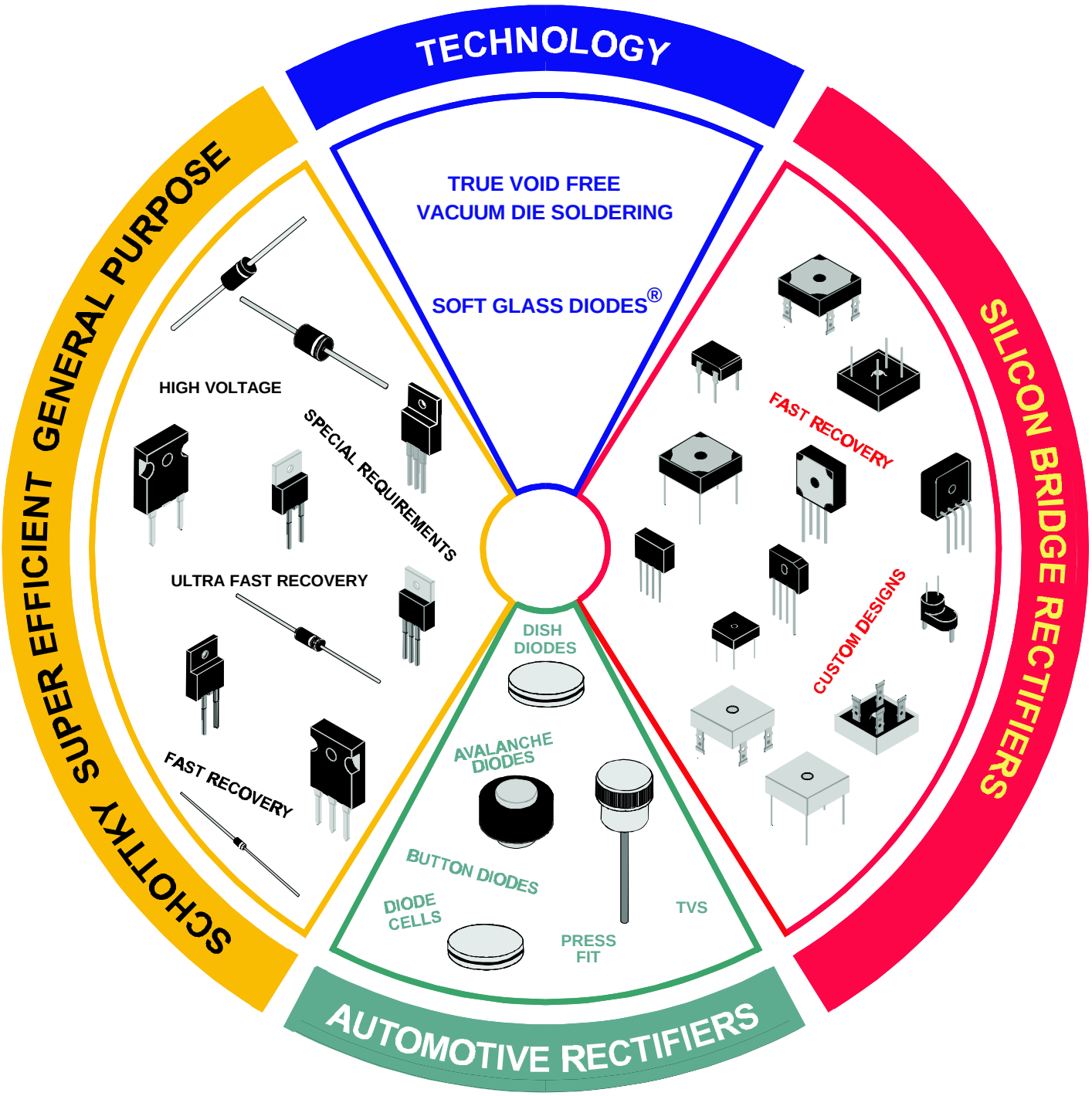
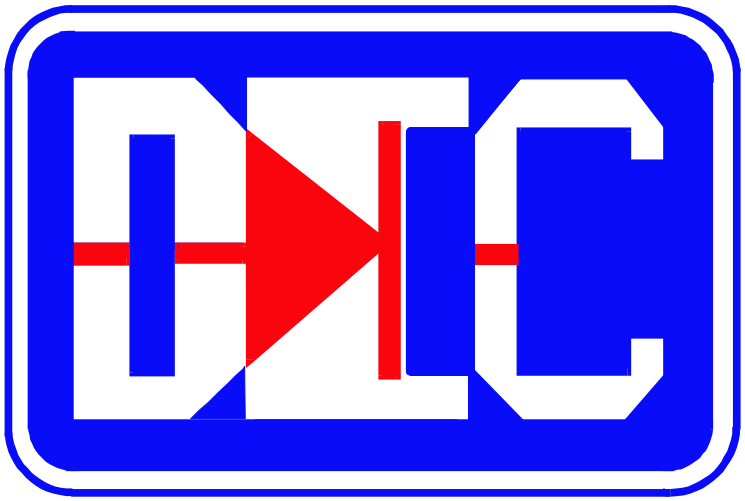
DIOTEC ELECTRONICS CORPORATION

PRODUCT GUIDE





DIOTEC ELECTRONICS CORP.

THE RECTIFIER SPECIALISTS

THE ONLY QUALITY

DIODES AND RECTIFIERS

AT COMPETITIVE PRICES

18020 HOBART BLVD, UNIT B • GARDENA, CALIFORNIA 90248 USA

TEL: 310 - 767 - 1052 • FAX: 310 - 767 - 7958

EMAIL: support@diotec-usa.com • WEB SITE: www.diotec-usa.com

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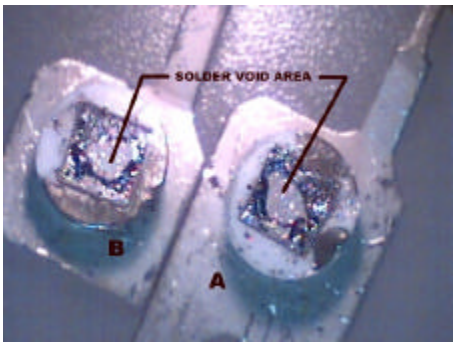
EVER WONDER WHY SOME DIODES DIE PREMATURELY ….. WITHOUT OBVIOUS CAUSE

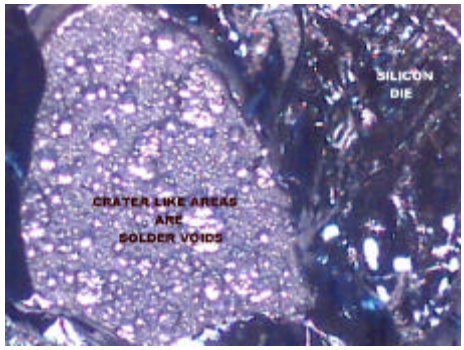
Most Likely It's The Invisible Killer ….. DIE ATTACH SOLDER VOIDS

This invisible problem is much, much, more serious, and a lot more common than you might think. In the photographs below, diodes produced by a prestigious multinational semiconductor manufacturer were examined for die solder quality. These diodes were provided by one of our potential customers who have experienced serious quality problems and premature failures.

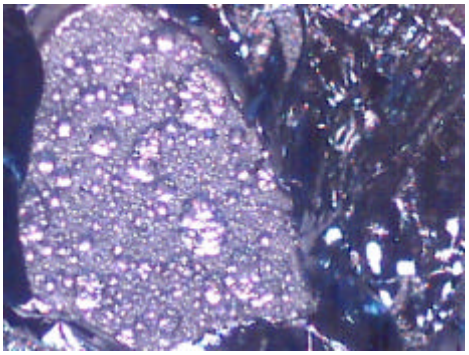
This set of photos illustrates a very common situation when a diode is pried open



LARGE VOID AREA REVEALED IN THE SOLDER LAYER



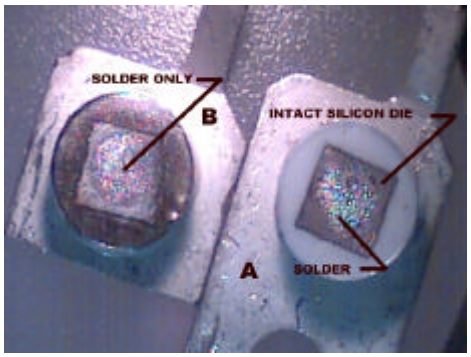
SECTION B



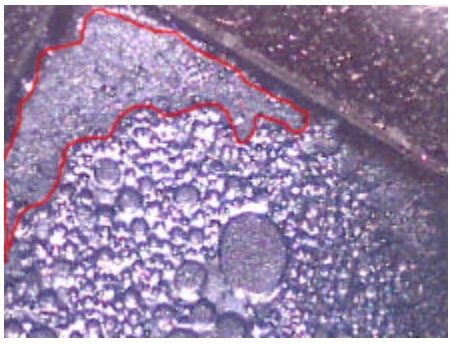
SECTION A

NUMEROUS SOLDER VOIDS CAN CLEARLY BE SEEN IN THESE CLOSE UPS. These Voids 1) Greatly Weaken The Diode's Mechanical Integrity, 2) Increase The Forward Voltage Drop, and 3) Severely Restrict The Dissipation of Heat From The Die. Restricted Heat Dissipation causes the Diode to Operate at Elevated Temperatures Which Could Lower Its Current Handling and/or Cause Premature Failure.

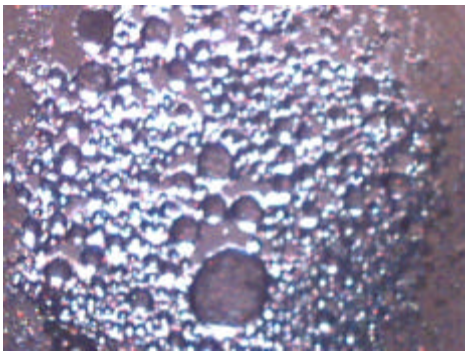
This set of photographs illustrates another common, but much more serious, situation. Here the diode is pried open and separates completely at the die solder layer



ONLY SOLDER IN SECTION B
CHIP IS INTACT IN SECTION A
SOLDER COVERS ~ 50% OF DIE



SECTION B - ONLY SOLDER



SECTION A- DIE SIDE

The Solder Either Failed to Wet And, Hence, Bond to The Die's Surface (Surface Outlined in Red on Section B) or is riddled with voids. As a Result, This Diode Has Absolutely No Mechanical Strength And May Fail On Impact if dropped or Struck. Additionally, The Thermal Resistance of This Diode is so High that Thermal Runaway is a Certainty.

See The DIOTEC Difference - VOID FREE DIE SOLDERING.

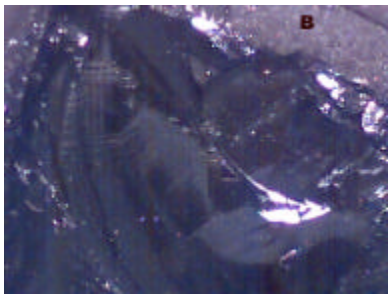
DIOTEC ELECTRONICS CORPORATION

This is the DIOTEC difference.

BREAKS AT SILICON DIE

NO VISIBLE VOIDS.

SECTION A



SECTION B

Superior Soldering Results in SUPERIOR MECHANICAL STRENGTH, SUPERB HEAT DISSIPATION, and LOWER FORWARD VOLTAGE DROP

DIOTEC utilizes an advanced, computer controlled, vacuum die soldering process, which enables silicon chips to be soldered to metal with exceptional consistency and void free quality. Thus, DIOTEC diodes and bridge rectifiers have unmatched heat dissipation, cooler junction temperatures, lower leakage currents, and reduced thermal stress. Additionally, the high quality die attachment allows the diodes survive mechanical shock without bond failure, another common problem with most offshore "cheap" diodes.

SHOULD YOU WANT:

- **Want to discuss this topic further?**
- **A free analysis similar to that shown here to determine the quality of the diodes you are now using? We'll tell it like we see it and return your items with the pictures so you can see for yourself.**
- **Wish to put us to the test in your environment? Request product samples**

Please don't hesitate to contact:

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DIOTEC ELECTRONICS CORPORATION
THE ONLY HIGH QUALITY DIODES & RECTIFIERS AT COMPETITIVE PRICES

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INTRODUCTION

DIOTEC Electronics Corp. is a major manufacturer of power diodes and rectifiers, with facilities and representatives worldwide. Principle engineering, sales, technical, and administrative personnel are located at DIOTEC's headquarters in Gardena, California, 20 miles south of the Los Angeles International airport. Major laboratory, test, and manufacturing facilities are located in Penang, Malaysia, and Carson, California USA.

DIOTEC was established to fill a severe industry need for a reliable and dependable manufacturer who:

- **Could offer comprehensive, high quality diode/rectifier product lines at very competitive prices**
- **Is capable, flexible, and willing to provide prompt technical and professional assistance to its customers**
- **Has an adequate inventory near its customers to support their production requirements at all times.**

In its 15 year history, DIOTEC and its affiliate company have grown from a star-up company to one with over $12 million in worldwide sales. Initially, DIOTEC's product line was limited to general purpose, axial lead, silicon diodes. Today, DIOTEC offers Schottky Barrier diodes, Super Efficient and Ultra-Fast Recovery diodes, a significantly expanded line of General Purpose and Fast Recovery diodes, and the most comprehensive line of full wave bridge rectifiers.

DIOTEC provides its customers with diodes and rectifiers of superior quality at competitive prices.
This superior quality results from using advanced, computer controlled, vacuum die soldering process which enables silicon chips to be soldered to metal with exceptional consistency and void free quality. Thus, DIOTEC diodes and bridge rectifiers have unmatched heat dissipation, cooler junction temperature, lower leakage currents, and reduced thermal stress.

Additionally, the high quality die attachment allows the diodes to survive mechanical shock without bond failure, another common problem with most offshore "cheap" diodes.

DIOTEC has also introduced the industry's only "Soft Glass Diode". These diodes exhibit unmatched mechanical and thermal resistance properties. Additional information on "Soft Glass may be found in Appendix IX.

DIOTEC has 7 main product lines:

Automotive Diodes (TVS & Standard - 12 to 75 amp)

Full Wave Bridge Rectifiers (1 to 50 amp, 50 - 1000 Volt)

Super Efficient and Ultra-Fast Recovery Diodes Fast Recovery Diodes

Schottky Barrier Rectifiers

Fast Recovery Full Wave Bridge Rectifiers

General Purpose Diodes

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INTRODUCTION (Continued)

VISIT US ON THE WEB for the latest product and specification updates

DIOTEC's web site is located at: **www.diotec-usa.com**

Our general e-mail address is: **support@diotec-usa.com**

Take some time every once in a while to visit our web site. Our product lines/specifications are continually being reviewed and updated based on customer requirements, product design improvements, and quality testing. When considering one of our products for a specific application, always check the web site to ensure you have the latest specifications.

When USING THIS CATALOG, please keep in mind that every effort has been made to ensure that the information contained here is current, accurate, and of the necessary detail to support the component or design engineer. It is recognize that not every application requirement can be satisfied by a standard product. If your requirements fall in this category, do not hesitate to call, fax or e-mail our technical staff. We are here to help you!

DIOTEC is dedicated to furnishing the highest quality products at the most competitive cost. Thus, product changes to improve reliability, function, and design may be made without notice. The information in this data book has been carefully reviewed and is believed to be accurate. However, no responsibility is assumed for inaccuracies. Before committing to a design, it is recommended that the designer request product samples (See Appendix IX) to validate the operational characteristics and performance in the actual application.

DIOTEC does not imply any warranty, or assume any liability from the application or use of any product or circuit described in this catalog. DIOTEC does not recommend the use of its products in applications where a failure/malfunction of the product may directly threaten life or injury. The user of DIOTEC's products in life support application assumes all risks of such use and indemnifies DIOTEC against all damages.

Following this introduction and table of contents, selector guides are provided for DIOTEC's Schottky Rectifiers, Super Efficient/Ultra Fast Diode, Bridge Rectifier, General Purpose Diode, and Fast Recovery Diode product lines. Industry cross-reference guides are provided in the appendices to assist in the selection of the proper DIOTEC product for your application.

DATA BOOK CONTENTS

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SCHOTTKY RECTIFIER QUICK SELECTION GUIDE - SEE SECTIONS A and B

DIOTEC Schottky Barrier Rectifiers feature a metal semiconductor junction with guard ring, epitaxial construction, low forward voltage drop, high current capability, and molded plastic material with an U/L 94V-O flammability rating. These products are ideal for use in low voltage, high frequency power supplies, as very fast clamping diodes, free wheeling, and polarity protection applications. These devices feature switching times of less than 10nS and are offered in current ranges up to 60 Amperes and reverse voltages to 100 volts.

	I_O, AVERAGE RECTIFIED FORWARD CURRENT (AMPERES)														
	1		3		5	6	12		16		24	30		40	60
VRRM	DO-41		DO-27		DO-27	TO-220AC (FullyInsulated)	TO-220AC (FullyInsulated)	TO-220AB (FullyInsulated) Dual Diode*	TO-247AC TO-3P	TO-220AB (FullyInsulated) Dual Diode*	TO-247AB TO-3P Dual Diode*	TO-247AC TO-3P	TO-247AB TO-3P Dual Diode*	TO-247AB TO-3P Dual Diode*	TO-247AB TO-3P Dual Diode*
20	1N5817	SK102	1N5820	SK302	SK502										
30	1N5818		1N5821									30SK30			SK6030C
40	1N5819	SK104	1N5822	SK304	SK504	6SK40	12SK40	SK1240C	16SK40	SK1640C	SK2440C	30SK40	SK3040C	SK4040C	SK6040C
50						6SK50	12SK50	SK1250C	16SK50	SK1650C	SK2450C	30SK50	SK3050C	SK4050C	SK6050C
60		SK106		SK306	SK506	6SK60	12SK60	SK1260C	16SK60	SK1660C	SK2460C	30SK60	SK3060C	SK4060C	SK6060C
70		SK107		SK307	SK507	6SK70	12SK70	SK1270C	16SK70	SK1670C	SK2470C	30SK70	SK3070C	SK4070C	SK6070C
80		SK108													
100		SK110		SK310	SK510	6SK100	12SK100	SK12100C	16SK100	SK16100C	SK24100C		SK30100C	SK40100C	
I_{FSM} (Amps)**	25	40	80	120	150	120	180	120	240	160	200	600	300	350	600
T_C @ Rated I_O* (°C)						100	100		100	110	100	100	90	85	90
T_L @ Rated I_O* (°C)	90	90	90	90	90										
T_J (Max) (°C)	125	150	125	150	150	150	150		150		150	150	150	150	150
V_{FM} @ I_{FM} = I_O (T_X = 25 °C)***	0.6	0.8	0.525	0.8	0.85	0.85	0.85		0.85		0.85	0.7	0.85	0.92	0.65

* I_O IS TOTAL DEVICE OUTPUT
** REPRESENTS THEMAX.FORALLPRODUCTSLISTED. SOMEINDIVUAL DEVICESMAY EXHIBITALOWERI_{FSM}. DETAILEDDATA SHEETS ARE AVAILABLE UPONREQUEST.
*** T_X = T_L FORDO-41/27PACKAGEDPRODUCTS; TX = T_C FOR TO-220/247 PACKAGED PRODUCTS.

PART NUMBERING SYSTEM

(1) AXIAL LEAD PRODUCTS (SEE SECTION A)

Example: SK102 (1 Amp, 20 Volt, Axial Lead Schottky)

SK A VV

- **VV** — Blocking Voltage Reference (20 - 100 Volts) - 2 Digits. Examples: 02 = 20 Volts; 10 = 100 Volts
- **A** — Current Reference (Average Forward Rectifed Current) - 1 Digit.
- **SK** — Schottky Diode Designator

(2) TWO (2) PIN TO-22OAC AND TO-247AC PACKAGED PRODUCTS (SEE SECTION A)

Examples: 6SK60 (6 Amp, 60 Volt, 2- Pin TO Packaged Schottky Diode)
12SK100 (12 Amp, 100 Volt, 2-Pin TO Packaged Schottky Diode)

A(A) SK VV(V)

- **VV(V)** — Blocking Voltage Reference (30 - 100 Volts) - 2 or (3) Digits.
- **SK** — Schottky Diode Designator
- **A(A)** — Current Reference (Average Forward Rectifed Current) - 1 or (2) Digits. Range: 6 - 30 Amps

(3) THREE (3) PIN TO-22OAB AND TO-247AB PACKAGED PRODUCTS (SEE SECTION B)

Example: SK1250C (12 Amp, 50 Volt, 3-Pin TO Packaged Schottky Diode)

SK AA VV C

- **C** — Dual Diode Common Point Designator (C=Common Cathode; A=Common Anode)
- **VV** — Blocking Voltage Reference (30 - 100 Volts) - 2 Digits.
- **AA** — Current Reference (Average Forward Rectifed Current) - 2 Digits. Range 12 - 60 Amps.
- **SK** — Schottky Diode Designator.

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SUPER EFFICIENT/ULTRAFAST RECOVERY RECTIFIER
QUICK SELECTION GUIDE - SEE SECTIONS C and D

These products complement DIOTEC's Schottky product line by providing switching times in the 30 to 90 nS range. All TO-220/247 devices are supplied with the cathodes connected to the "backside" metal heatsink. Reverse polarity devices (i.e., common anode) may be available upon special request. Switching power supplies operating from 20 kHz to 250 kHz, inverters, and freewheeling diodes are excellent applications for these devices.

	I_O, AVERAGE RECTIFIED FORWARD CURRENT (AMPERES)																	
	1		2	3		4	5	6			8		10	12	15	16		30
	DO-41			DO-27				G-6A	TO-220AC	TO-220AB DualDiode*	TO-220AC	TO-220AC	TO-220AB Dual Diode*	TO-220AC	TO-220AC	TO-220AB DualDiode*	TO-220AB DualDiode*	TO-247AB TO-3P
VRRM	SOFT GLASS DIODES			SOFT GLASS DIODES					Fully Insulated	Fully Insulated	Fully Insulated	Non-Insulated	Fully Insulated	Fully Insulated	Non-Insulated	Fully Insulated	Non-Insulated	Dual Diode* Fully Insulated
50	UFR100			SPR30	UFR300	UFR400		UFR600							SPR150			
100	UFR101	SPR11	SPR21	SPR31	UFR301	UFR401	SPR51	UFR601	6SPR01	SPR601C	8SPR01	SPR81	SPR1001C	12SPR01	SPR151	SPR1601C	SPR161C	UFR3001C
200	UFR102	SPR12	SPR22	SPR32	UFR302	UFR402	SPR52	UFR602	6SPR02	SPR602C	8SPR02	SPR82	SPR1002C	12SPR02	SPR152	SPR1602C	SPR162C	UFR3002C
300	UFR103	SPR13	SPR23	SPR33	UFR303	UFR403	SPR53	UFR603	6SPR03	SPR603C	8SPR03	SPR83	SPR1003C	12SPR03	SPR153	SPR1603C	SPR163C	UFR3003C
400	UFR104	SPR14	SPR24	SPR34	UFR304	UFR404	SPR54	UFR604	6SPR04	SPR604C	8SPR04	SPR84	SPR1004C	12SPR04	SPR154	SPR1604C	SPR164C	UFR3004C
500	UFR105				UFR305	UFR405		UFR605	6SPR05	SPR605C	8SPR05	SPR85	SPR1005C	12SPR05	SPR155	SPR1605C	SPR165C	UFR3005C
600	UFR106		SPR26		UFR306	UFR406		UFR606				SPR86			SPR156		SPR166C	
800	UFR108		SPR28		UFR308	UFR408		UFR608										
1000	UFR110				UFR310	UFR410												
I_{FSM} (Amps)**	35	40	50,70	75	150	150	150	300	80	60	120	125	100	120	250	150	200	250
T_C @ Rated I_O (°C)									100	120	110	110	120	110	110	100	100	100
T_A @ Rated I_O (°C)**	55	55	55	55	55	80,40, 35	55	55										
T_J (Max) (°C)	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
T_{RR} (nS)**	50,75	35	35,50, 75	35	50,75	50,75	50	60,75, 90	50,75	30	35,45	35,45	35,45	35,45	35,50	35,45	35,50	50,60

* I_O IS TOTAL DEVICE OUTPUT
** TWO OR MOREENTRIES INDICATES A DIFFERENCE IN PARAMETER VALUES AMONG THE SPECIFIC PRODUCTS IN THE SERIES LISTED.

PART NUMBERING SYSTEM

AXIAL LEAD PRODUCTS (SEE SECTION C)

(a) Example: SPR21 (2 Amp, 100 Volt Axial Lead Super Efficient Rectifier)

SPR/UFR A V

- **V** — Blocking Voltage Reference (50 - 800 Volts) - 1 Digit. Examples: 1 = 100 Volts; 8 = 800 Volts
- **A** — Current Reference (Ave. Forward Rectified Current) - 1 Digit.
- **SPR/UFR** — Rectifier Type Designator. SPR = Super Efficient Rectifier/UFR = Ultrafast Rectifier.

(b) Example: UFR302 (3 Amp, 200 Volt, Axial Lead, Ultrafast Rectifier)

UFR A VV

- **VV** — Blocking Voltage Reference (50 - 1000 Volts) - 2 Digits. Examples: 00 = 50 Volts; 10 = 1000 Volts
- **A** — Current Reference (Ave. Forward Rectified Current) - 1 Digit.
- **UFR** — Ultrafast Rectifier Designator.

TWO (2) PIN TO-22OAC PACKAGED PRODUCTS (SEE SECTION C)

a) Example: 12SPR01 (12 Amp, 100 Volt, 2- Pin, *FULLY INSULATED,* Super Efficient Rectifier)

A(A) SPR VV

- **VV** — Blocking Voltage Reference (100 - 500 Volts) - 2 Digits. Examples: 01 = 100 Volts, 05 = 500 Volts
- **SPR** — Super Efficent Rectifier Designator
- **A(A)** — Current Reference (Average Forward Rectified Current) - 1 or (2) Digits. Range: 8 - 12 Amps

(b) Example: SPR85 (8 Amp, 500 Volt, 2-Pin, *NON-INSULATED,* Super Efficient Rectifier)

SPR A(A) V

- **V** — Blocking Voltage Reference (50 - 600 Volts) - 1 Digit. Examples: 0 = 50 Volts; 6 = 600 Volts.
- **A(A)** — Current Reference (Average Forward Rectified Current) 1 or 2 Digits - Range: 8 to 15 Amps.
- **SPR** — Super Efficient Rectifier Designator.

THREE (3) PIN TO-22OAB AND TO-247AB PACKAGED PRODUCTS (SEE SECTION D)

(a) Example: SPR605C (6 Amp, 500 Volt, 3-Pin *FULLY INSULATED* Super Efficient Rectifier)

SPR/UFR A(A) 0 V C

- **C** — Dual Diode Common Designator (C=Common Cathode; A=Common Anode)
- **V** — Blocking Voltage Reference (100 - 600 Volts) - 1 Digit.
- **0** — Key to Denote *Fully Insulated* Rectifier
- **A(A)** — Current Reference (Average Forward Rectified Current) - 1 or 2 Digits. Range 6 - 30 Amps.
- **SPR/UFR** — Rectifier Type Designator: SPR=Super Efficient Rectifier/UFR=Ultrafast Rectifier.

(b) Example: SPR163C (16 Amp, 300 Volt, 3-Pin *NON- INSULATED* Super Efficient Rectifier)

SPR AA V C

- **C** — Dual Diode Common Designator (C=Common Cathode; A=Common Anode)
- **V** — Blocking Voltage Reference (100 - 600 Volts) - 1 Digit.
- **AA** — Current Reference (Average Forward Rectified Current) 2 Digits. Range 15 - 16 Amps
- **SPR** — Super Efficient Rectifier Designator

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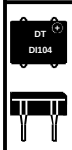
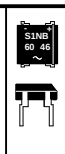
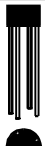
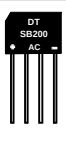
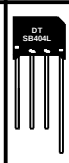
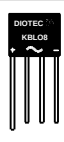
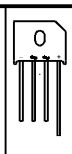
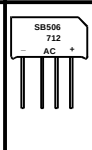
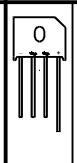
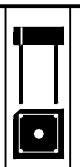
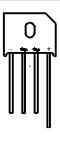
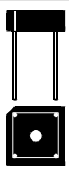
SILICON BRIDGE RECTIFIER QUICK SELECTION GUIDE - SEE SECTION E

DIOTEC offers a complete line of single phase full wave bridge rectifiers. A wide variety of package designs allows these bridges to be used in virtually any application. Forward current outputs range from 1 to 50 Amps with reverse voltages from 50 to 1000 Volts.

	Io, AVERAGE RECTIFIED FORWARD CURRENT (AMPERES) - Note 1																
	1			1.5	2		3	4			5	6			8		10
																	
VRRM	ᖇᑌ		ᖇᑌ	ᖇᑌ	ᖇᑌ	ᖇᑌ	ᖇᑌ	ᖇᑌ	ᖇᑌ	ᖇᑌ		ᖇᑌ	ᖇᑌ	ᖇᑌ	ᖇᑌ	ᖇᑌ	ᖇᑌ
50	DI100	S1NB05	WB100	WB150	WB200	SB200	DB300	SB400L	KBL00	SBU4A	SB500	SBU6A	DB600	HBU600	SBU8A	DB800	DB1000
100	DI101	S1NB10	WB101	WB151	WB201	SB201	DB301	SB401L	KBL01	SBU4B	SB501	SBU6B	DB601	HBU601	SBU8B	DB801	DB1001
200	DI102	S1NB20	WB102	WB152	WB202	SB202	DB302	SB402L	KBL02	SBU4D	SB502	SBU6D	DB602	HBU602	SBU8D	DB802	DB1002
400	DI104	S1NB40	WB104	WB154	WB204	SB204	DB304 ADB304	SB404L ASB404L	KBL04	SBU4G	SB504	SBU6G	DB604 ADB604	HBU604 AHBU604	SBU8G	DB804 ADB804	DB1004 ADB1004
600	DI106	S1NB60	WB106	WB156	WB206	SB206	DB306 ADB306	SB406L ASB406L	KBL06	SBU4J	SB506	SBU6J	DB606 ADB606	HBU606 AHBU606	SBU8J	DB806 ADB806	DB1006 ADB1006
800	DI108	S1NB80	WB108	WB158	WB208	SB208	DB308 ADB308	SB408L ASB408L	KBL08	SBU4K	SB508	SBU6K	DB608 ADB606	HBU608 AHBU606	SBU8K	DB808 ADB806	DB1008 ADB1006
1000	DI110	S1NB100	WB110	WB1510	WB210	SB210	DB310	SB410L	KBL10	SBU4M	SB510	SBU6M	DB610	HBU610	SBU8M	DB810	DB1010
Typ. $R_{\theta JA}$	40	40	40	35	35	30	12	19.0	19.0	19.0	17.0	16.0	16.0	16.0	16	12	12
Typ. $R_{\theta JL}$	15	15	15	15	15	11		3.4	3.4	3.4	3.3	3.1					
Typ. $R_{\theta JC}$							8						5.7	5.7	3	5	5
TC @ Rated Io (°C) TA @ Rated Io (°C) (Note 2)	40	40	50	25	25	55	60 25	50	100 65	100 65	55	100 40	50 40	50 40	100 65	100 50	100 50
Max. VF	1.10	1.05	1.00	1.00	1.00	1.05	0.95	0.95	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Typ. VF							0.90	0.90	0.90	0.90	0.95	0.90	0.90	0.90	0.90	0.90	0.90
TJ (Max) (°C)	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150	150
Avalanche Voltages V(BR)Min V(BR)Max							Note 3 Note 4	Note 3 Note 4						Note 3 Note 4		Note 3 Note 4	Note 3 Note 4

NOTES: (1) I_O is Total Bridge Output
(2) Tc - With BridgeMountedonanAluminum Plate; T_A - With Bridge Mounted on PC Board (See DataSheets For Details)
(3) $V_{(BR)MIN}$ =450 Volts For All 400 Volt ControlledAvalanche Bridges (i.e., Those Bridges WithaPartNumberBeginningWithThe Letter "A")
650 VoltsFor All 600 Volt Controlled Avalanche Bridges
850 VoltsFor All 800 Volt Controlled Avalanche Bridges
(4) $V_{(BR)MAX}$=900 Volts For All400VoltControlled Avalanche Bridges
1100 Volts For All600VoltControlled Avalanche Bridges
1300 Volts For All800VoltControlled Avalanche Bridges

BODY ID	DEFINITION
DB	Retangular Package, Small Vertical Elevation
DI	DualIn-Line 4 Pin Package
HBU	Special Package,IdealForMotor Applications
SB	Vertical or Side-Looking Package
S1NB	DualIn-Line 4 Pin Package
SBU	Side-Looking Package w/Center Mounting Hole
SDB	Side Looking DB Package
SDI	DualIn-Line 4 Pin Package
WB	Cylindrical Package

PART NUMBERING SYSTEM

1 TO 10 AMP BRIDGES

(a) Example: DB600 or HBU606 (6 Amp, 50 Volt, or 6 Amp, 600 Volt in Rectangular or Special Package)

(A) BB(B) C(C) VV

- **VV** — Blocking Voltage Reference (50 - 1000 Volts) - 2 Digits, e.g., 00 = 50 Volts; 02 = 200 Volts, 10 = 1000 Volts.
- **C(C)** — Current Reference (Average Forward Rectifed Current For Total Bridge) - 1 or 2 Digits.
- **BB(B)** — Body Type Designator. Two or 3 Letters - See Table at Right.
- **(A)** — The Letter "A" Before the Body Designators SB, DB, or HBU Indicates Bridge is Part of the "Avalanche" Series

Note: The SB400/ASB400 Series Part Numbers Incorporate a Suffix Letter (L) to Indicate the "+" Output of the Rectifier is on The Longest Lead. The New Bridge Series, S1NBVV(V), Incorporates the 1 Amp Current Reference in the Body Designator and Uses the Final 2 or 3 Digits as a Voltage Reference, i.e., 05 = 50 Volts, 10 = 100 Volts, 100 = 1000 Volts

(b) Example: SBU6A (6 Amp, 50 Bridge Rectifier, Side Looking Package)

SBU C L

- **L** — Blocking Voltage Reference (50 - 1000 Volts) - 1 Letter. A, B, D, G, J, K, M = 50, 100, 200, 400, 600, 800, 1000 Volts, Respectively.
- **C** — Current Reference (Average Forward Rectifed Current) - 1 Digit, Range 4-8 Amps.
- **SBU** — Side Looking Package With Mounting Hole

15 - 50 AMP BRIDGES

Example: DB3504 or ADB3504P (35 Amp, 400 Volt Bridges. The Second Bridge is One of The "Avalanche" Series and Provided in a Plastic Package, i.e., With Integrally Molded Heat Sink)

(A) (S)DB AA VV (P)/ (W) or (T)

- **(W) or (T)** — Suffix Indicating Wire (W) or Fast-on Terminals (T)
- **(P)** — When Present, Indicates Plastic Package With The Heat Sink Integrated into The Bridge Encapsulation (See Figure 2 on Facing Page)
- **VV** — Blocking Voltage Reference (50 - 1000 Volts) - 2 Digits, e.g., 00 = 50 Volts, 05 = 500 Volts, 10 = 1000 Volts
- **AA** — Current Reference (Average Forward Rectifed Current) - 2 Digits, Range: 15 - 50 Amps
- **(S)DB** — Body Type Designator. Rectangular (DB) Body Used in These Products. When "S" is Present, Indicates Side-Looking (In-Line) Package
- **(A)** — The Letter "A" Before the Body Designator, DB, Indicates Bridge is Part of the "Avalanche" Series

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SILICON BRIDGE RECTIFIER QUICK SELECTION GUIDE (Continued)
SEE SECTION E

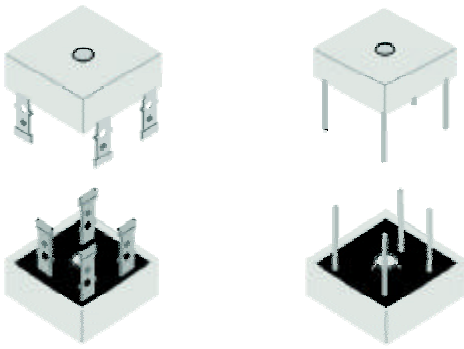
DIOTEC's 15, 25, and 35 Amp Bridges are offered with an electrically isolated metal case or epoxy case with integral heatsink, Figures 1 and 2, respectively. The metal or epoxy case, in turn, can be obtained with Fast-On Terminals or Wire Leads. DIOTEC offers 40 and 50 Amp in-line bridges also. These in-line bridges are only available in the epoxy case with wire leads. The 50 Amp bridge is also available in the epoxy case with Fast-On Terminals or Wire Leads.

	Io, AVERAGE RECTIFIED FORWARD CURRENT (AMPERES)															
	15				25				35				40	50		
	SEE FIG 1 BELOW		SEE FIG 2 BELOW		SEE FIG 1 BELOW		SEE FIG 2 BELOW		SEE FIG 1 BELOW		SEE FIG 2 BELOW		SEE FIG 3 BELOW	SEE FIG 3 BELOW	SEE FIG 2 BELOW	
VRRM	ᖇᑌ		ᖇᑌ		ᖇᑌ		ᖇᑌ		ᖇᑌ		ᖇᑌ		ᖇᑌ	ᖇᑌ		
50		DB1500		DB1500P		DB2500		DB2500P		DB3500		DB3500P	SDB4000	SDB5000		DB5000P
100		DB1501		DB1501P		DB2501		DB2501P		DB3501		DB3501P	SDB4001	SDB5001		DB5001P
200		DB1502		DB1502P		DB2502		DB2502P		DB3502		DB3502P	SDB4002	SDB5002		DB5002P
400	ADB1504	DB1504	ADB1504P	DB1504P	ADB2504	DB2504	ADB2504P	DB2504P	ADB3504	DB3504	ADB3504P	DB3504P	SDB4004	SDB5004	ADB5004P	DB5004P
600	ADB1506	DB1506	ADB1506P	DB1506P	ADB2506	DB2506	ADB2506P	DB2506P	ADB3506	DB3506	ADB3506P	DB3506P	SDB4006	SDB5006	ADB5006P	DB5006P
800	ADB1508	DB1508	ADB1508P	DB1508P	ADB2508	DB2508	ADB2508P	DB2508P	ADB3508	DB3508	ADB3508P	DB3508P	SDB4008	SDB5008	ADB5008P	DB5008P
1000		DB1510		DB1510P		DB2510		DB2510P		DB3510		DB3510P	SDB4010	SDB5010		DB5010P
RθJC	1.8		1.4		1.6		1.2		1.6		1.2		1.1	1.1	1.1	
TC @ Rated Io (°C)	50		50		50		50		50		50		55	55	55	
Max. VF Typ. VF	1.03		1.03		1.03		1.03		1.03		1.03		SEENOTE (8)	SEENOTE (8)	SEE NOTE (8)	
TJ (Max) (°C)	150		150		150		150		150		150		175	175	175	
Avalanche Voltages V(BR)Min V(BR)Max	Note 6 Note 7		Note 3 Note 4		Note 6 Note 7		Note 6 Note 7		Note 6 Note 7		Note 6 Note 7				Note 6 Note 7	

Notes: **(5)** $V_{(BR)MIN}$ **= 450 Volts For All 400 Volt Controlled Avalanche Bridges (i.e. Those Bridges With a Part Number Starting With The Letter "A")**
650 Volts For All 600 Volt Controlled Avalanche Bridges, and
850 Volts For All 800 Volt Controlled Avalanche Bridges.

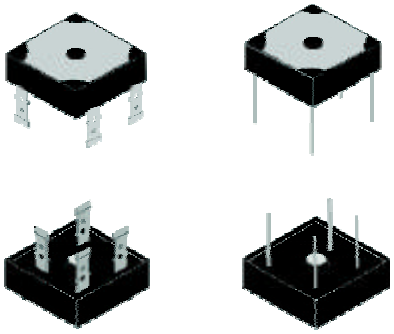
(7) $V_{(BR)MAX}$ **= 900 Volts For All 400 Volt Controlled Avalanche Bridges,**
1100 Volts For All 600 Volt Controlled Avalanche Bridges, and
1300 Volts For All 800 Volt Controlled Avalanche Bridges.

(8) Max. V_F **= 0.96 (**V_R **= 100 to 600 Volts); 1.00 (**V_R **= 800 to 1000 Volts)**
Typ. V_F **= 0.93 (**V_R **= 100 to 600 Volts); 0.97 (**V_R **= 800 to 1000 Volts)**



FAST-ON TERMINALS **WIRE LEADS**

FIGURE 1. ELECTRICALLY ISOLATED METAL CASE



FAST-ON TERMINALS **WIRE LEADS**

FIGURE 2. EPOXY CASE WITH INTEGRALLY MOLDED HEAT SINK

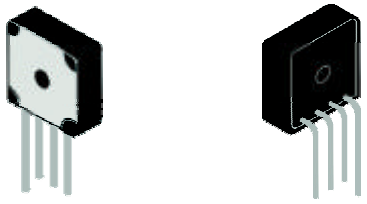


FIGURE3. IN-LINE CONFIGURATION. EPOXY CASE WITH INTEGRALLY MOLDED HEAT SINK

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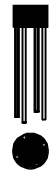
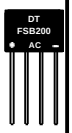
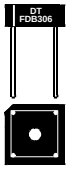
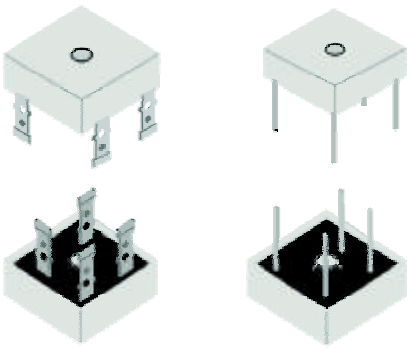
FAST RECOVERY BRIDGE RECTIFIER QUICK SELECTION GUIDE
SEE SECTION G

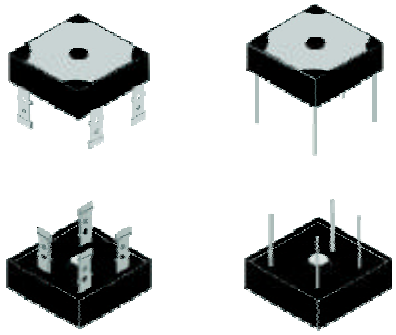
DIOTEC's Fast Recovery Bridge Rectifiers provide switching times ranging from 200nS to 500nS, some of the fastest in the industry! These bridges are available with current ratings up 35 Amps at 1000 Volts. Switching times at these ratings are a maximum of 500nS! Contact DIOTEC with your special requirements.

	Io, AVERAGE RECTIFIED FORWARD CURRENT (AMPERES)								
	1	1.5	2	3	6	25		35	
VRRM						SEE FIGURE 1 RIGHT	SEE FIGURE 2 RIGHT	SEE FIGURE 1 RIGHT	SEE FIGURE 2 RIGHT
50	FDI100	FWB150	FSB200	FDB300	FDB600	FDB2500	FDB2500P	FDB3500	FDB3500P
100	FDI101	FWB151	FSB201	FDB301	FDB601	FDB2501	FDB2501P	FDB3501	FDB3501P
200	FDI102	FWB152	FSB202	FDB302	FDB602	FDB2502	FDB2502P	FDB3502	FDB3502P
400	FDI104	FWB154	FSB204	FDB304	FDB604	FDB2504	FDB2504P	FDB3504	FDB3504P
600	FDI106	FWB156	FSB206	FDB306	FDB606	FDB2506	FDB2506P	FDB3506	FDB3506P
800	FDI108	FWB158	FSB208	FDB308	FDB608	FDB2508	FDB2508P	FDB3508	FDB3508P
1000	FDI110	FWB150	FSB210	FDB310	FDB610	FDB2510	FDB2510P	FDB3510	FDB3510P
Typ. $R_{\theta JA}$ Typ. $R_{\theta JC}$	40	35	30	8	5.7	1.6	1.2	1.6	1.2
T_C @ Rated Io (°C) T_A @ Rated Io (°C)	40	55	55	50	50	55	55	55	55
Max. V_F	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
$T_{J\,(Max)}$ (°C)	150	150	150	150	150	150	150	150	150
T_{RR} (nS)	T_{RR} = 200nS: 0 < V_{RRM} < 300; T_{RR} = 300nS: 300 < V_{RRM} < 700; T_{RR} = 500nS: 700 < V_{RRM} <1100								



FAST-ON TERMINALS WIRE LEADS

FIGURE 1. ELECTRICALLY ISOLATED METAL CASE



FAST-ON TERMINALS WIRE LEADS

FIGURE 2. EPOXY CASE WITH INTEGRALLY MOLDED HEAT SINK

PART NUMBERING SYSTEM

Example: FDI106 or FDB2506 (1 Amp, 600 Volt, or 25 Amp, 600 Volt Fast Recovery Bridge Rectifier. The First Product is Housed in a Dual In-Line Package; The Second in a Rectangular Package)

F BB C(C) VV

- **Blocking Voltage Reference (50 - 1000 Volts) - 2 Digits, e.g., 00 = 50 Volts; 02 = 200 Volts, 10 = 1000 Volts.**
- **Current Reference (Average Forward Rectifed Current For Total Bridge) - 1 or 2 Digits. Range: 1 to 35 Amps.**
- **Body Type Designator. Two Letters - See Table Below.**
- **The Letter "F" Before the Body Designators DI, WB, SB, or DB Indicates This Product is a Fast Recovery Bridge Rectifer**

BODY ID	DEFINITION
DB	Retangular Package, Small Vertical Elevation
DI	Dual In-Line 4 Pin Package
WB	Cylindercal Package

GENERAL PURPOSE SILICON DIODE QUICK SELECTION GUIDE
SEE SECTION H

DIOTEC's offers a number of axial lead, low cost, general purpose diodes which will satisfy a wide range of applications. A number these diodes are available as DIOTEC's SOFT GLASS DIODES (SOFT GLASS DIODE is a DIOTEC Registered Trademark). These SOFT GLASS DIODES provide the highest degree of operational reliability, efficiency, and high temperature/mechanical stress reliability. More information on SOFT GLASS DIODES may be found in Appendix X.

	I_O, AVERAGE RECTIFIED FORWARD CURRENT (AMPERES)									
	1				1.5	2	3		4	6
	DO-41				DO-15	DO-41	DO-27		DO-27	
VRRM		SOFT GLASS DIODES				SOFT GLASS DIODES		SOFT GLASS DIODES		
50	1N4001	1N4001G	GP100	S1A	1N5391	GP200	IN5400	1N5400G	GP400	GP600
100	1N4002	1N4002G	GP101	S1B	1N5392	GP201	IN5400	1N5400G	GP401	GP601
200	1N4003	1N4003G	GP102	S1D	1N5393	GP202	IN5400	1N5400G	GP402	GP602
400	1N4004	1N4004G	GP104	S1G	1N5395	GP204	IN5400	1N5400G	GP404	GP604
600	1N4005	1N4005G	GP106	S1J	1N5397	GP206	IN5400	1N5400G	GP406	GP606
800	1N4006	1N4006G	GP108	S1K	1N5398	GP208	IN5400	1N5400G	GP408	GP608
1000	1N4007	1N4007G	GP110	S1M	1N5399	GP210	IN5400	1N5400G	GP410	GP610
I_{FSM} (Amps)	50	50	50	30	60	70	200	200	200	400
T_A @ Rated I_O (°C)	75	75	75	100 Note 1	75	50	75	75	75	75
T_J (Max) (°C)	175	175	175	150	175	175	175	175	175	175

NOTES: (1) Temperature Rating: T_L=100° C

PART NUMBERING SYSTEM

Example: GP102 (1 Amp, 200 Volt, Axial Lead General Purpose SOFT GLASS DIODE (SOFT GLASS DIODE is a DIOTEC Electronics Registered Trademark)

GP A VV

- **VV** — Blocking Voltage Reference (50 - 1000 Volts) - 2 Digits. Examples: 02 = 200 Volts; 10 = 1000 Volts
- **A** — Current Reference (Average Forward Rectified Current) - 1 Digit.
- **GP** — Soft Glass, General Purpose Diode Designator (See Note)

NOTE: The Single Exception to This System is The GP600 Series of Diodes. These diodes are ARE NOT SOFT GLASS DIODES.

1N4000, 1N5391, 1N5400 - JEDEC Type Designation

1N4000G, 1N5400G - DIOTEC SOFT GLASS Equivalent of the JEDEC Type Designated Diode

FAST RECOVERY SILICON DIODE QUICK SELECTION GUIDE
SEE SECTION H

DIOTEC's Fast Recovery Diodes exhibit switching times in the range of 4 to 500nS. Additionally, many of these products are SOFT GLASS DIODES (SOFT GLASS DIODE is a DIOTEC Registered Trademark). These SOFT GLASS DIODES provide the highest degree of operational efficiency and high temperature/mechanical stress reliability. More information on SOFT GLASS DIODES may be found in Appendix X.

	I_O, AVERAGE RECTIFIED FORWARD CURRENT (AMPERES)								
	0.15	1		2		3		6	8
	DO-35	DO-41		DO-41		DO-27		G-6A	TO-220AC
VRRM				SOFT GLASS DIODES			SOFT GLASS DIODES		
50		1N4933	RP100	RGP100	RGP200	RP300	RGP300	RP600	RGP800
100	1N4148 (Note 1)	1N4934	RP101	RGP101	RGP201	RP301	RGP301	RP601	RGP801
200		1N4935	RP102	RGP102	RGP202	RP302	RGP302	RP602	RGP802
400		1N4936	RP104	RGP104	RGP204	RP304	RGP304	RP604	RGP804
600		1N4937	RP106	RGP106	RGP206	RP306	RGP306	RP606	RGP806
800			RP108	RGP108	RGP208	RP308	RGP308	RP608	
1000			RP110	RGP110	RGP210	RP310	RGP310	RP610	
I_{FSM} (Amps)	Note 2	30	30	50	60	200	200	300	150
T_C @ Rated Io (°C)									110
T_A @ Rated Io (°C)	75	75	75	75	75	55	55	60	
T_J (Max) (°C)	175	175	175	175	175	175	175	175	150
T_{RR} (nS)	4	200	T_{RR} = 150nS: 0 < V_{RRM} < 500; T_{RR} = 250nS: 500 < V_{RRM} < 700; T_{RR} = 500nS: 700 < V_{RRM} <1100 (Note 3)						Note 4

NOTES: (1) V_{RRM} = 75 VOLTS
(2) ULTRA FAST SWITCHING DIODE: @ PULSE WIDTH OF 1 Sec, I_{FSM} = 1 Amp; @ PULSE WIDTH OF 1 µSec, I_{FSM} = 4 Amps
(3) 300nS AVAILABLE, CONSULT FACTORY
(4) FOR 0< V_{RRM} <300, T_{RR} = 150nS; 300< V_{RRM} <500, T_{RR} = 200 nS; 500< V_{RRM} <650 T_{RR} = 250nS

PART NUMBERING SYSTEM

Example: RP102 or RGP102 (1 Amp, 200 Volt, Axial Lead Fast Recovery Diode; The Second Product (RGP102) is a SOFT GLASS DIODE®)

R(G)P A VV

- **VV** — Blocking Voltage Reference (50 - 1000 Volts) - 2 Digits. Examples: 02 = 200 Volts; 10 = 1000 Volts
- **A** — Current Reference (Average Forward Rectified Current) - 1 Digit.
- **R(G)P** — Fast Recovery Diode Designator; With the "G" Present, Indicates That This Product is a *SOFT GLASS DIODE*

NOTE: The Single Exception to This System is The RGP800 Series of Fast Recovery Diodes. These diodes are provided in a TO-220AC Package. Additionally, These Products ARE NOT SOFT GLASS DIODES.

1N4148, 1N4933 - JEDEC Type Designation

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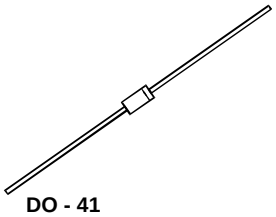
SECTION A

SINGLE DIODE SCHOTTKY RECTIFIERS

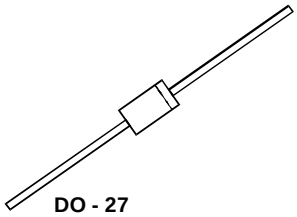
AXIAL LEAD DO-41 AND DO-27 PACKAGES

1 TO 5 AMPERES

20 TO 100 VOLTS



DO - 41



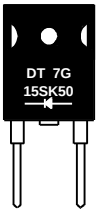
DO - 27

2 PIN TO-220AC AND TO-247AC PACKAGES

6 TO 30 AMPERES

30 TO 100 VOLTS

TO - 220AC



TO - 247AC

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Data Sheet No. SBDA-101-1B

1 AMP SCHOTTKY BARRIER RECTIFIERS

FEATURES

- Metal semiconductor junction with guard ring
- Epitaxial Construction
- Low forward voltage drop
- High current capacity
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

MECHANICAL DATA

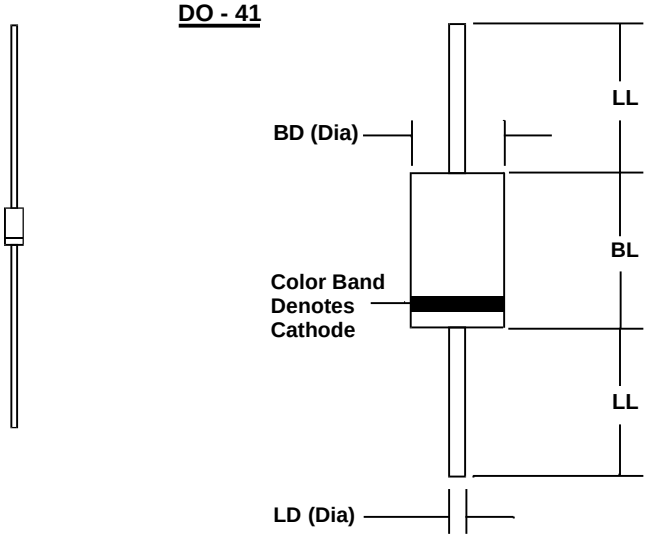
- Case: JEDEC DO-41, molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.012 Ounces (0.34 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-41 PACKAGE

SERIES 1N5817 - 1N5819

DO - 41



Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.160	4.1	0.205	5.2
BD	0.103	2.6	0.107	2.7
LL	1.00	25.4		
LD	0.028	0.71	0.034	0.86

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS			UNITS
Series Number		1N5817	1N5818	1N5819	
Maximum DC Blocking Voltage	V_{RM}	20	30	40	VOLTS
Maximum RMS Voltage	V_{RMS}	14	21	28	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	20	30	40	
Average Forward Rectified Current @ T_L = 90 °C (T_L measured on cathode lead, 1/32 in. from case)	I_O	1			AMPS
Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load)	I_{FSM}	25			
Maximum Forward Voltage at 1 Amp DC	V_{FM}	0.45	0.55	0.6	VOLTS
Maximum Forward Voltage at 3 Amps DC	V_{FM}	0.75	0.875	0.9	
Maximum Average DC Reverse Current @ T_L = 25°C At Rated DC Blocking Voltage (Note 1) @ T_L = 100°C	I_{RM}	1 10			mA
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	80			°C/W
Typical Junction Capacitance (Note 2)	C_J	110			pF
Junction Operating Temperature Range	T_J	-65 to +125			°C
Storage Temperature Range	T_{STG}	-65 to +150			

NOTES: (1) Lead temperature reference is cathode lead 1/32 in from case.
(2) Measured at 1MHz & applied reverse voltage of 4 volts

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1 AMP SCHOTTKY BARRIER RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES 1N5817 - 1N5819

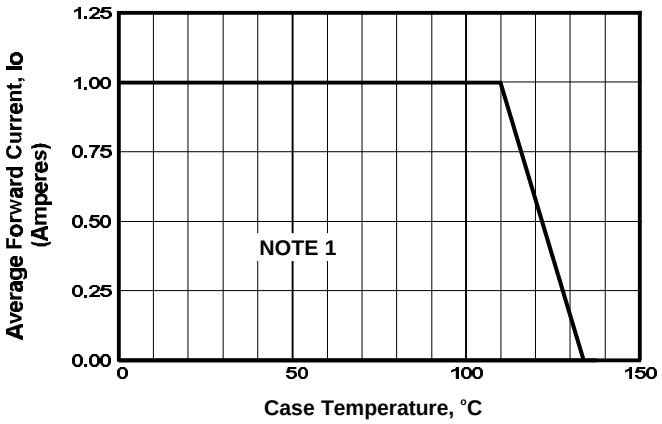

FIGURE 1. FORWARD CURRENT DERATING CURVE

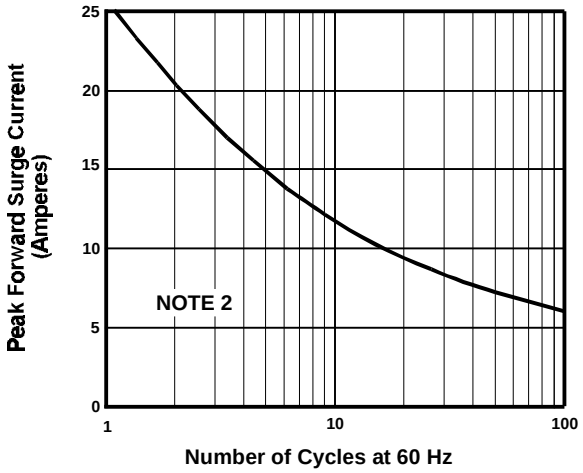

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

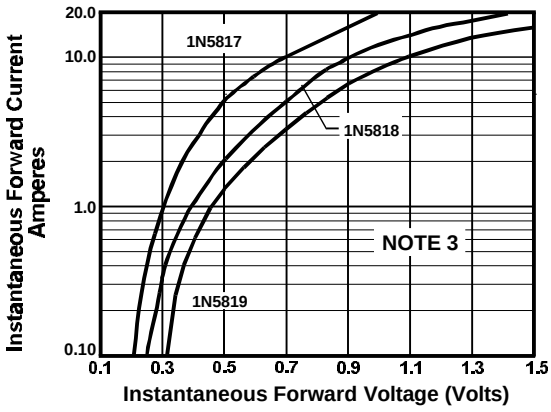

FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

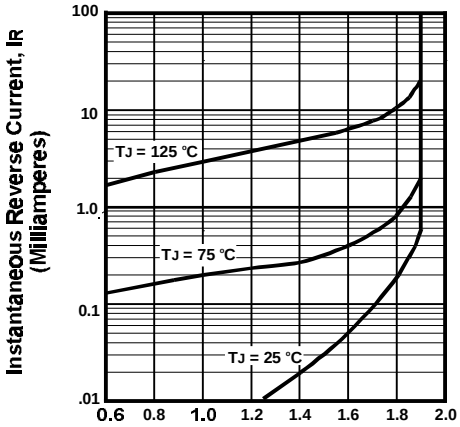

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

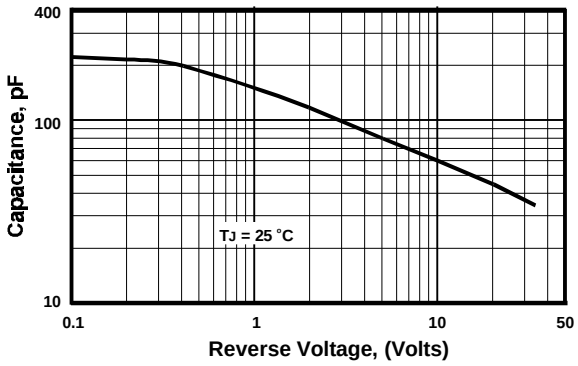

FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) Single Phase, Half Wave, 60 Hz, Resistive or Inductive Load, 0.375" (9mm) Lead Length

(2) JEDEC Method, 8.3 mSec. Single Half Sine Wave

(3) T_J = 25 °C, Pulse Width = 300 μSec, 1.0% Duty Cycle

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Data Sheet No. SBDA-102-1B

1 AMP SCHOTTKY BARRIER RECTIFIERS

FEATURES

- Metal semiconductor junction with guard ring
- Epitaxial Construction
- Low forward voltage drop
- High current capacity
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

MECHANICAL DATA

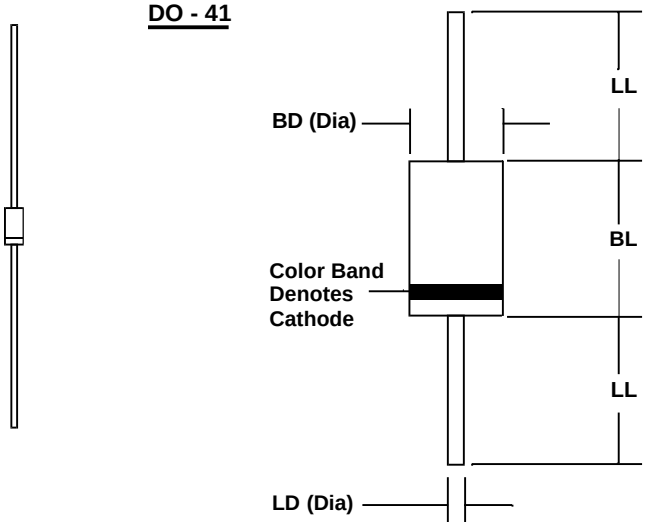
- Case: JEDEC DO-41, molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.012 Ounces (0.34 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-41 PACKAGE

SERIES SK102 - SK110

DO - 41



Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.160	4.1	0.205	5.2
BD	0.103	2.6	0.107	2.7
LL	1.00	25.4		
LD	0.028	0.71	0.034	0.86

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS						UNITS
Series Number		SK102	SK104	SK106	SK107	SK108	SK110	
Maximum DC Blocking Voltage	V_{RM}	20	40	60	70	80	100	VOLTS
Maximum RMS Voltage	V_{RMS}	14	28	42	49	56	70	VOLTS
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	20	40	60	70	80	100	VOLTS
Average Forward Rectified Current @ T_L = 90 °C (T_L measured on cathode lead, 1/32 in. from case)	I_O	1						AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	40						AMPS
Maximum Forward Voltage at 1 Amp DC	V_{FM}	0.5		0.7		0.8		VOLTS
Maximum Average DC Reverse Current @ T_L = 25 °C At Rated DC Blocking Voltage (Note 1) @ T_L = 100°C	I_{RM}	0.5 10				0.1 5		mA
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	15						°C/W
Typical Junction Capacitance (Note 2)	C_J	110						pF
Junction Operating Temperature Range	T_J	-65 to +125				-65 to +150		°C
Storage Temperature Range	T_{STG}	-65 to +150						°C

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NOTES: (1) Lead temperature reference is cathode lead 1/32 in from case.
(2) Measured at 1MHz & applied reverse voltage of 4 volts

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1 AMP SCHOTTKY BARRIER RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES SK102 - SK107 and SERIES SK108 - SK110

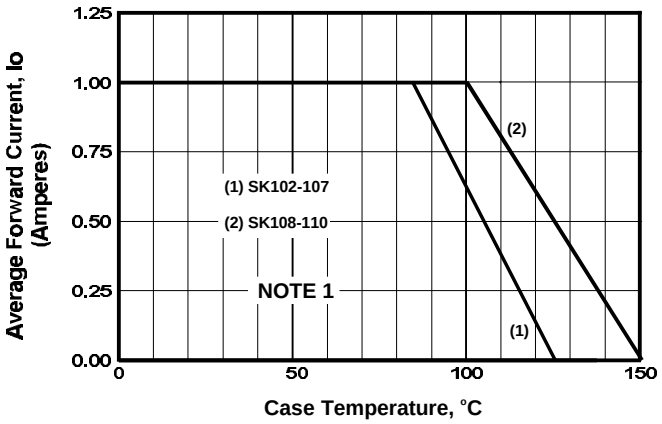

FIGURE 1. FORWARD CURRENT DERATING CURVE

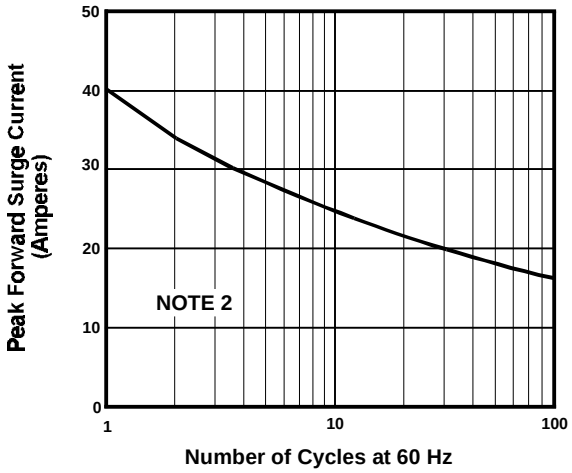

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

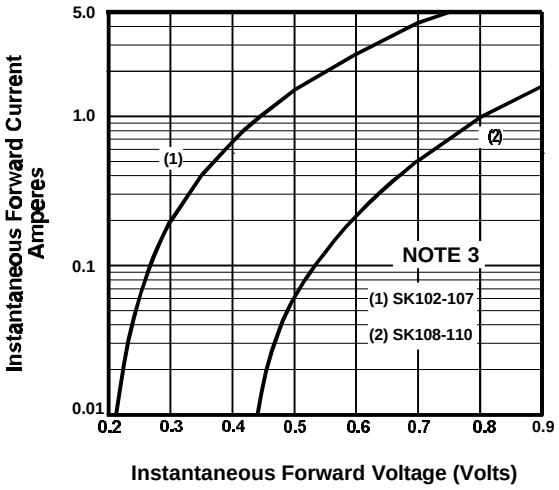

FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

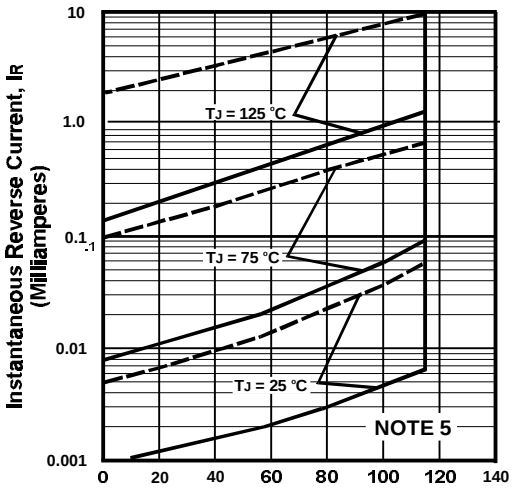

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

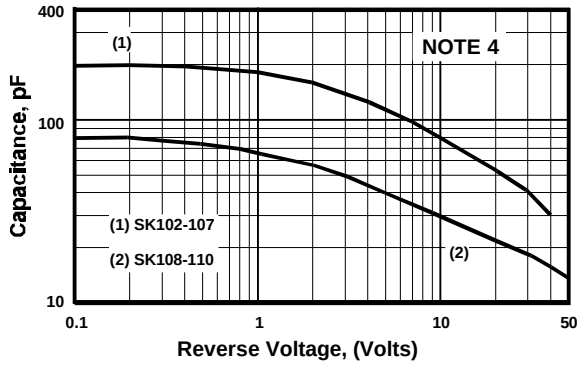

FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) Single Phase, Half Wave, 60 Hz, Resistive or Inductive Load, 0.375" (9mm) Lead Length

(2) JEDEC Method, 8.3 mSec. Single Half Sine Wave, Tc = 95 °C

(3) T_J = 25 °C, Pulse Width = 300 µSec, 2.0% Duty Cycle

(4) T_J = 25 °C, f = 1MHz, V_{SIG} = 50 mV P-P

(5) Legend for Figure 4, Typical Reverse Characteristics:

- - - - - SK102-107

——— SK108-110

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3 AMP SCHOTTKY BARRIER RECTIFIERS

FEATURES

- Metal semiconductor junction with guard ring
- Epitaxial Construction
- Low forward voltage drop
- High current capacity
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

MECHANICAL DATA

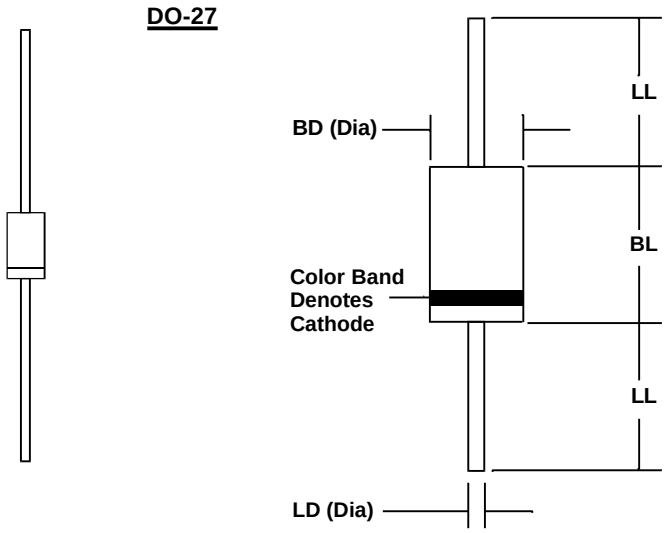
- Case: JEDEC DO-27, molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.04 Ounces (1.12 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-27 PACKAGE

SERIES 1N5820 - 1N5822

DO-27



Sym	Minimum		Maximum	
	In	mm	In	mm
BL			0.365	9.28
BD			0.205	5.2
LL	1.00	25.4		
LD	0.048	1.2	0.052	1.3

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS			UNITS
Series Number		1N5820	1N5821	1N5822	
Maximum DC Blocking Voltage	V_{RM}	20	30	40	VOLTS
Maximum RMS Voltage	V_{RMS}	14	21	28	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	20	30	40	
Average Forward Rectified Current @ T_L = 90 °C (T_L measured on cathode lead, 1/32 in, from case)	I_O	3			AMPS
Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load)	I_{FSM}	80			
Maximum Forward Voltage at 3 Amps DC	V_{FM}	0.475	0.5	0.525	VOLTS
Maximum Forward Voltage at 9.4 Amps DC	V_{FM}	0.85	0.9	0.95	
Maximum Average DC Reverse Current @ T_A = 25°C At Rated DC Blocking Voltage (Note 1) @ T_A = 100°C	I_{RM}	2 20			mA
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	28			°C/W
Typical Junction Capacitance (Note 2)	C_J	110			pF
Junction Operating Temperature Range	T_J	-65 to +125			°C
Storage Temperature Range	T_{STG}	-65 to +150			

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NOTES: (1) Measured at pulse width 300 μSec & 2.0% duty cycle.
(2) Measured at 1MHz & applied reverse voltage of 4 volts.

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3 AMP SCHOTTKY BARRIER RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES 1N5820 - 1N5822

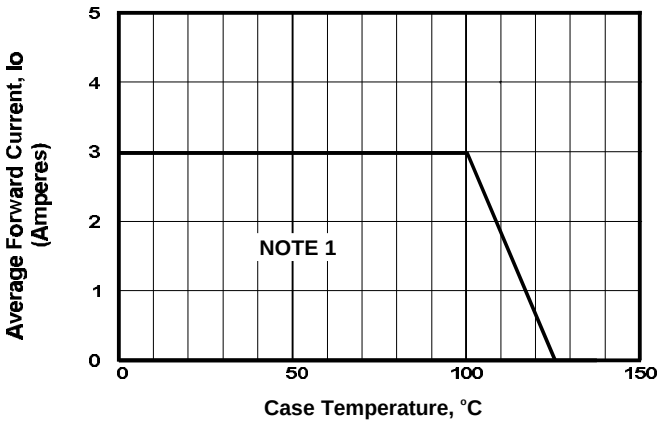

FIGURE 1. FORWARD CURRENT DERATING CURVE

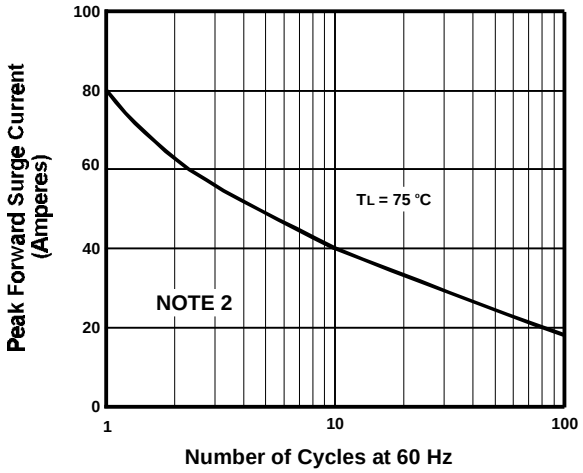

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

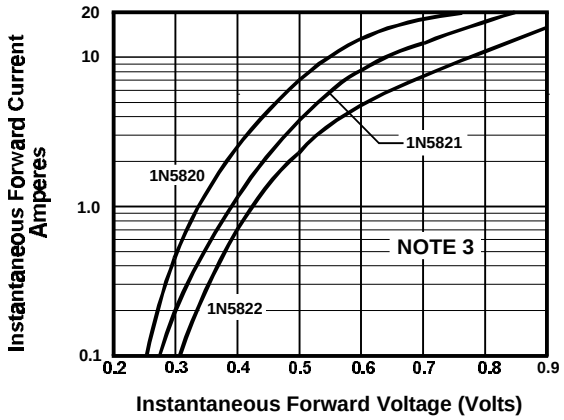

FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

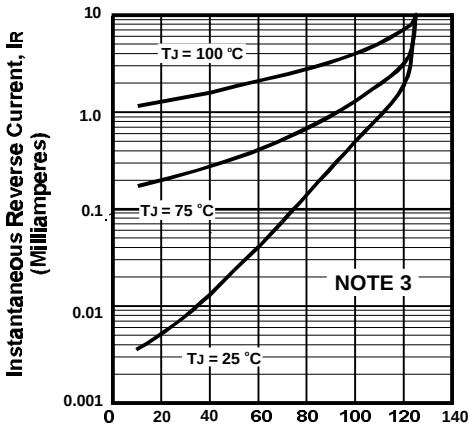

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

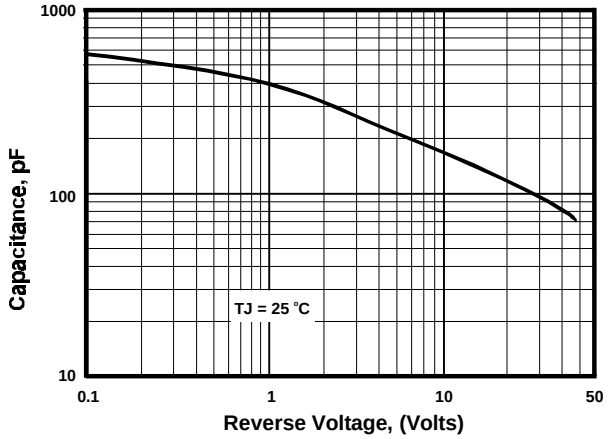

FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) Single Phase, Half Wave, 60 Hz, Resistive or Inductive Load, 0.375" (9mm) Lead Length

(2) JEDEC Method, 8.3 mSec. Single Half Sine Wave

(3) T_J = 25 °C, Pulse Width = 300 μSec, 2.0% Duty Cycle

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Data Sheet No. SBDA-302-1B

3 AMP SCHOTTKY BARRIER RECTIFIERS

FEATURES

- Metal semiconductor junction with guard ring
- Epitaxial Construction
- Low forward voltage drop
- High current capacity
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

MECHANICAL DATA

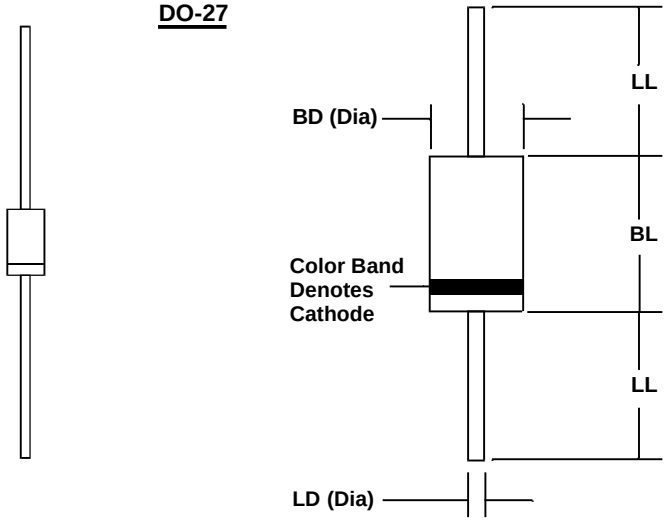
- Case: JEDEC DO-27 molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.04 Ounces (1.12 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-27 PACKAGE

SERIES SK302 - SK310

DO-27



Sym	Minimum		Maximum	
	In	mm	In	mm
BL			0.365	9.28
BD			0.205	5.2
LL	1.00	25.4		
LD	0.048	1.2	0.052	1.3

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
Series Number		SK302	SK304	SK306	SK307	SK310	
Maximum DC Blocking Voltage	V_{RM}	20	40	60	70	100	VOLTS
Maximum RMS Voltage	V_{RMS}	14	28	42	56	70	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	20	40	60	70	100	
Average Forward Rectified Current @ T_L = 90 °C (T_L measured on cathode lead, 1/32 in. from case))	I_O	3					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	120				100	
Maximum Forward Voltage at 3 Amps DC	V_{FM}	0.5		0.7		0.8	VOLTS
Maximum Average DC Reverse Current @ T_L= 25 °C At Rated DC Blocking Voltage (Note 1) @ T_L = 100 °C	I_{RM}	0.5 20					mA
Typical Thermal Resistance, Junction to Ambient	$R\theta_{JA}$	20					°C/W
Typical Junction Capacitance (Note 2)	C_J	250					pF
Junction Operating Temperature Range	T_J	-65 to +125				-65 to +150	°C
Storage Temperature Range	T_{STG}	-65 to +150					

4.97fsbda302

NOTES: (1) Lead temperature reference is cathode lead 1/32 in from case.
(2) Measured at 1MHz & applied reverse voltage of 4 volts

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3 AMP SCHOTTKY BARRIER RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES SK302 - SK310

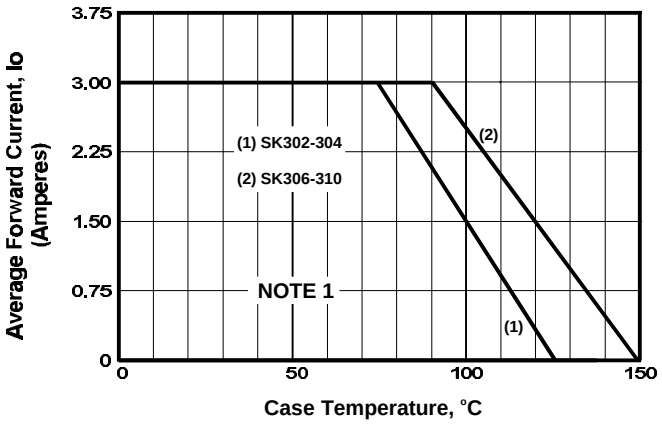

FIGURE 1. FORWARD CURRENT DERATING CURVE

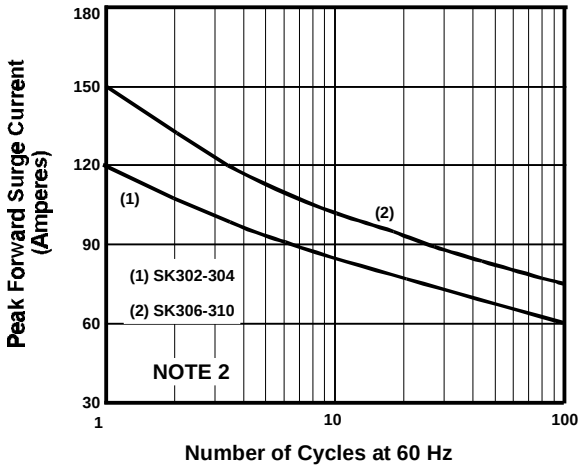

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

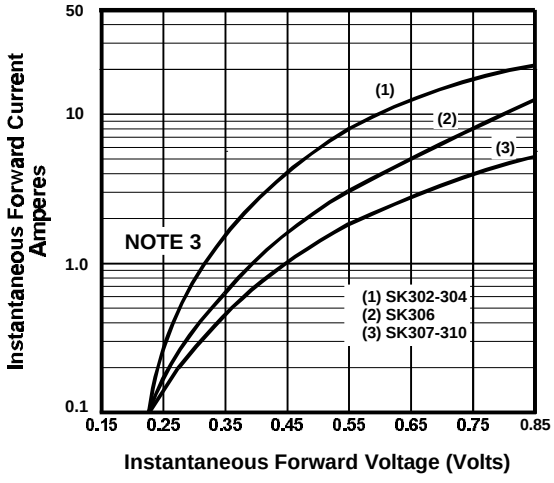

FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

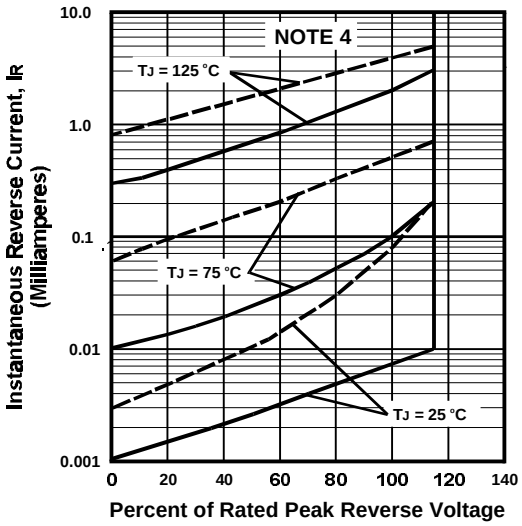

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

NOTES

(1) Single Phase, Half Wave, 60 Hz, Resistive or Inductive Load, 0.375" (9mm) Lead Length

(2) JEDEC Method, 8.3 mSec. Single Half Sine Wave, Tc = 95 °C

(3) TJ = 25 °C, Pulse Width = 300 µSec, 2.0% Duty Cycle

(4) Legend for Figure 4, Typical Reverse Characteristics:

– – – – – SK302-306

——— SK307-310

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Data Sheet No. SBDA-501-1B

5 AMP SCHOTTKY BARRIER RECTIFIERS

FEATURES

- Metal semiconductor junction with guard ring
- Epitaxial Construction
- Low forward voltage drop
- High current capacity
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

MECHANICAL DATA

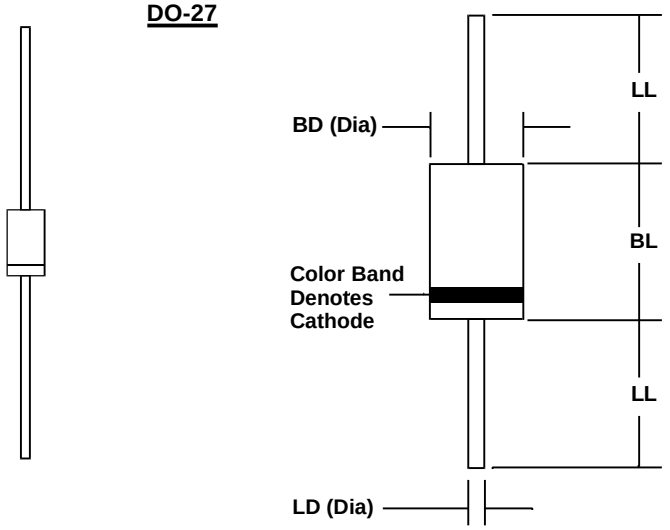
- Case: JEDEC DO-27, molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.04 Ounces (1.12 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-27 PACKAGE

SERIES SK502 - SK510

DO-27



Sym	Minimum		Maximum	
	In	mm	In	mm
BL			0.365	9.28
BD			0.205	5.2
LL	1.00	25.4		
LD	0.048	1.2	0.052	1.3

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
Series Number		SK502	SK504	SK506	SK507	SK510	
Maximum DC Blocking Voltage	V_{RM}	20	40	60	70	100	VOLTS
Maximum RMS Voltage	V_{RMS}	14	28	42	56	70	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	20	40	60	70	100	
Average Forward Rectified Current @ T_L = 90 °C (TL measured on cathode lead, 1/32 in. from case)	I_O	5					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	150		120			
Maximum Forward Voltage at 5 Amps DC	V_{FM}	0.55		0.70		0.85	VOLTS
Maximum Average DC Reverse Current @ T_A = 25 °C At Rated DC Blocking Voltage (Note 1) @ T_A = 100 °C	I_{RM}	0.5 50		0.5 25			mA
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	15					°C/W
Typical Junction Capacitance (Note 2)	C_J	250					pF
Junction Operating Temperature Range	T_J	-65 to +125				-65 to +150	°C
Storage Temperature Range	T_{STG}	-65 to +150					

4.97fsbda501

NOTES: (1) Measured at pulse width 300 μSec and 2% duty cycle.
(2) Measured at 1MHz and an applied reverse voltage of 4 volts.

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5 AMP SCHOTTKY BARRIER RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES SK502 - SK510

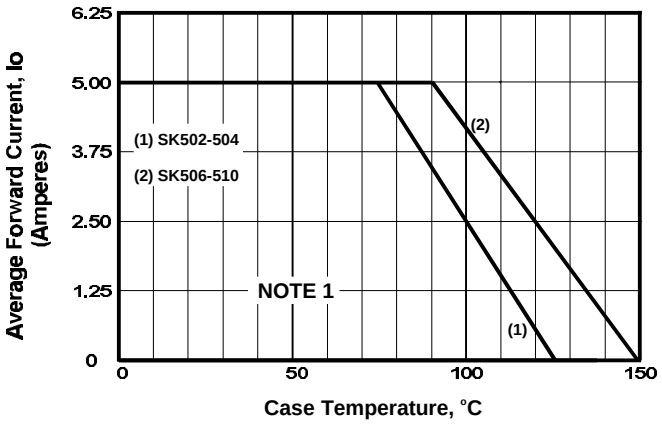

FIGURE 1. FORWARD CURRENT DERATING CURVE

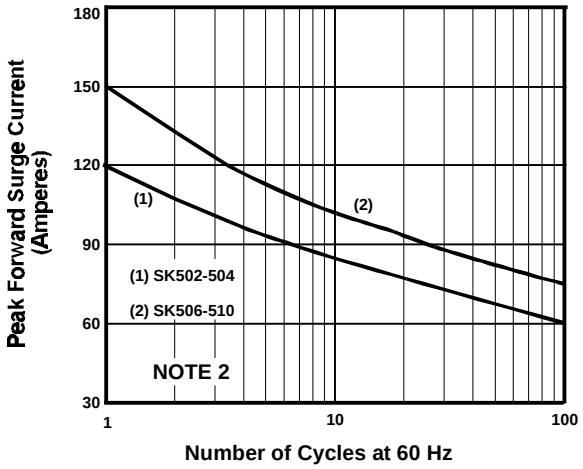

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

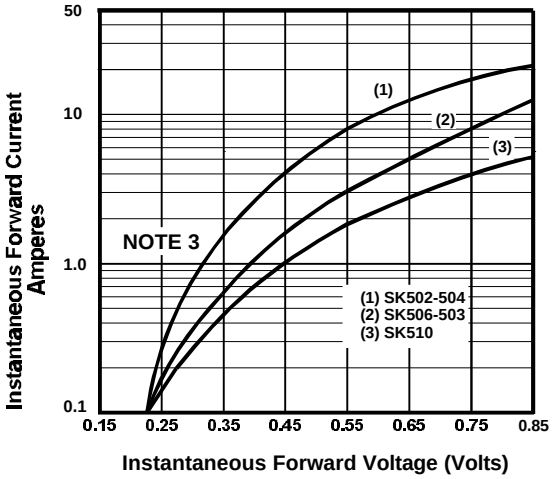

FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

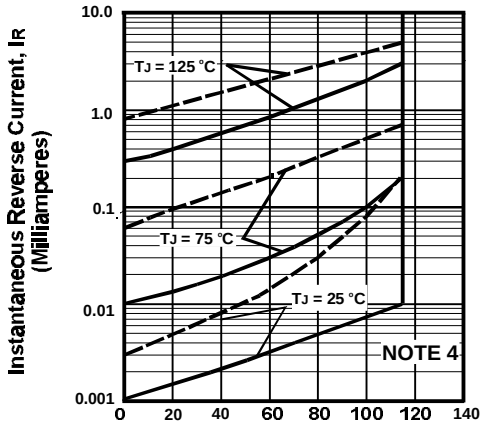

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

NOTES

(1) Single Phase, Half Wave, 60 Hz, Resistive or Inductive Load, 0.375" (9mm) Lead Length

(2) JEDEC Method, 8.3 mSec. Single Half Sine Wave, Tc = 95 °C

(3) T_J = 25 °C, Pulse Width = 300 μSec, 2.0% Duty Cycle

(4) Legend for Figure 4, Typical Reverse Characteristics:

– – – – – SK502-504

——— SK506-510

4.97bsbda501

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6 AMP SCHOTTKY BARRIER RECTIFIERS

FEATURES

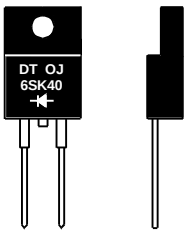
- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability
- High reliability

MECHANICAL DATA

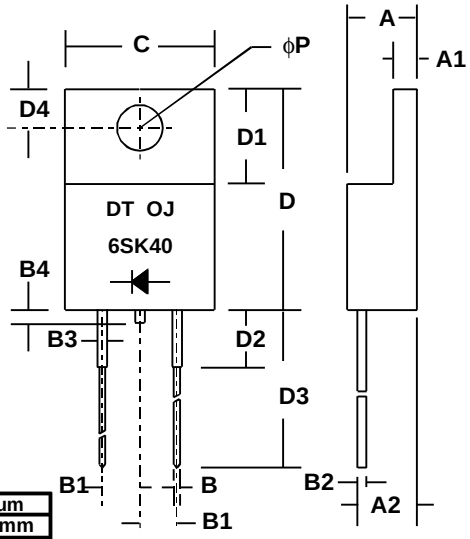
- Case: TO-220 molded plastic (Fully Insulated)
  (U/L Flammability Rating 94V-0)
- Terminals: Rectangular pins w/ standoff
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Diode depicted on product
- Mounting Position: Any
- Weight: 0.06 Ounces (1.7 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF TO-220AC PACKAGE



FULLY INSULATED PACKAGE



ITO - 220AC

SERIES 6SK40 - 6SK100

Sym	Minimum		Maximum	
	in	mm	in	mm
A			0.187	4.75
A1	0.121*	4.75*		
A2	0.14*	3.56*		
B	0.035	0.9	0.043	1.1
B1	0.09	2.3	0.102	2.6
B2	0.025*	0.64*		
B3	0.050*	1.27*		
B4			0.04	1.0
C			0.413	10.5
D	0.59	15.0	0.61	15.5
D1	0.262*	6.6*		
D2			0.16	4.0
D3	0.54	13.7	0.60	15.2
D4	0.108*	2.75*		
ϕP	0.126*	3.2*		

* These dimensions are "Typicals".

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
Series Number		6SK40	6SK50	6SK60	6SK70	6SK100	
Maximum DC Blocking Voltage	V_{RM}	40	50	60	70	100	VOLTS
Maximum RMS Voltage	V_{RMS}						
Maximum Peak Recurrent Reverse Voltage	V_{RRM}						
Average Forward Rectified Current @ T_C =100 °C	I_O	6					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	120					
Maximum Forward Voltage at 6 Amps DC	V_{FM}	0.55		0.65		0.85	VOLTS
Maximum Average DC Reverse Current @ T_J = 25 °C At Rated DC Blocking Voltage @ T_J = 100 °C	I_{RM}	0.5 50		0.1 25			mA
Typical Thermal Resistance, Junction to Case (on heat sink)	$R_{\theta JC}$	3					°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150					°C

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6 AMP SCHOTTKY BARRIER RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES 6SK40 - 6SK100

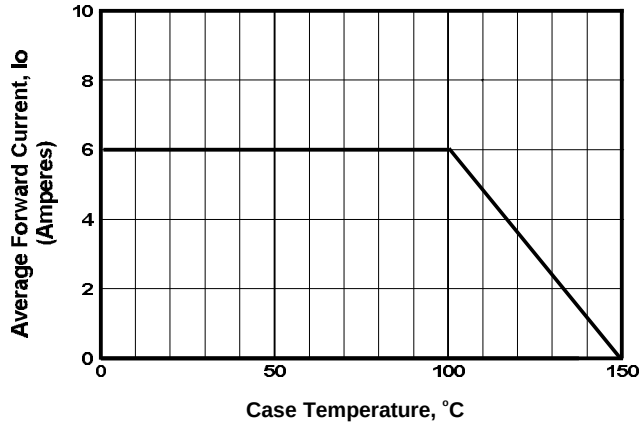

FIGURE 1. FORWARD CURRENT DERATING CURVE

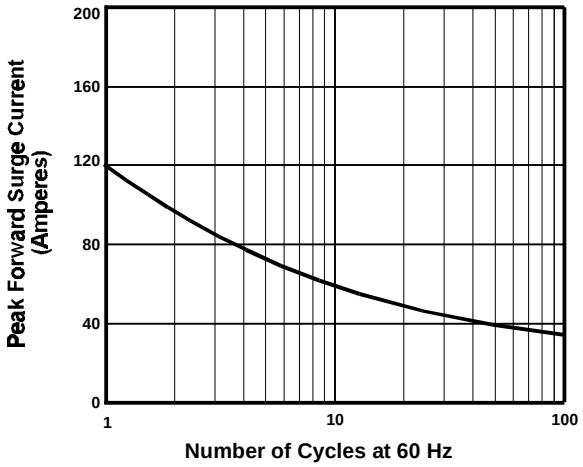

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

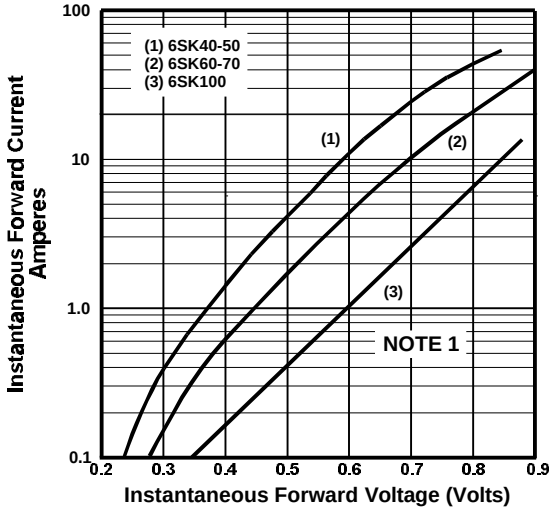

FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

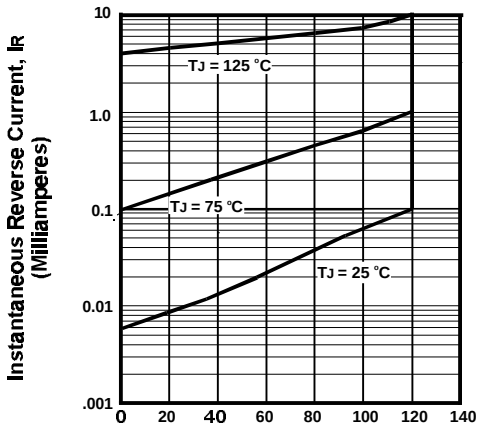

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

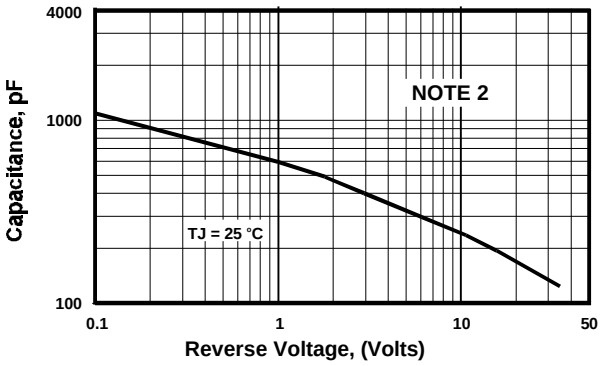

FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) T_J = 25 °C, Pulse Width = 300 μSec, 2.0% Duty Cycle

(2) T_J = 25 °C, f = 1 MHz, V_{SIG} = 50 mV P-P

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Data Sheet No. SBDR-1201-1B

12 AMP SCHOTTKY BARRIER RECTIFIERS

FEATURES

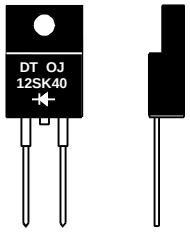
- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability
- High reliability

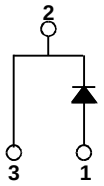
MECHANICAL DATA

- Case: TO-220 molded plastic (Fully Insulated)
  (U/L Flammability Rating 94V-0)
- Terminals: Rectangular pins w/ standoff
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Diode depicted on product
- Mounting Position: Any
- Weight: 0.06 Ounces (1.7 Grams)

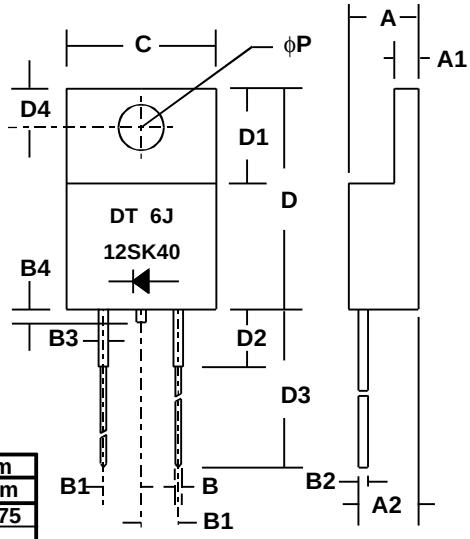
MECHANICAL SPECIFICATION

ACTUAL SIZE OF TO-220AC PACKAGE





FULLY INSULATED PACKAGE



ITO - 220AC

SERIES 12SK40 - 12SK100

Sym	Minimum		Maximum	
	in	mm	in	mm
A			0.187	4.75
A1	0.121*	4.75*		
A2	0.14*	3.56*		
B	0.035	0.9	0.043	1.1
B1	0.09	2.3	0.102	2.6
B2	0.025*	0.64*		
B3	0.050*	1.27*		
B4			0.04	1.0
C			0.413	10.5
D	0.59	15.0	0.61	15.5
D1	0.262*	6.6*		
D2			0.16	4.0
D3	0.54	13.7	0.60	15.2
D4	0.108*	2.75*		
ϕP	0.126*	3.2*		

*** These dimensions are "Typicals".**

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
Series Number		12SK40	12SK50	12SK60	12SK70	12SK100	
Maximum DC Blocking Voltage	V_{RM}	40	50	60	70	100	VOLTS
Maximum RMS Voltage	V_{RMS}						
Maximum Peak Recurrent Reverse Voltage	V_{RRM}						
Average Forward Rectified Current @ T_C = 100 °C	I_O	12					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	180					
Maximum Forward Voltage at 12 Amps DC	V_{FM}	0.58		0.68		0.85	VOLTS
Maximum Average DC Reverse Current @ T_J = 25 °C At Rated DC Blocking Voltage @ T_J = 100 °C	I_{RM}	0.5 50		0.1 25			mA
Typical Thermal Resistance, Junction to Case (on heat sink)	$R_{\theta JC}$	3					°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150					°C

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12 AMP SCHOTTKY BARRIER RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES 12SK40 - 12SK100

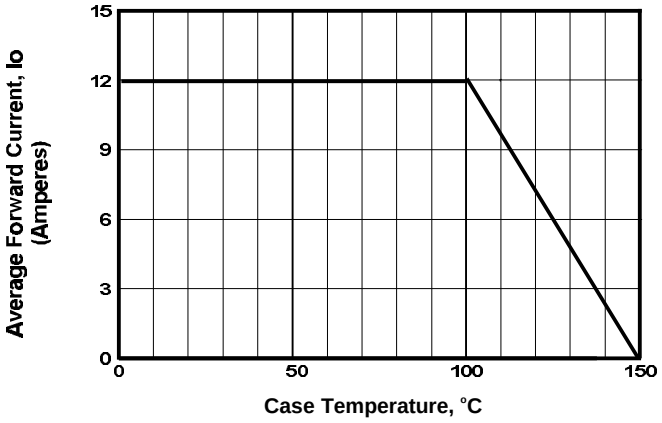

FIGURE 1. FORWARD CURRENT DERATING CURVE

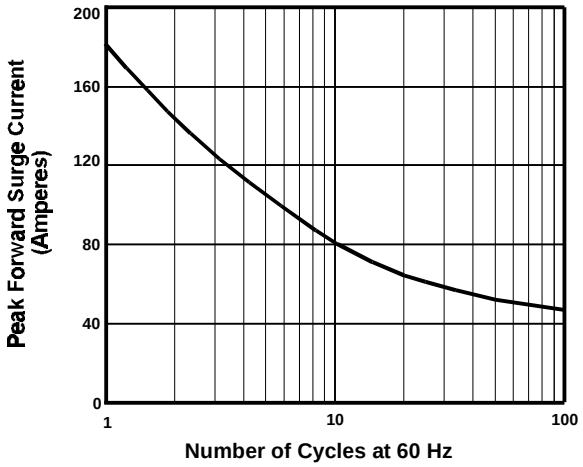

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

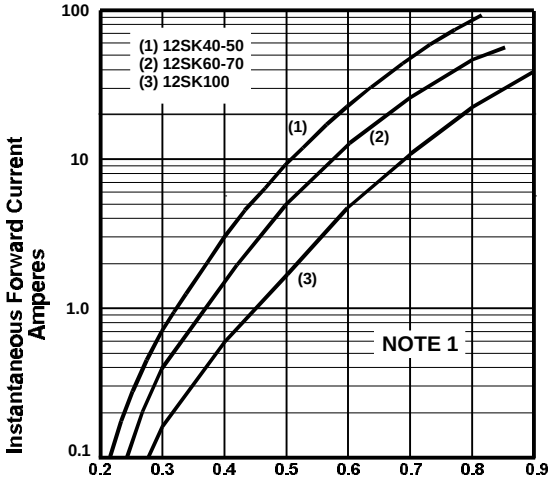

FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

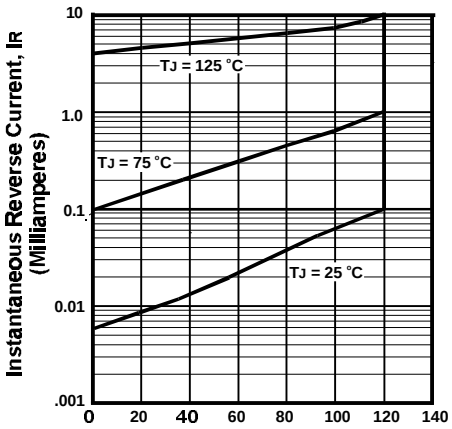

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

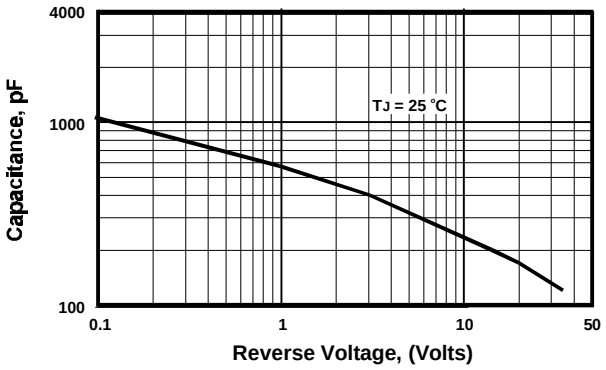

FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) T_J = 25 °C, Pulse Width = 300 μSec, 2.0% Duty Cycle

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Data Sheet No. SBDR-1601-1B

16 AMP SCHOTTKY BARRIER RECTIFIERS

FEATURES

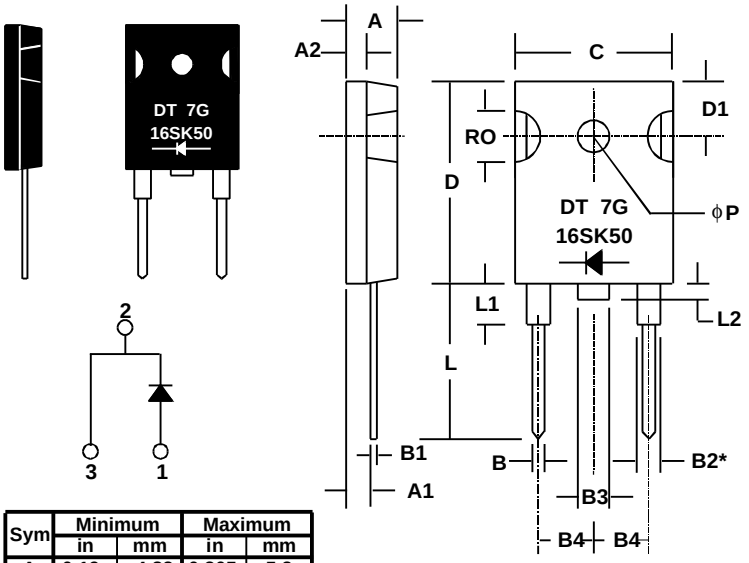
- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability
- High reliability

MECHANICAL DATA

- Case: TO-247 (TO-3P) molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Rectangular pins w/ standoff
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Diode depicted on product
- Mounting Position: Any
- Weight: 0.19 Ounces (5.5 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE TO-247AC (TO-3PAC) PACKAGE



Sym	Minimum		Maximum	
	in	mm	in	mm
A	0.19	4.82	0.205	5.2
A1	0.087	2.21	0.102	2.6
A2	0.075	1.9	0.085	2.16
B	0.045	1.14	0.055	1.4
B1	0.022	0.56	0.032	0.81
B2	0.079	2.01	0.094	2.39
B3	0.116	2.95	0.126	3.2
B4			0.215	5.46
C	0.602	15.29	0.625	15.88
D	0.776	19.7	0.799	20.3
D1	0.209	5.31	0.224	5.69
L	0.559	14.2	0.582	14.8
L1	0.146	3.71	0.189	4.8
L2			0.063	1.6
RO	0.209	5.3	0.224	5.7
ϕP	0.13	3.3	0.145	3.7

* Applies to Pins 1 and 3

TO-247AC (TO - 3PAC)

SERIES 16SK40 - 16SK100

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
Series Number		16SK40	16SK50	16SK60	16SK70	16SK100	
Maximum DC Blocking Voltage	V_{RM}	40	50	60	70	100	VOLTS
Maximum RMS Voltage	V_{RMS}						
Maximum Peak Recurrent Reverse Voltage	V_{RRM}						
Average Forward Rectified Current @ T_C = 100 °C	I_O	16					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	240					
Maximum Forward Voltage at 16 Amps DC	V_{FM}	0.55		0.65		0.85	VOLTS
Maximum Average DC Reverse Current @ T_J = 25 °C At Rated DC Blocking Voltage @ T_J = 100 °C	I_{RM}	1 50		0.5 25			mA
Typical Thermal Resistance, Junction to Case (on heat sink)	$R_{\theta JC}$	3					°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150					°C

DIOTEC ELECTRONICS CORP.
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16 AMP SCHOTTKY BARRIER RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES 16SK40 - 16SK100

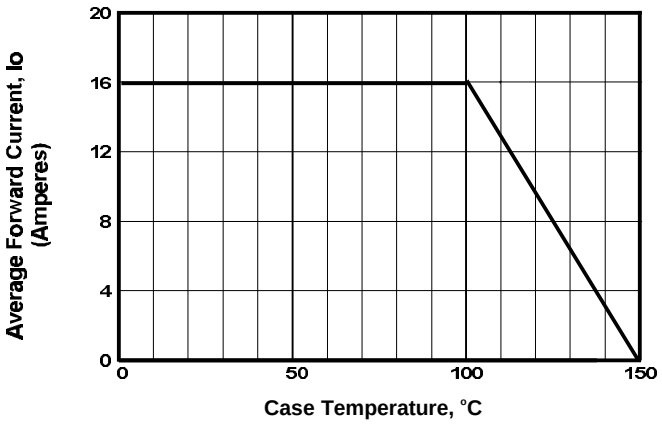

FIGURE 1. FORWARD CURRENT DERATING CURVE

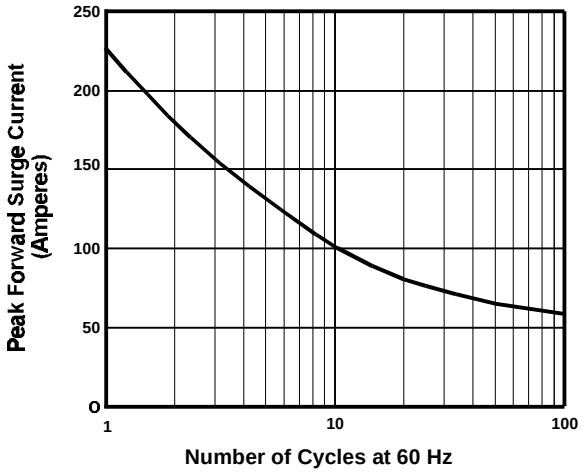

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

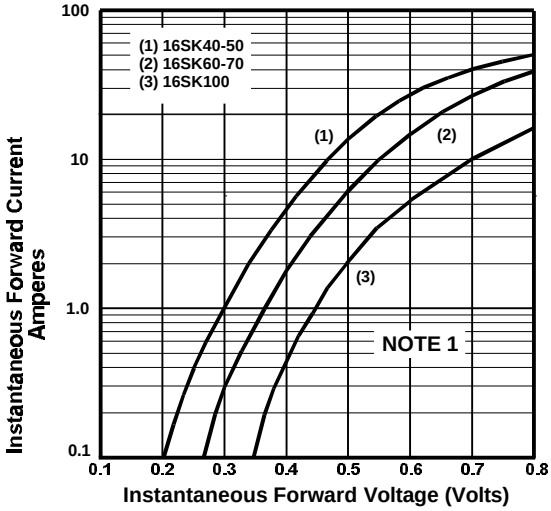

FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

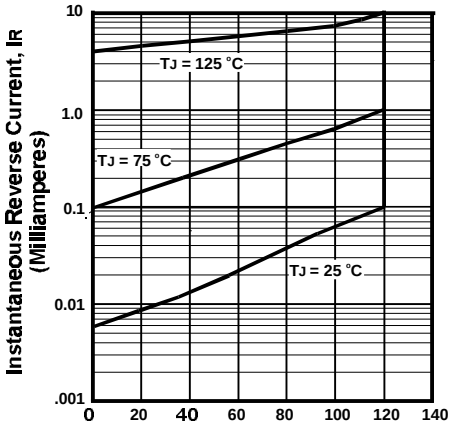

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

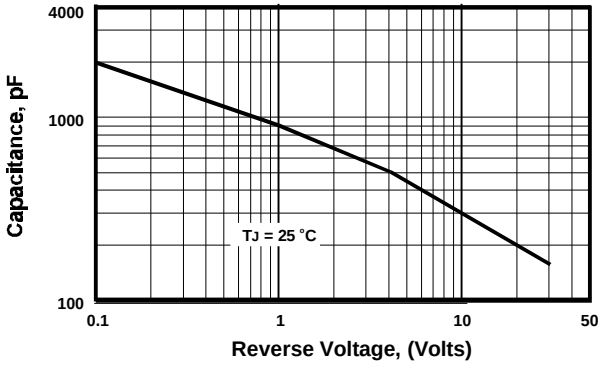

FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) T_J = 25 °C, Pulse Width = 300 μSec, 2.0% Duty Cycle

4.97bsbdr160

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Data Sheet No. SBDR-3001-1B

30 AMP SCHOTTKY BARRIER RECTIFIERS

FEATURES

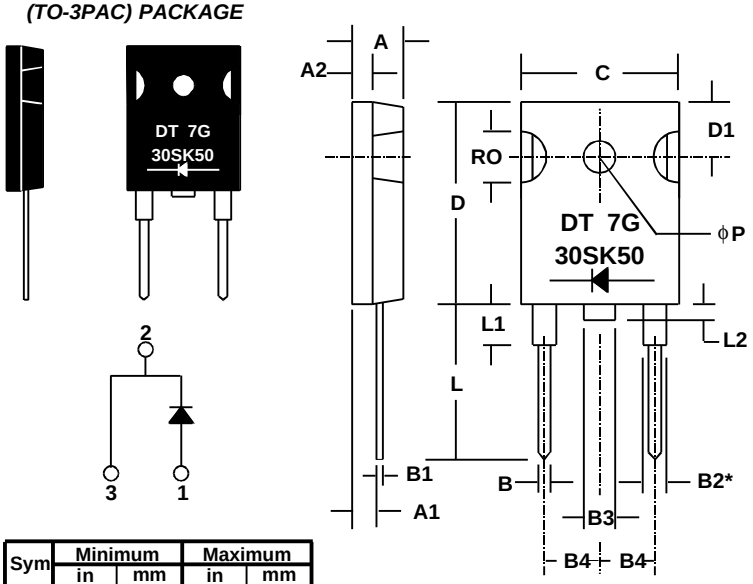
- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability
- High reliability

MECHANICAL DATA

- Case: TO-247 (TO-3P) molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Rectangular pins w/ standoff
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Diode depicted on product
- Mounting Position: Any
- Weight: 0.20 Ounces (5.5 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE TO-247AC (TO-3PAC) PACKAGE



Sym	Minimum		Maximum	
	in	mm	in	mm
A	0.19	4.82	0.205	5.2
A1	0.087	2.21	0.102	2.6
A2	0.075	1.9	0.085	2.16
B	0.045	1.14	0.055	1.4
B1	0.022	0.56	0.032	0.81
B2	0.079	2.01	0.094	2.39
B3	0.116	2.95	0.126	3.2
B4			0.215	5.46
C	0.602	15.29	0.625	15.88
D	0.776	19.7	0.799	20.3
D1	0.209	5.31	0.224	5.69
L	0.559	14.2	0.582	14.8
L1	0.146	3.71	0.189	4.8
L2			0.063	1.6
RO	0.209	5.3	0.224	5.7
ϕP	0.13	3.3	0.145	3.7

* Applies to Pins 1 and 3

TO-247AC (TO-3PAC)

SERIES 30SK40 - 30SK70

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
Series Number		30SK30	30SK40	30SK50	30SK60	30SK70	
Maximum DC Blocking Voltage	V_{RM}	30	40	50	60	70	VOLTS
Maximum RMS Voltage	V_{RMS}						
Maximum Peak Recurrent Reverse Voltage	V_{RRM}						
Average Forward Rectified Current @ T_C = 100 °C	I_O	30					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	600			450		
Maximum Forward Voltage at 30 Amps DC	V_{FM}	0.55			0.65	0.85	VOLTS
Maximum Average DC Reverse Current @ T_J = 25 °C At Rated DC Blocking Voltage @ T_J = 100 °C	I_{RM}	1 100					mA
Typical Thermal Resistance, Junction to Case (on heat sink)	$R_{\theta JC}$	1.3					°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150					°C

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30 AMP SCHOTTKY BARRIER RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES 30SK40 - 30SK70

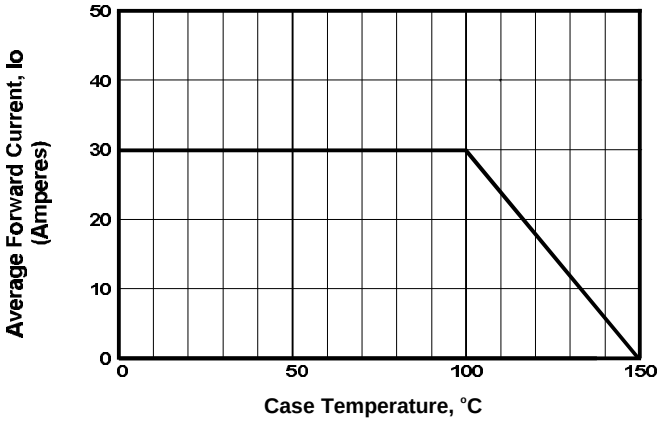

FIGURE 1. FORWARD CURRENT DERATING CURVE

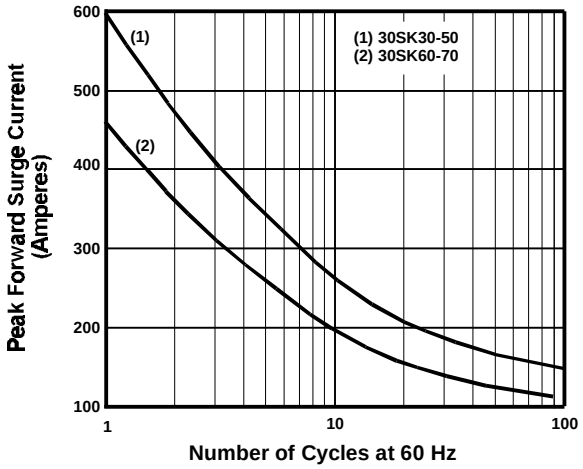

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

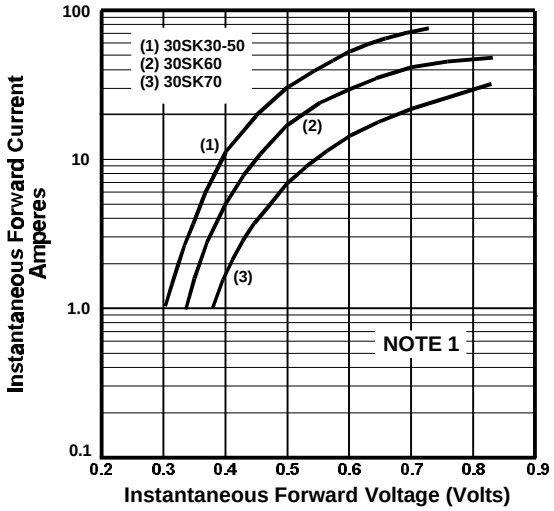

FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

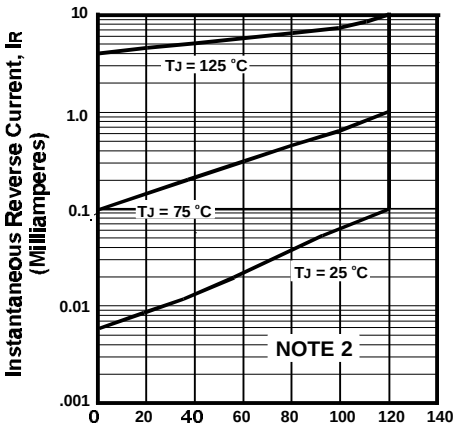

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

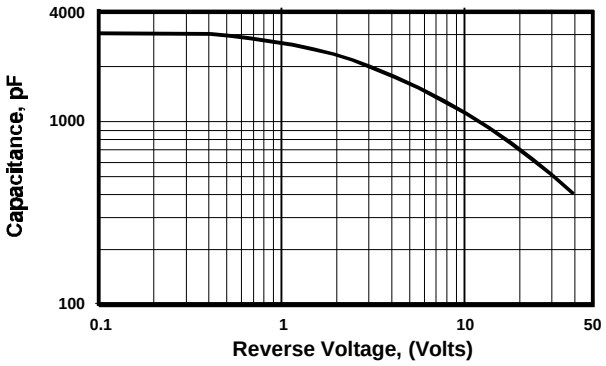

FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) T_J = 25 °C, Pulse Width = 300 μSec, 2.0% Duty Cycle

(2) T_J = 25 °C, f = 1.0 MHz, V_{SIG} = 50 mV P-P

4.97bsbdr300

SECTION B

DUAL DIODE SCHOTTKY RECTIFIERS

3 PIN TO-220AB AND TO-247AB PACKAGES

12 TO 60 AMPERES

30 TO 100 VOLTS

TO - 220AB

TO - 247AB

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Data Sheet No. SBDT-1200-1B

12 AMP SCHOTTKY BARRIER RECTIFIERS

FEATURES

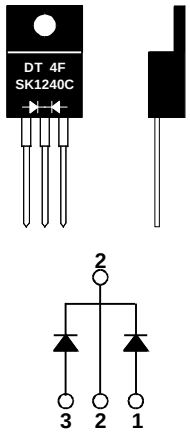
- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability
- High reliability

MECHANICAL DATA

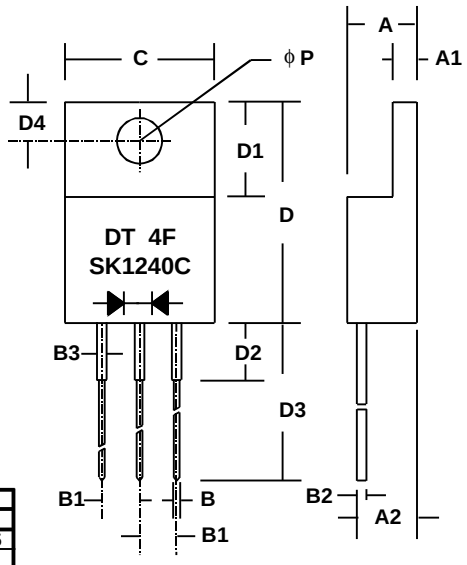
- Case: TO-220 molded plastic (Fully Insulated)
  (U/L Flammability Rating 94V-0)
- Terminals: Rectangular pins w/ standoff
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Diode depicted on product
- Mounting Position: Any
- Weight: 0.06 Ounces (1.75 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF TO-22OAB PACKAGE



FULLY INSULATED PACKAGE



Sym	Minimum		Maximum	
	in	mm	in	mm
A			0.187	4.75
A1	0.055*	1.4*		
A2	0.14*	3.56*		
B	0.035	0.9	0.043	1.1
B1	0.09	2.3	0.102	2.6
B2	0.028*	0.66*		
B3	0.051*	1.3*		
C			0.410	10.4
D	0.59	15.0	0.61	15.5
D1	0.25*	6.4*		
D2			0.16	4.0
D3	0.53	13.5	0.57	14.8
D4	0.108*	2.75*		
ϕP	0.141*	3.58*		

* These dimensions are "Typicals".

ITO-220AB

SERIES SK1240C - SK12100C

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
Series Number		SK 1240C	SK 1250C	SK 1260C	SK 1270C	SK 12100C	
Maximum DC Blocking Voltage	V_{RM}	40	50	60	70	100	VOLTS
Maximum RMS Voltage	V_{RMS}						
Maximum Peak Recurrent Reverse Voltage	V_{RRM}						
Average Forward Rectified Current @ T_C = 100 °C	I_O	12					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	120					
Maximum Forward Voltage Drop (per diode) at 6 Amps DC	V_{FM}	0.55		0.65		0.85	VOLTS
Maximum Average DC Reverse Current @ T_J = 25 °C At Rated DC Blocking Voltage @ T_J = 100 °C	I_{RM}	0.5 50			0.2 10		mA
Typical Thermal Resistance, Junction to Case (on heat sink)	$R_{\theta JC}$	2.5					°C/W
Junction Operating Temperature Range	T_J	-65 to +150					°C
Storage Temperature Range	T_{STG}	-65 to +175					

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12 AMP SCHOTTKY BARRIER RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES SK1240C - SK12100C

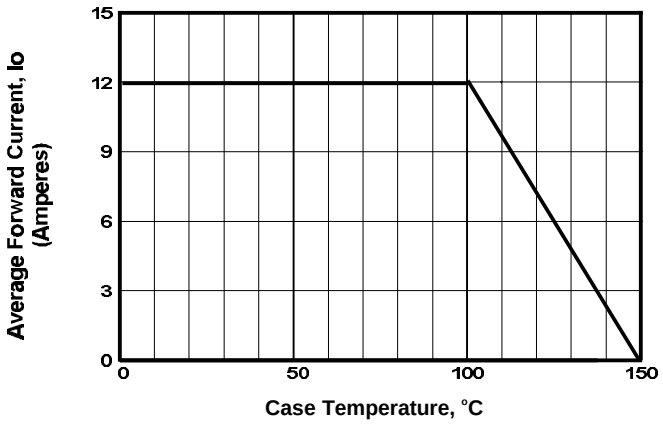

FIGURE 1. FORWARD CURRENT DERATING CURVE

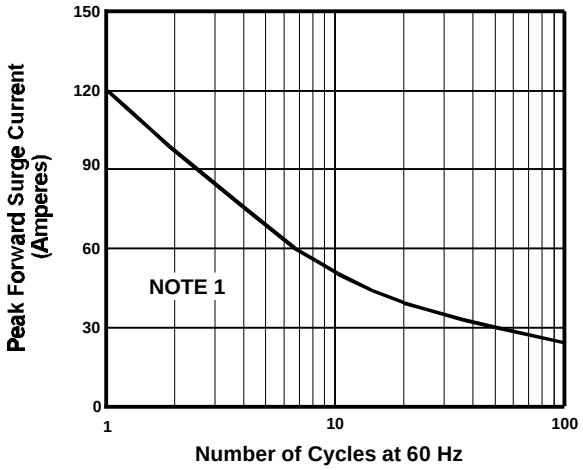

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

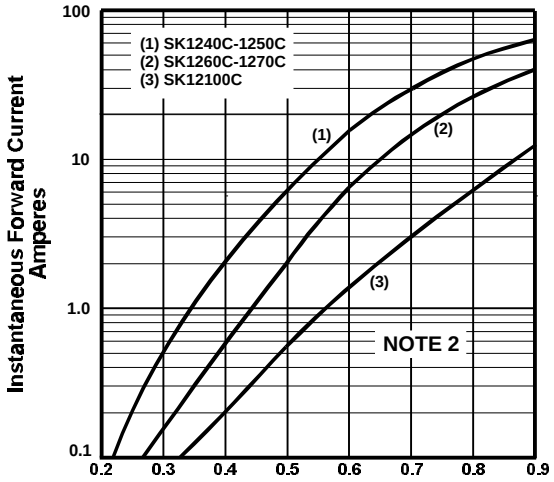

FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

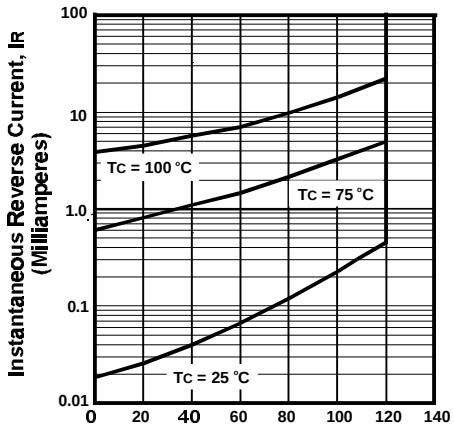

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

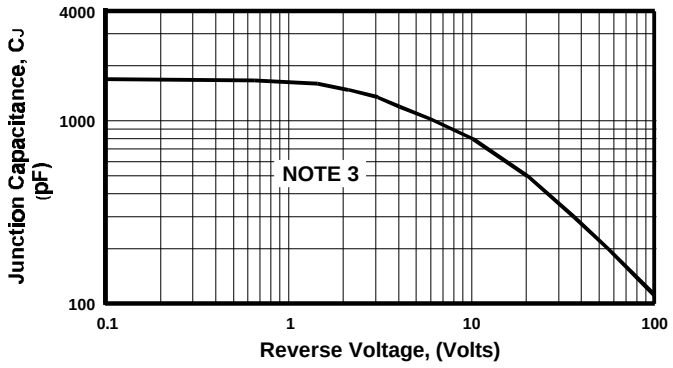

FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) JEDEC Method, 8.3 mSec. Single Half Sine Wave

(2) T_J = 25 °C, Pulse Width = 300 µSec, 2.0% Duty Cycle

(3) T_C =25 °C, f = 1.0 MHz, V_{SIG} = 50 mV P-P

4.97bsbdt12

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Data Sheet No. SBDT-1600-1B

16 AMP SCHOTTKY BARRIER RECTIFIERS

FEATURES

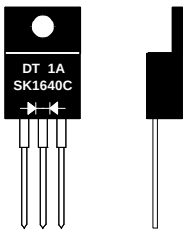
- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability
- High reliability

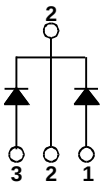
MECHANICAL DATA

- Case: TO-220 molded plastic (Fully Insulated)
  (U/L Flammability Rating 94V-0)
- Terminals: Rectangular pins w/ standoff
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Diode depicted on product
- Mounting Position: Any
- Weight: 0.06 Ounces (1.75 Grams)

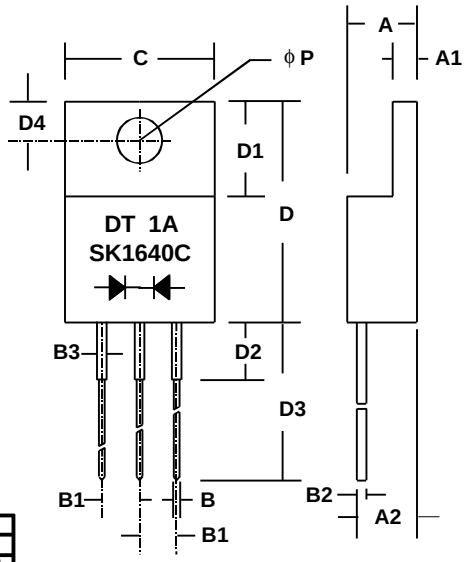
MECHANICAL SPECIFICATION

ACTUAL SIZE OF TO-220AB PACKAGE





FULLY INSULATED PACKAGE



Sym	Minimum		Maximum	
	in	mm	in	mm
A			0.187	4.75
A1	0.055*	1.4*		
A2	0.14*	3.56*		
B	0.035	0.9	0.043	1.1
B1	0.09	2.3	0.102	2.6
B2	0.028*	0.66*		
B3	0.051*	1.3*		
C			0.410	10.4
D	0.59	15.0	0.61	15.5
D1	0.25*	6.4*		
D2			0.16	4.0
D3	0.53	13.5	0.57	14.8
D4	0.108*	2.75*		
ϕP	0.141*	3.58*		

* These dimensions are "Typicals".

ITO-220AB

SERIES SK1640C - SK16100C

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
Series Number		SK 1640C	SK 1650C	SK 1660C	SK 1670C	SK 16100C	
Maximum DC Blocking Voltage	V_{RM}	40	50	60	70	100	VOLTS
Maximum RMS Voltage	V_{RMS}						
Maximum Peak Recurrent Reverse Voltage	V_{RRM}						
Average Forward Rectified Current @ T_C = 110 °C	I_O	16					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	160					
Maximum Forward Voltage Drop (per diode) at 8 Amps DC	V_{FM}	0.55		0.65		0.85	VOLTS
Maximum Average DC Reverse Current @ T_J = 25 °C At Rated DC Blocking Voltage @ T_J = 125 °C	I_{RM}	0.5 50			0.2 10		mA
Typical Thermal Resistance, Junction to Case (on heat sink)	$R_{\theta JC}$	1.5					°C/W
Junction Operating Temperature Range	T_J	-65 to +150					°C
Storage Temperature Range	T_{STG}	-65 to +175					

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16 AMP SCHOTTKY BARRIER RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES SK1640C - SK16100C

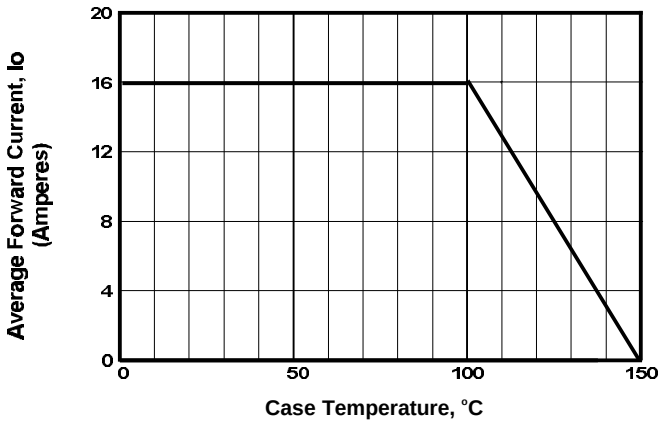

FIGURE 1. FORWARD CURRENT DERATING CURVE

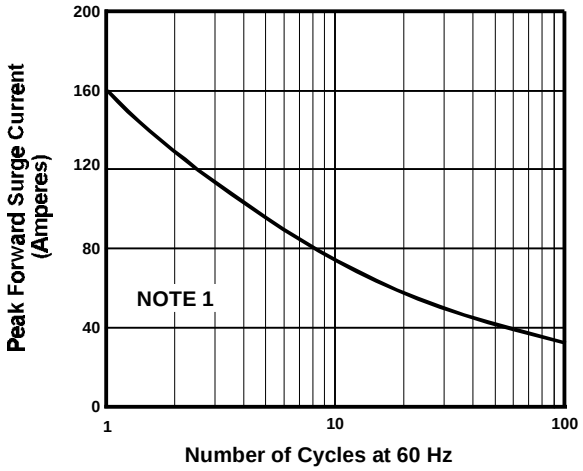

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

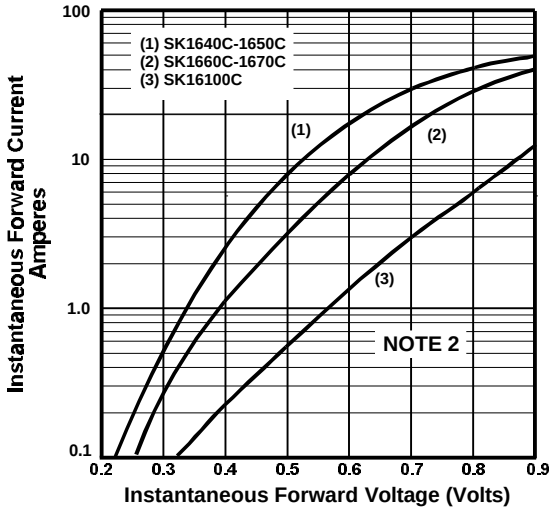

FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

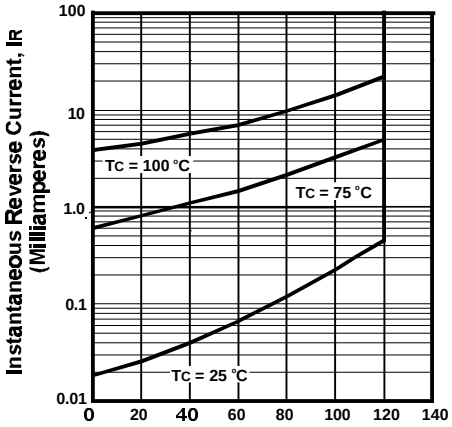

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

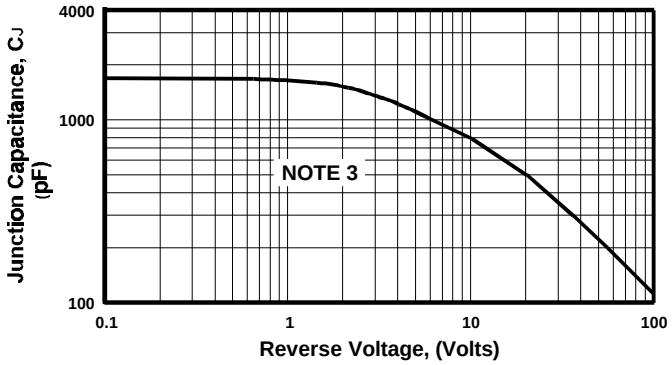

FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) JEDEC Method, 8.3 mSec. Single Half Sine Wave

(2) T_J = 25 °C, Pulse Width = 300 µSec, 2.0% Duty Cycle

(3) T_C =25°C, f = 1.0 MHz, V_{SIG} = 50 mV P-P

4.97bsbdt16

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Data Sheet No. SBDT-2400-1B

24 AMP SCHOTTKY BARRIER RECTIFIERS

FEATURES

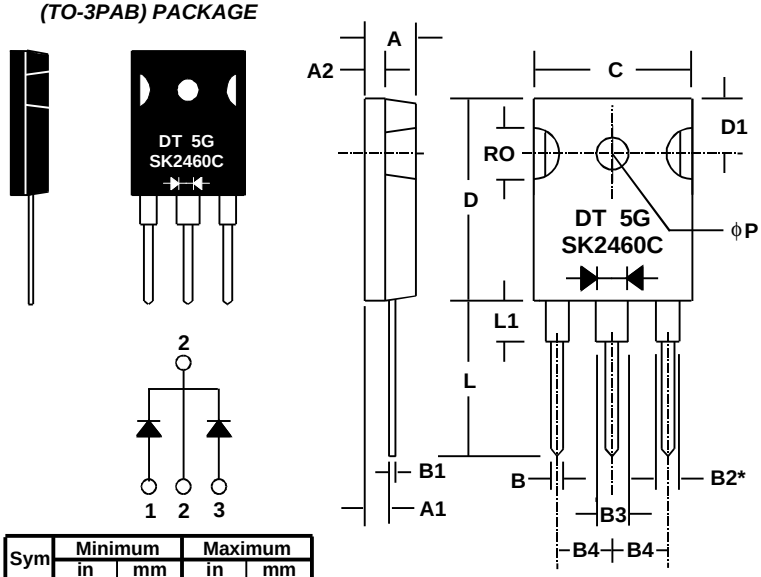
- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability
- High reliability

MECHANICAL DATA

- Case: TO-247 (TO-3P) molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Rectangular pins w/ standoff
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Diode depicted on product
- Mounting Position: Any
- Weight: 0.20 Ounces (5.5 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF TO-247AB (TO-3PAB) PACKAGE



*Applies to Pins 1 and 3

Sym	Minimum		Maximum	
	in	mm	in	mm
A	0.19	4.82	0.205	5.2
A1	0.087	2.21	0.102	2.6
A2	0.075	1.9	0.085	2.16
B	0.045	1.14	0.055	1.4
B1	0.022	0.56	0.032	0.81
B2	0.079	2.01	0.094	2.39
B3	0.116	2.95	0.126	3.2
B4			0.215	5.46
C	0.602	15.29	0.625	15.88
D	0.776	19.7	0.799	20.3
D1	0.209	5.31	0.224	5.69
L	0.559	14.2	0.582	14.8
L1	0.146	3.71	0.189	4.8
RO	0.209	5.3	0.224	5.7
ϕP	0.13	3.3	0.145	3.7

TO-247AB (TO-3PAB)

SERIES SK2440C - SK24100C

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
Series Number		SK 2440C	SK 2450C	SK 2460C	SK 2470C	SK 24100C	
Maximum DC Blocking Voltage	V_{RM}	40	50	60	70	100	VOLTS
Maximum RMS Voltage	V_{RMS}						
Maximum Peak Recurrent Reverse Voltage	V_{RRM}						
Average Forward Rectified Current @ T_C = 100 °C	I_O	24					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	200					
Maximum Forward Voltage Drop (per diode) at 12 Amps DC	V_{FM}	0.55		0.65		0.85	VOLTS
Maximum Average DC Reverse Current @ T_J = 25 °C At Rated DC Blocking Voltage @ T_J = 125 °C	I_{RM}	0.5 100				0.2 15	mA
Typical Thermal Resistance, Junction to Case (on heat sink)	$R_{\theta JC}$	1.5					°C/W
Junction Operating Temperature Range	T_J	-65 to +150					°C
Storage Temperature Range	T_{STG}	-65 to +175					

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

24 AMP SCHOTTKY BARRIER RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES SK2440C - SK24100C

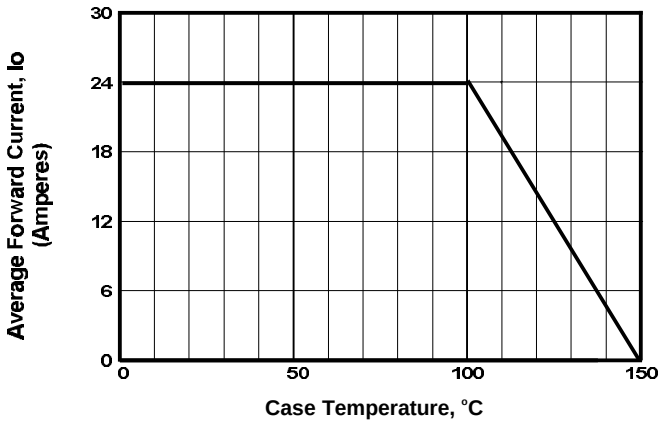


FIGURE 1. FORWARD CURRENT DERATING CURVE

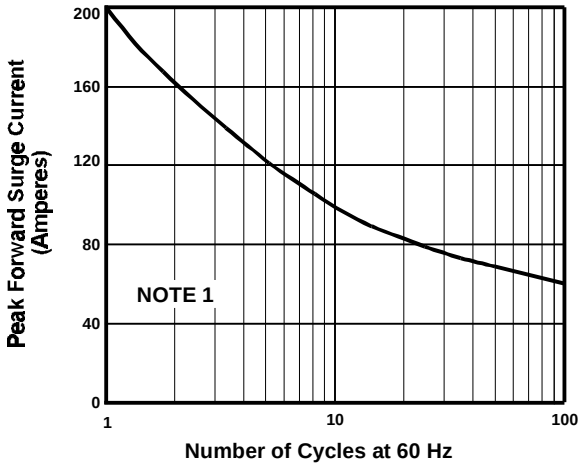


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

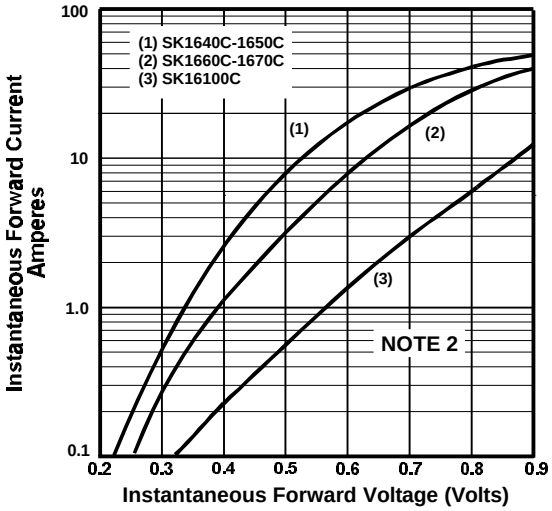


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

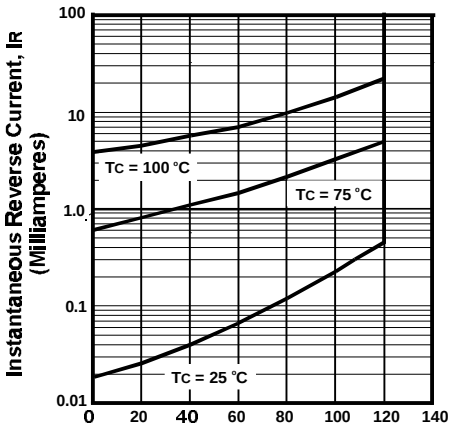


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

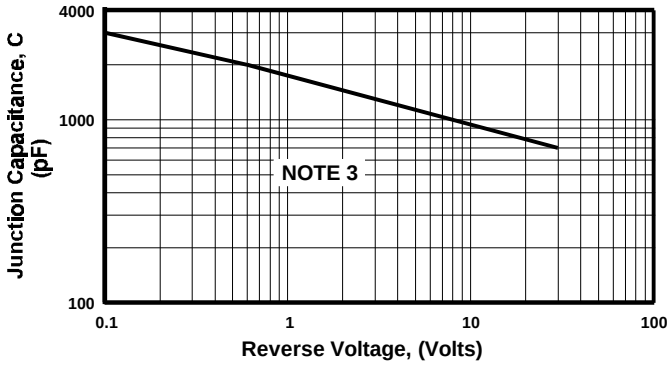


FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) JEDEC Method, 8.3 mSec. Single Half Sine Wave

(2) T_J = 25 °C, Pulse Width = 300 μSec, 2.0% Duty Cycle

(3) T_C =25°C, f = 1.0 MHz, V_{SIG} = 50 mV P-P

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Data Sheet No. SBDT-3000-1B

30 AMP SCHOTTKY BARRIER RECTIFIERS

FEATURES

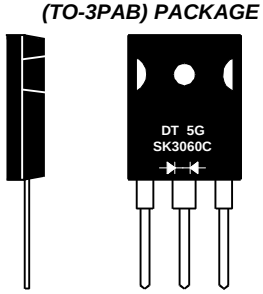
- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability
- High reliability

MECHANICAL DATA

- Case: TO-247 (TO-3P) molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Rectangular pins w/ standoff
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Diode depicted on product
- Mounting Position: Any
- Weight: 0.20 Ounces (5.5 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF TO-247AB (TO-3PAB) PACKAGE



*Applies to Pins 1 and 3

Sym	Minimum		Maximum	
	in	mm	in	mm
A	0.19	4.82	0.205	5.2
A1	0.087	2.21	0.102	2.6
A2	0.075	1.9	0.085	2.16
B	0.045	1.14	0.055	1.4
B1	0.022	0.56	0.032	0.81
B2	0.079	2.01	0.094	2.39
B3	0.116	2.95	0.126	3.2
B4			0.215	5.46
C	0.602	15.29	0.625	15.88
D	0.776	19.7	0.799	20.3
D1	0.209	5.31	0.224	5.69
L	0.559	14.2	0.582	14.8
L1	0.146	3.71	0.189	4.8
RO	0.209	5.3	0.224	5.7
ϕP	0.13	3.3	0.145	3.7

TO-247AB (TO-3PAB)

SERIES SK3040C - SK30100C

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
Series Number		SK 3040C	SK 3050C	SK 3060C	SK 3070C	SK 30100C	
Maximum DC Blocking Voltage	V_{RM}	40	50	60	70	100	VOLTS
Maximum RMS Voltage	V_{RMS}						
Maximum Peak Recurrent Reverse Voltage	V_{RRM}						
Average Forward Rectified Current @ T_C = 90 °C)	I_O	30					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	200					
Maximum Forward Voltage Drop (per diode) at 15 Amps DC	V_{FM}	0.57		0.65		0.85	VOLTS
Maximum Average DC Reverse Current @ T_J = 25 °C At Rated DC Blocking Voltage @ T_J = 125 °C	I_{RM}	0.5 100				0.2 15	mA
Typical Thermal Resistance, Junction to Case (on heat sink)	$R_{\theta JC}$	1.2					°C/W
Junction Operating Temperature Range	T_J	-65 to +150					°C
Storage Temperature Range	T_{STG}	-65 to +175					

DIOTEC ELECTRONICS CORP.
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30 AMP SCHOTTKY BARRIER RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SK3040C - SK30100C SERIES

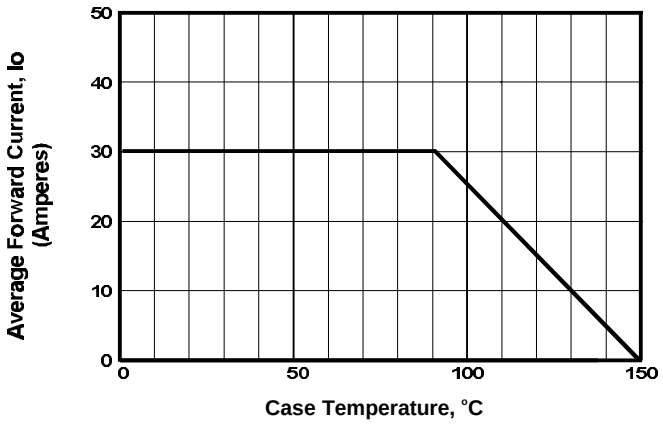

FIGURE 1. FORWARD CURRENT DERATING CURVE

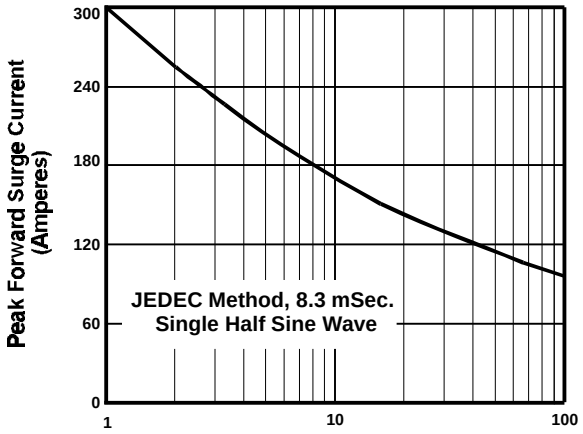

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

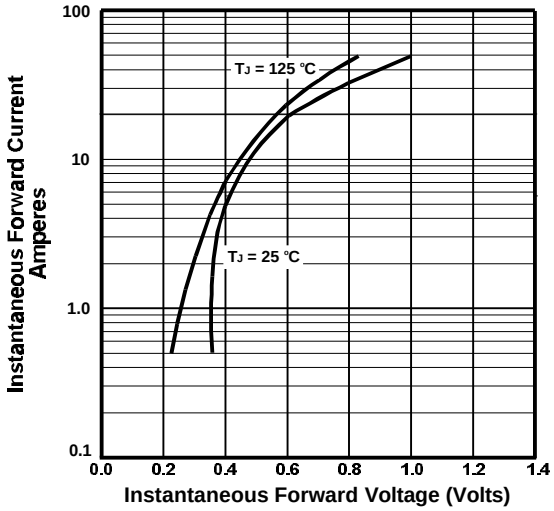

FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

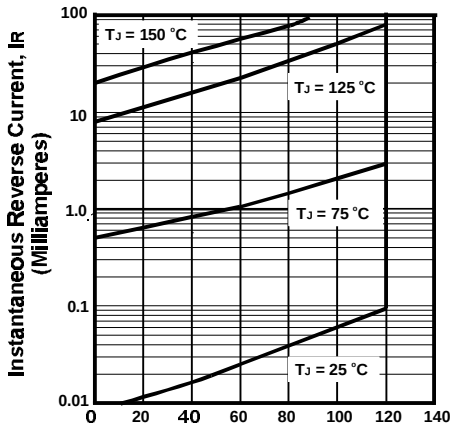

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

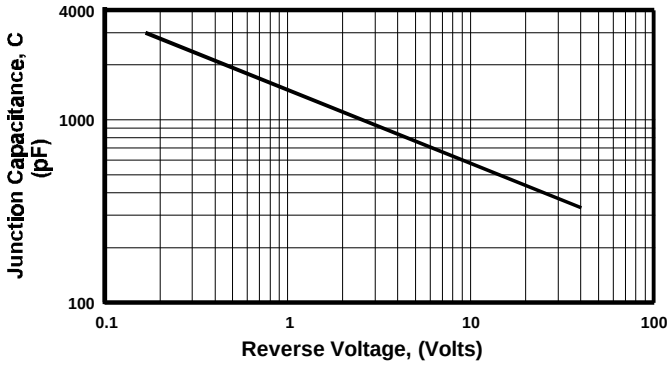

FIGURE 5. TYPICAL JUNCTION CAPACITANCE

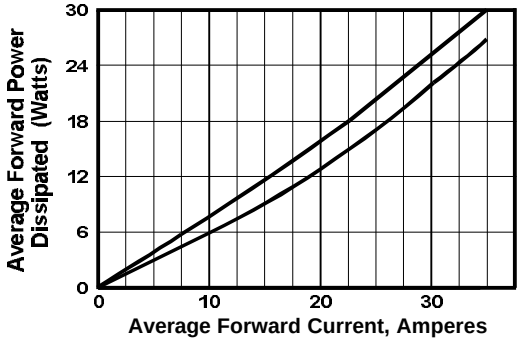

FIGURE 6. FORWARD POWER DISSIPATION

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
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Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. SBDT-4000-1B

40 AMP SCHOTTKY BARRIER RECTIFIERS

FEATURES

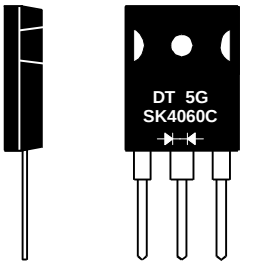
- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability
- High reliability

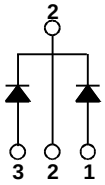
MECHANICAL DATA

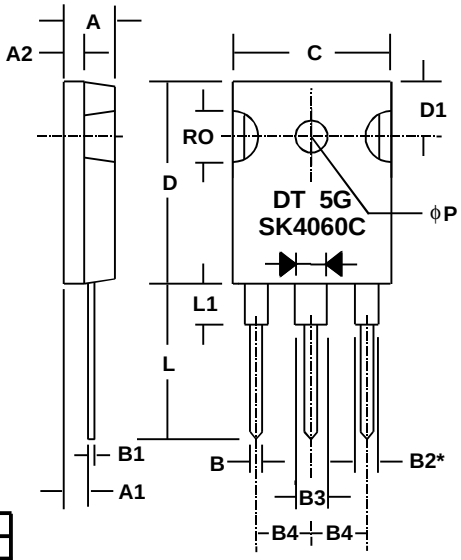
- Case: TO-247 (TO-3P) molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Rectangular pins w/ standoff
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Diode depicted on product
- Mounting Position: Any
- Weight: 0.20 Ounces (5.5 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF TO-247AB (TO-3PAB) PACKAGE







*Applies to Pins 1 and 3

Sym	Minimum		Maximum	
	in	mm	in	mm
A	0.19	4.82	0.205	5.2
A1	0.087	2.21	0.102	2.6
A2	0.075	1.9	0.085	2.16
B	0.045	1.14	0.055	1.4
B1	0.022	0.56	0.032	0.81
B2	0.079	2.01	0.094	2.39
B3	0.116	2.95	0.126	3.2
B4			0.215	5.46
C	0.602	15.29	0.625	15.88
D	0.776	19.7	0.799	20.3
D1	0.209	5.31	0.224	5.69
L	0.559	14.2	0.582	14.8
L1	0.146	3.71	0.189	4.8
RO	0.209	5.3	0.224	5.7
ϕP	0.13	3.3	0.145	3.7

TO-247AB (TO-3PAB)

SERIES SK4040C - SK40100C

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
Series Number		SK 4040C	SK 4050C	SK 4060C	SK 4070C	SK 40100C	
Maximum DC Blocking Voltage	V_{RM}	40	50	60	70	100	VOLTS
Maximum RMS Voltage	V_{RMS}						
Maximum Peak Recurrent Reverse Voltage	V_{RRM}						
Average Forward Rectified Current @ T_C = 85 °C)	I_O	40					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	200					
Maximum Forward Voltage Drop (per diode) at 20 Amps	V_{FM}	0.6		0.7		0.92	VOLTS
Maximum Average DC Reverse Current @ T_J = 25 °C At Rated DC Blocking Voltage @ T_J = 125 °C	I_{RM}	2.0 100				2.0 50	mA
Typical Thermal Resistance, Junction to Case (on heat sink)	$R_{\theta JC}$	1.2					°C/W
Junction Operating Temperature Range	T_J	-65 to +150					°C
Storage Temperature Range	T_{STG}	-65 to +175					

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18020 Hobart Blvd., Unit B
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Tel.: (310) 767-1052 Fax: (310) 767-7958

40 AMP SCHOTTKY BARRIER RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SK4040C - SK40100C SERIES

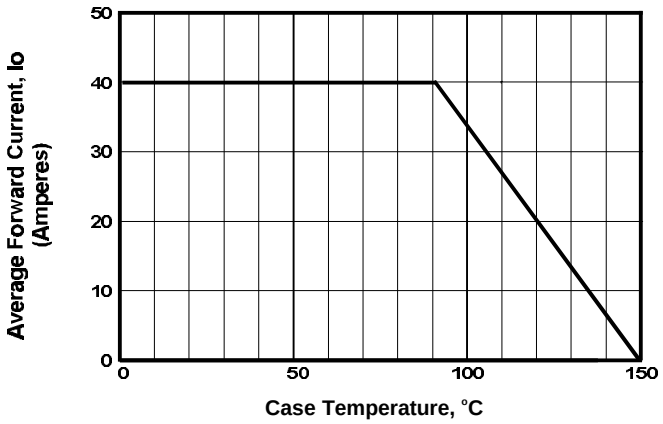


FIGURE 1. FORWARD CURRENT DERATING CURVE

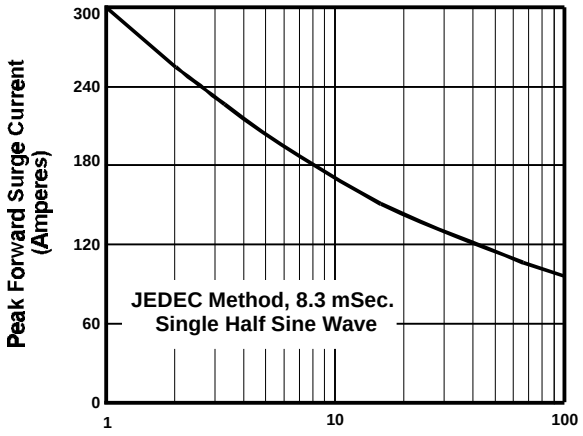


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

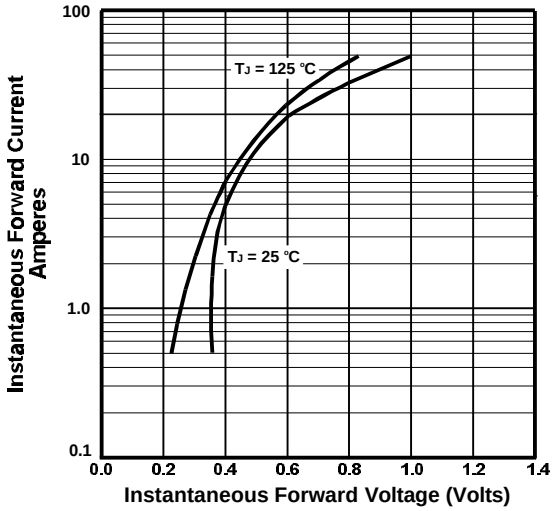


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

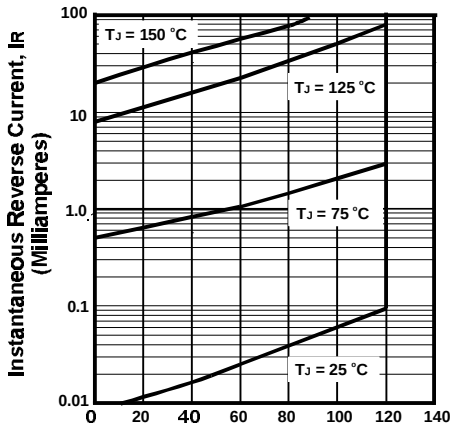


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

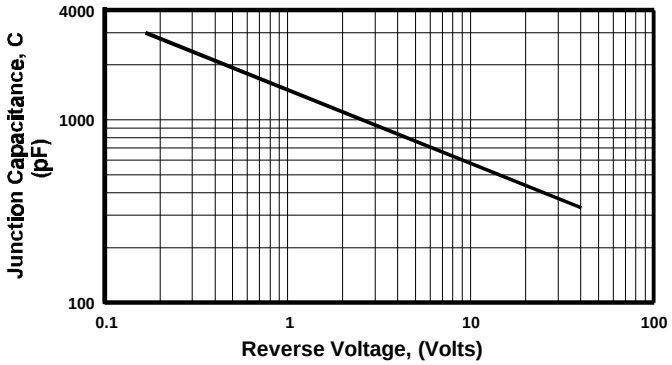


FIGURE 5. TYPICAL JUNCTION CAPACITANCE

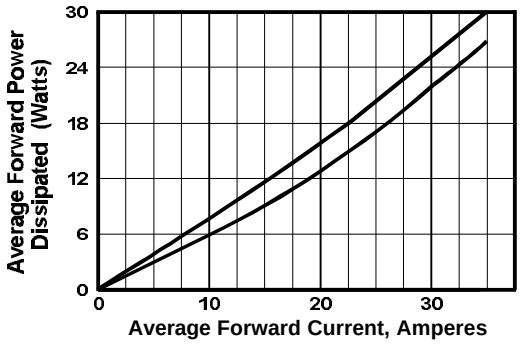


FIGURE 6. FORWARD POWER DISSIPATION

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. SBDT-6000-1B

60 AMP SCHOTTKY BARRIER RECTIFIERS

FEATURES

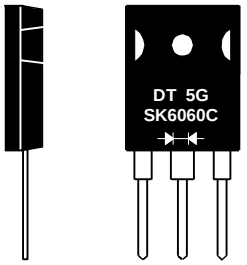
- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability
- High reliability

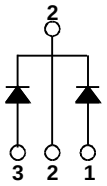
MECHANICAL DATA

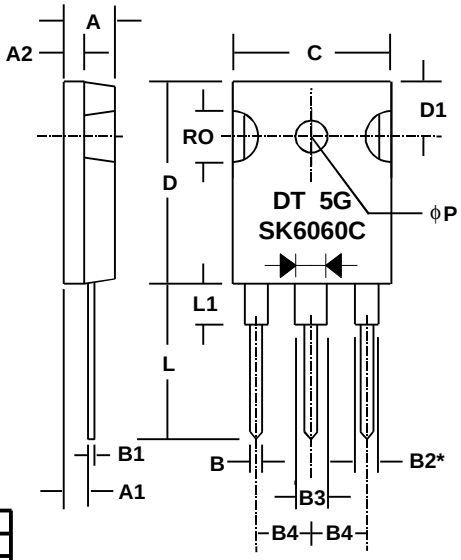
- Case: TO-247 (TO-3P) molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Rectangular pins w/ standoff
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Diode depicted on product
- Mounting Position: Any
- Weight: 0.20 Ounces (5.5 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF TO-247AB (TO-3PAB) PACKAGE







*Applies to Pins 1 and 3

Sym	Minimum		Maximum	
	in	mm	in	mm
A	0.19	4.82	0.205	5.2
A1	0.087	2.21	0.102	2.6
A2	0.075	1.9	0.085	2.16
B	0.045	1.14	0.055	1.4
B1	0.022	0.56	0.032	0.81
B2	0.079	2.01	0.094	2.39
B3	0.116	2.95	0.126	3.2
B4			0.215	5.46
C	0.602	15.29	0.625	15.88
D	0.776	19.7	0.799	20.3
D1	0.209	5.31	0.224	5.69
L	0.559	14.2	0.582	14.8
L1	0.146	3.71	0.189	4.8
RO	0.209	5.3	0.224	5.7
ϕP	0.13	3.3	0.145	3.7

TO-247AB (TO-3PAB)

SERIES SK6030C - SK6070C

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
Series Number		SK 6030C	SK 6040C	SK 6050C	SK 6060C	SK 6070C	
Maximum DC Blocking Voltage	V_{RM}	30	40	50	60	70	VOLTS
Maximum RMS Voltage	V_{RMS}						
Maximum Peak Recurrent Reverse Voltage	V_{RRM}						
Average Forward Rectified Output Current @ Tc = 90 °C	I_O	60					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	600					
Maximum Forward Voltage Drop (per diode) at 30 Amps	V_{FM}	0.55			0.65		VOLTS
Maximum Average DC Reverse Current @ T_J = 25 °C At Rated DC Blocking Voltage @ T_J = 125 °C	I_{RM}	5.0 200					mA
Typical Thermal Resistance, Junction to Case (on heat sink)	$R_{\theta JC}$	1.1					°C/W
Junction Operating Temperature Range	T_J	-65 to +150					°C
Storage Temperature Range	T_{STG}	-65 to +175					

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

60 AMP SCHOTTKY BARRIER RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SK6030C - SK6070C SERIES

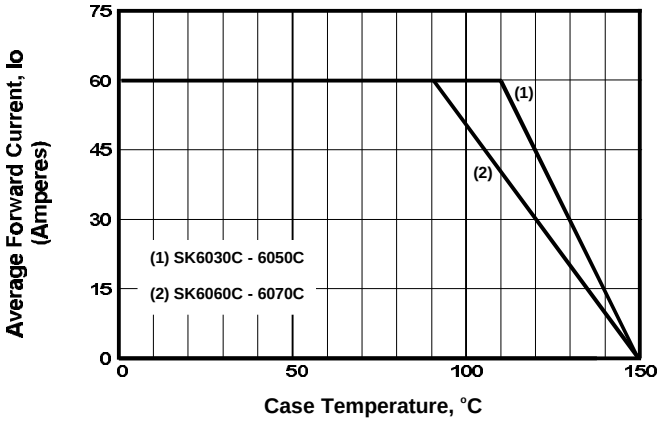


FIGURE 1. FORWARD CURRENT DERATING CURVE

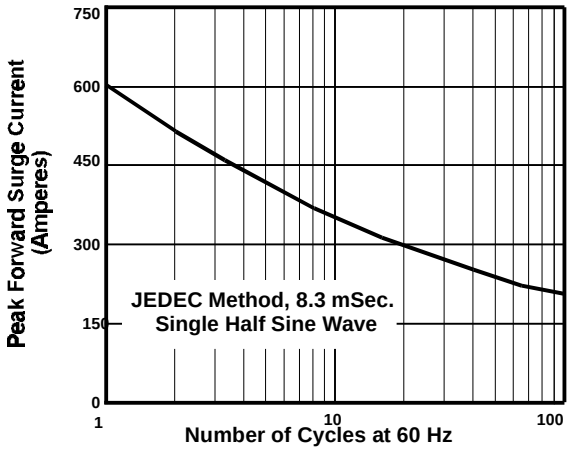


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

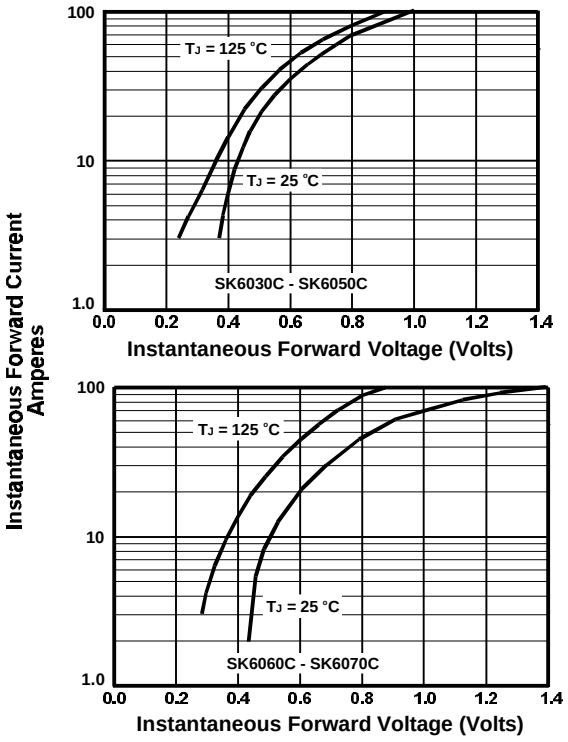


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

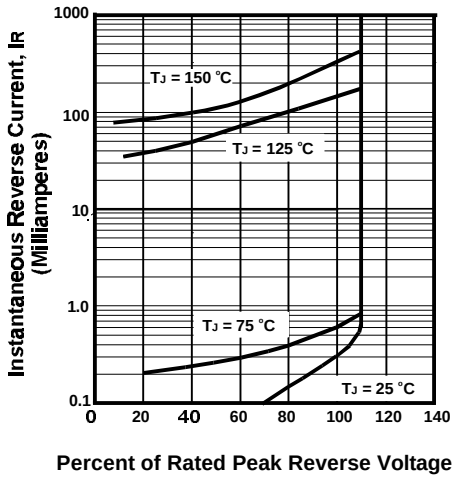


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

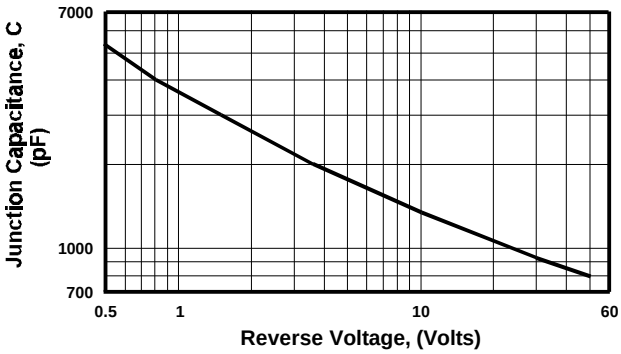


FIGURE 5. TYPICAL JUNCTION CAPACITANCE

4.97bsbdt60

SECTION C

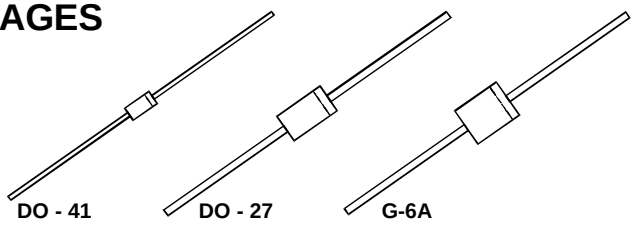
SUPER EFFICIENT and ULTRA FAST RECOVERY DIODES

Single Diode Products

AXIAL LEAD DO-41, DO-27, AND G-6A PACKAGES

1 TO 6 AMPERES

50 TO 1000 VOLTS



DO - 41 **DO - 27** **G-6A**

2 PIN TO-220AC PACKAGE

6 TO 15 AMPERES

50 TO 600 VOLTS

TO - 220AC

DIOTEC ELECTRONICS CORP. • **18020 Hobart Blvd., Unit B** • **Gardena, CA 90248 U.S.A.** • **PH: 310-767-1052 - FX: 310-767-7958**

DIOTEC ELECTRONICS CORP
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. SESA-100-1B

1 AMP SUPER-EFFICIENT RECTIFIERS

FEATURES

- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability
- High reliability

MECHANICAL DATA

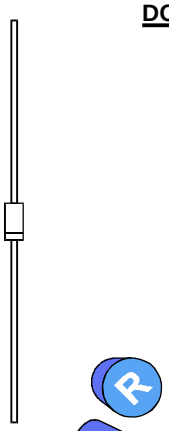
- Case: JEDEC DO-41 molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.013 Ounces (0.35 Grams)

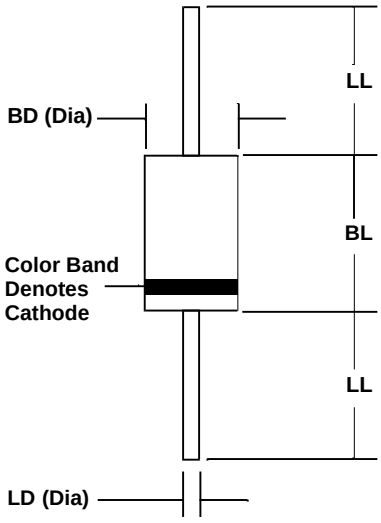
MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-41 PACKAGE

SERIES SPR11 - SPR14

DO - 41





Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.160	4.1	0.205	5.2
BD	0.103	2.6	0.107	2.7
LL	1.00	25.4		
LD	0.028	0.71	0.034	0.86

SOFT GLASS® DIODE

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS				UNITS
Series Number		SPR11	SPR12	SPR13	SPR14	
Maximum DC Blocking Voltage	V_{RM}	100	200	300	400	VOLTS
Maximum RMS Voltage	V_{RMS}	70	140	210	280	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	100	200	300	400	
Average Forward Rectified Current @ T_A = 55 °C	I_O	1				AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	30				
Maximum Forward Voltage at 1 Amp DC	V_{FM}	0.95			1.25	VOLTS
Maximum Average DC Reverse Current @ T_C = 25 °C At Rated DC Blocking Voltage @ T_C = 100 °C	I_{RM}	2.0 50				µA
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	50				°C/W
Typical Junction Capacitance (Note 1)	C_J	50				pF
Maximum Reverse Recovery Time (I_F=0.5A, I_R=1A, I_{RR}=0.25A)	T_{RR}	35				nSec
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150				°C

NOTES: (1) Measured at 1 MHz and an applied reverse voltage of 4 volts.

4.97fsesa1

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1 AMP SUPER EFFICIENT RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES SPR11 - SPR14

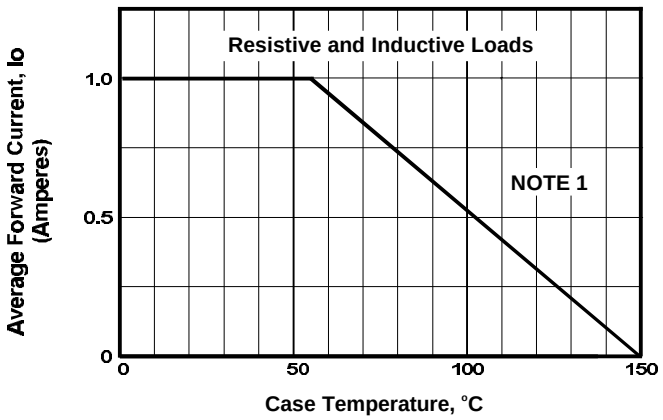

FIGURE 1. FORWARD CURRENT DERATING CURVE

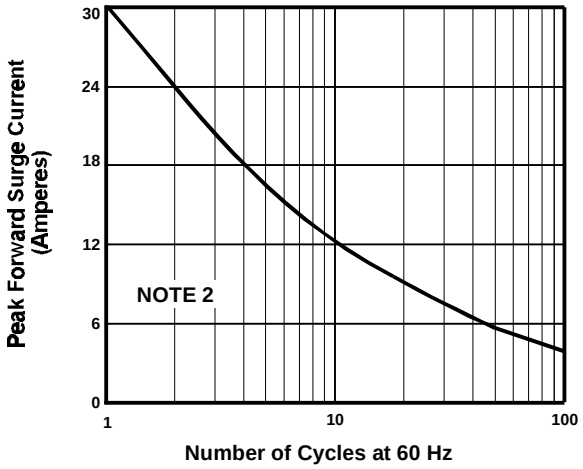

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

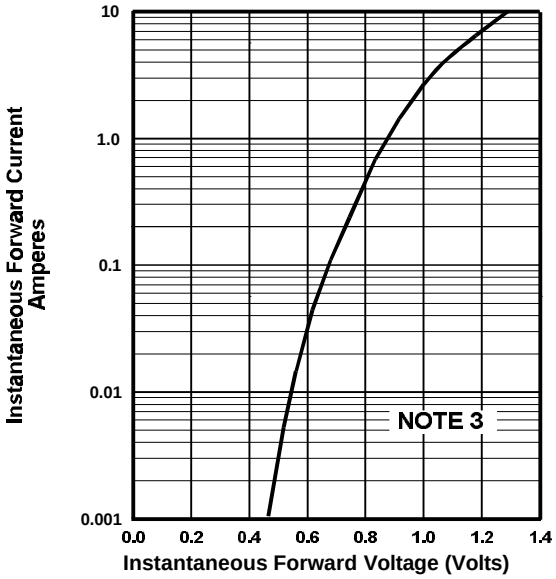

FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

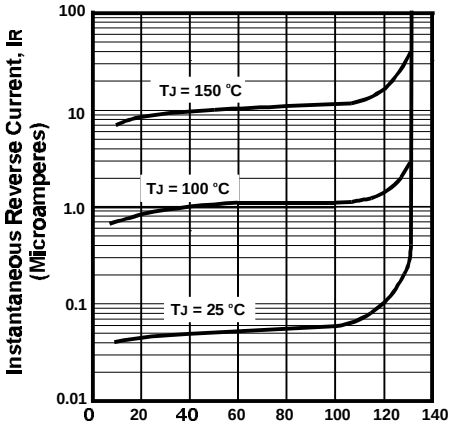

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

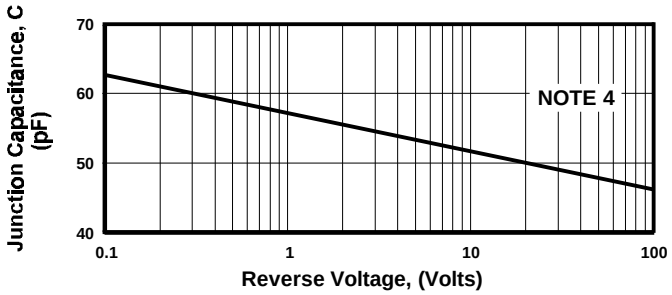

FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) Single Phase, Half Wave, 60 Hz; Lead Length = 0.375" (9.5mm)

(2) JEDEC Method, 8.3 mSec. Single Half Sine Wave

(3) T_J = 25 °C, Pulse Width = 300 μSec, 1.0% Duty Cycle

(4) T_J =25°C, f = 1.0 MHz, 2% Duty Cycle.

4.97bsesa1

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Data Sheet No. SESA-101-1B

1 AMP ULTRAFAST RECOVERY DIODES

FEATURES

- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability
- High reliability

MECHANICAL DATA

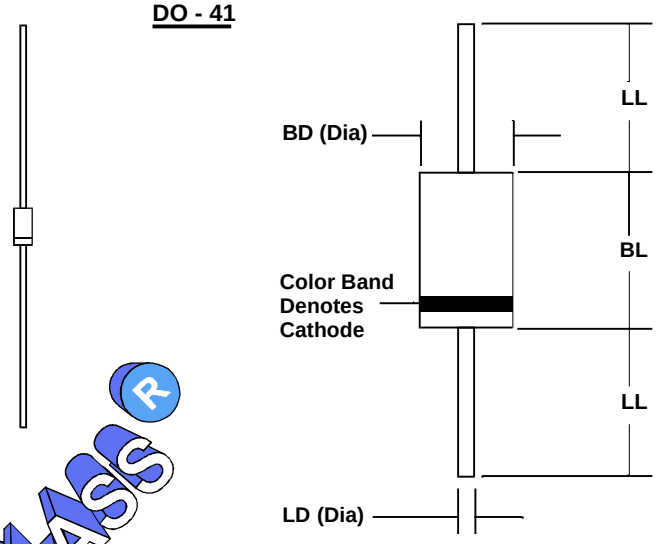
- Case: JEDEC DO-41 molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.013 Ounces (0.35 Grams)

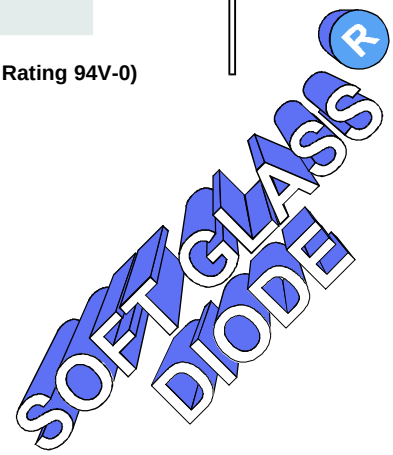
MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-41 PACKAGE

SERIES UFR100 - UFR110

DO - 41





Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.160	4.1	0.205	5.2
BD	0.103	2.6	0.107	2.7
LL	1.00	25.4		
LD	0.028	0.71	0.034	0.86

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS									UNITS
Series Number		UFR 100	UFR 101	UFR 102	UFR 103	UFR 104	UFR 105	UFR 106	UFR 108	UFR 110	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	300	400	500	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	210	280	350	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	300	400	500	600	800	1000	
Average Forward Rectified Current @ T_A = 55 °C	I_O	1									AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	35									
Maximum Forward Voltage at 1 Amp DC	V_{FM}	1.25					1.7				VOLTS
Maximum Average DC Reverse Current @ T_C = 25°C At Rated DC Blocking Voltage @ T_C = 125°C	I_{RM}	2.0 50									µA
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	50									°C/W
Typical Junction Capacitance (Note 1)	C_J	15									pF
Maximum Reverse Recovery Time (I_F=0.5A, I_R=1A, I_{RR}=0.25A)	T_{RR}	50					75				nSec
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150									°C

NOTES: (1) Measured at 1 MHz and an applied reverse voltage of 4 volts.

3.01 ufr100

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1 AMP ULTRAFAST RECOVERY DIODES

RATING & CHARACTERISTIC CURVES FOR SERIES UFR100 - UFR110

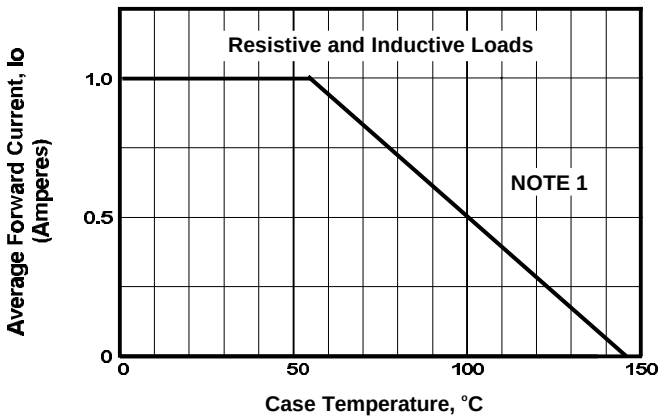

FIGURE 1. FORWARD CURRENT DERATING CURVE

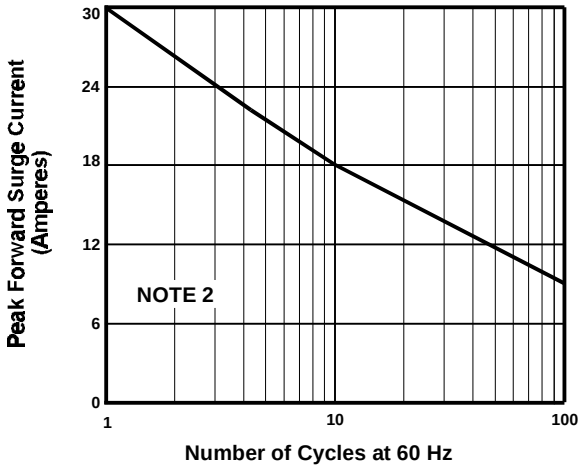

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

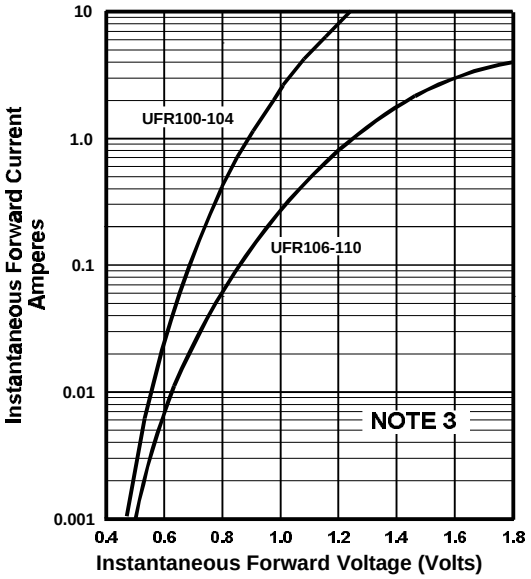

FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

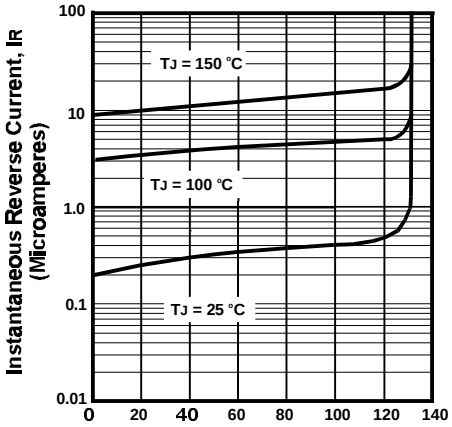

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

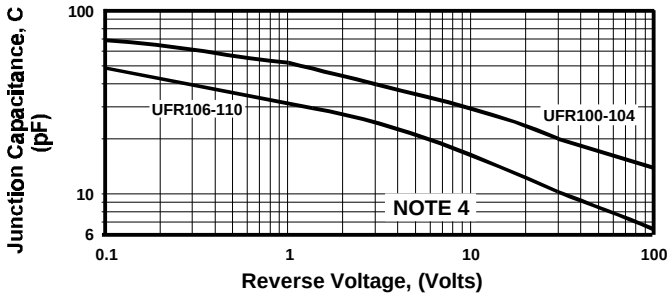

FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) Single Phase, Half Wave, 60 Hz; Lead Length = 0.375" (9.5mm)

(2) JEDEC Method, 8.3 mSec. Single Half Sine Wave

(3) T_J = 25 °C, Pulse Width = 300 μSec, 1.0% Duty Cycle

(4) T_J =25°C, f = 1.0 MHz, 2% Duty Cycle.

4.97bsesa1a

DIOTEC ELECTRONICS CORP.
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Data Sheet No. SESA-200-1B

2 AMP SUPER-EFFICIENT RECTIFIERS/ULTRAFAST RECOVERY DIODES

FEATURES

- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability
- High reliability

MECHANICAL DATA

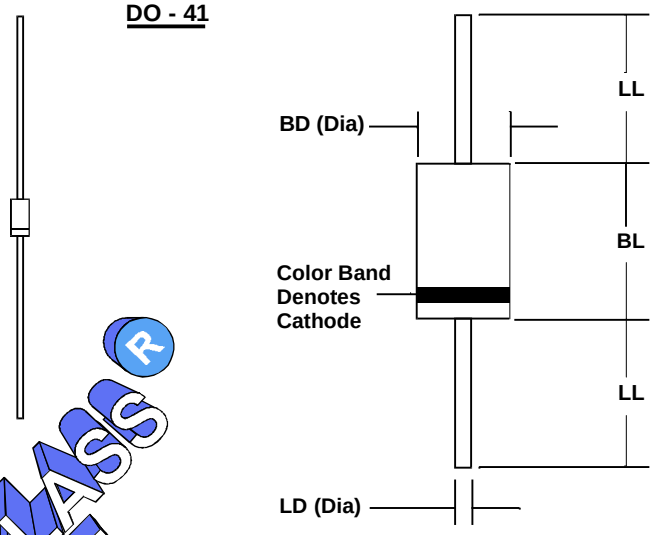
- Case: JEDEC DO-41 molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.013 Ounces (0.35 Grams)

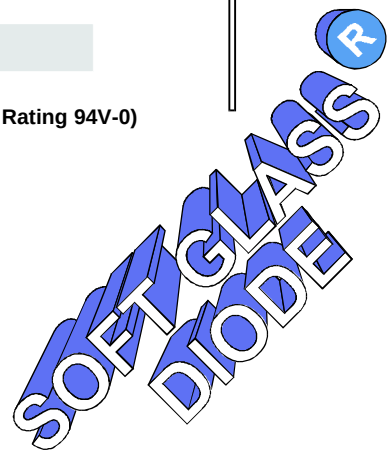
MECHANICAL SPECIFICATION

ACTUAL SIZE OF
DO-41 PACKAGE

SERIES: SPR21 - SPR23
UFR24 - UFR28

DO - 41





Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.160	4.1	0.205	5.2
BD	0.103	2.6	0.107	2.7
LL	1.00	25.4		
LD	0.028	0.71	0.034	0.86

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS						UNITS
Series Number		SPR21	SPR22	SPR23	UFR24	UFR26	UFR28	
Maximum DC Blocking Voltage	V_{RM}	100	200	300	400	600	800	VOLTS
Maximum RMS Voltage	V_{RMS}	70	140	210	280	420	560	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	100	200	300	400	600	800	
Average Forward Rectified Current @ T_A = 55 °C	I_O	2						AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	50			70			
Maximum Forward Voltage at 2 Amps DC	V_{FM}	1.0			1.5			VOLTS
Maximum Average DC Reverse Current @ T_C = 25 °C At Rated DC Blocking Voltage @ T_C = 100 °C	I_{RM}	2.0 50						µA
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	40						°C/W
Typical Junction Capacitance (Note 1)	C_J	60						pF
Maximum Reverse Recovery Time (I_F=0.5A, I_R=1A, I_{RR}=0.25A)	T_{RR}	35			50		75	nSec
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150						°C

NOTES: (1) Measured at 1 MHz and an applied reverse voltage of 4 volts.

4.97fsesa2

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2 AMP SUPER EFFICIENT RECTIFIERS/ULTRAFAST RECOVERY DIODES

RATING & CHARACTERISTIC CURVES FOR SERIES SPR21 - SPR23 and SERIES UFR24 - UFR28

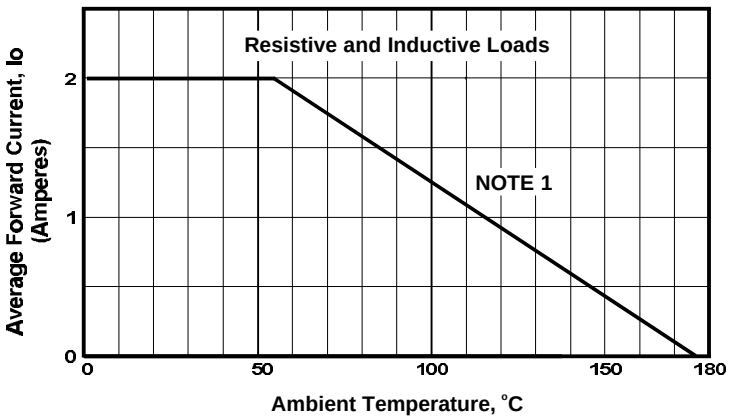

FIGURE 1. FORWARD CURRENT DERATING CURVE

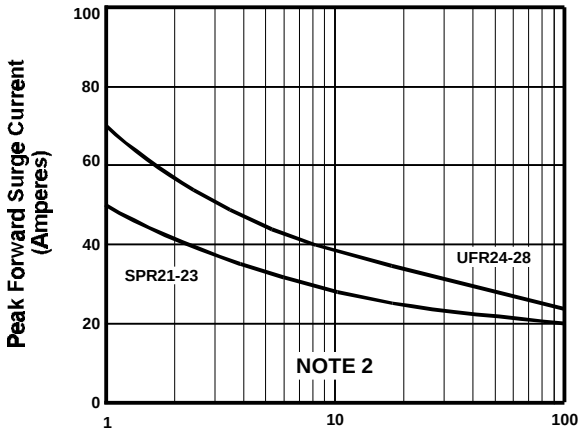

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

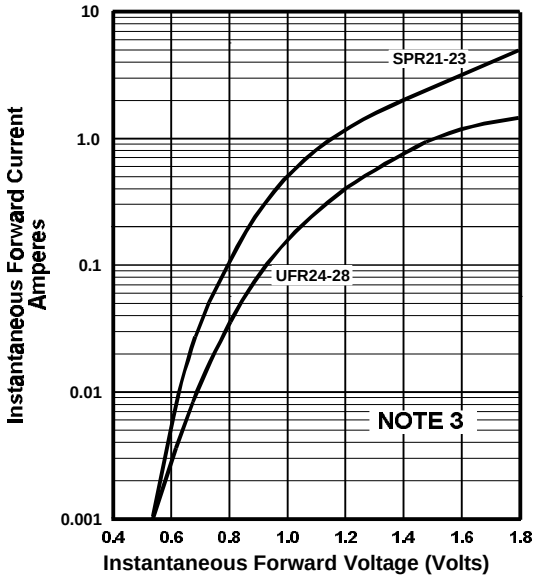

FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

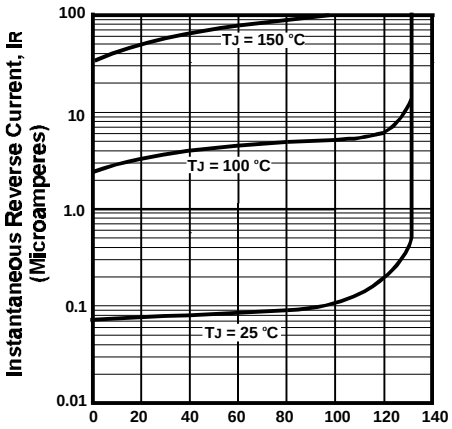

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

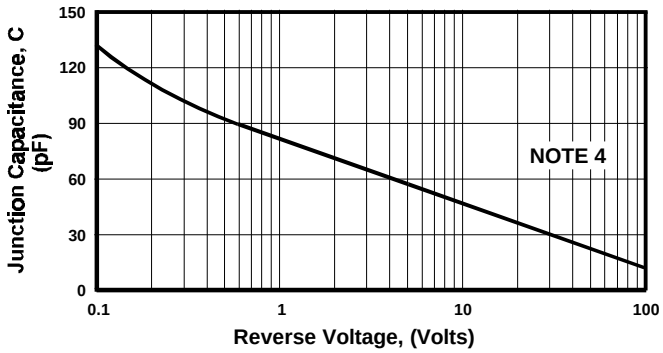

FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) Single Phase, Half Wave, 60 Hz; Lead Length = 0.375" (9.5mm)

(2) JEDEC Method, 8.3 mSec. Single Half Sine Wave;

(3) T_J = 25 °C, Pulse Width = 300 μSec, 2.0% Duty Cycle

(4) T_J =25°C, f = 1.0 MHz,

DIOTEC ELECTRONICS CORP.
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Data Sheet No. SESA-300-1B

3 AMP SUPER-EFFICIENT RECTIFIERS

FEATURES

- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability
- High reliability

MECHANICAL DATA

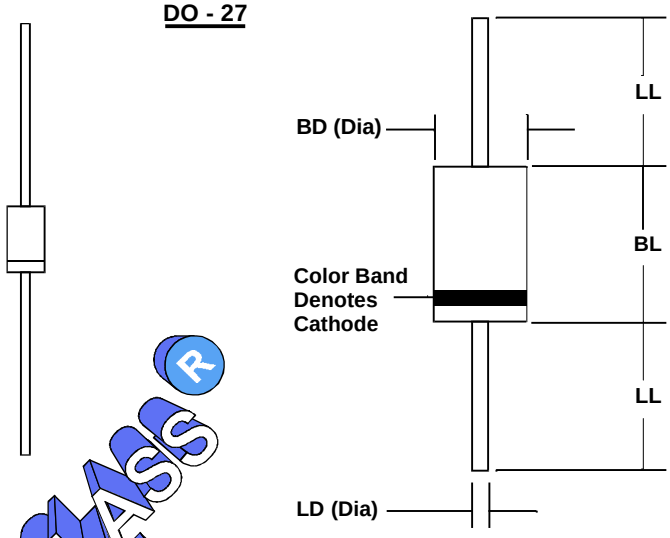
- Case: JEDEC DO-27 molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.04 Ounces (1.12 Grams)

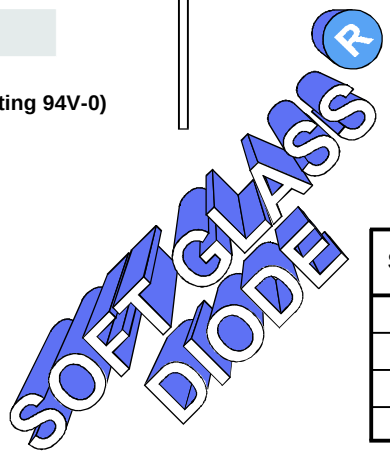
MECHANICAL SPECIFICATION

ACTUAL SIZE OF
DO-27 PACKAGE

SERIES SPR30 - SPR34

DO - 27





Sym	Minimum		Maximum	
	In	mm	In	mm
BL			0.365	9.28
BD			0.205	5.2
LL	1.00	25.4		
LD	0.048	1.2	0.052	1.3

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
Series Number		SPR30	SPR31	SPR32	SPR33	SPR34	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	300	400	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	210	280	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	300	400	
Average Forward Rectified Current @ T_A = 55 °C	I_O	3					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	75					
Maximum Forward Voltage at 3 Amps DC	V_{FM}	1.0			1.25		VOLTS
Maximum Average DC Reverse Current @ T_C = 25 °C At Rated DC Blocking Voltage @ T_C = 100 °C	I_{RM}	5.0 50					µA
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	20					°C/W
Typical Junction Capacitance (Note 1)	C_J	100					pF
Maximum Reverse Recovery Time (I_F=0.5A, I_R=1A, I_{RR}=0.25A)	T_{RR}	35					nSec
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150					°C

NOTES: (1) Measured at 1 MHz and an applied reverse voltage of 4 volts.

4.97fsesa3

DIOTEC ELECTRONICS CORP.
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3 AMP SUPER EFFICIENT RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES SPR30 - SPR34

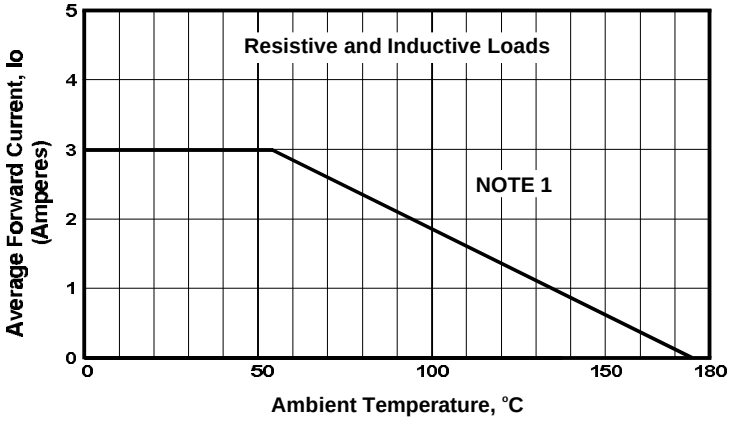

FIGURE 1. FORWARD CURRENT DERATING CURVE

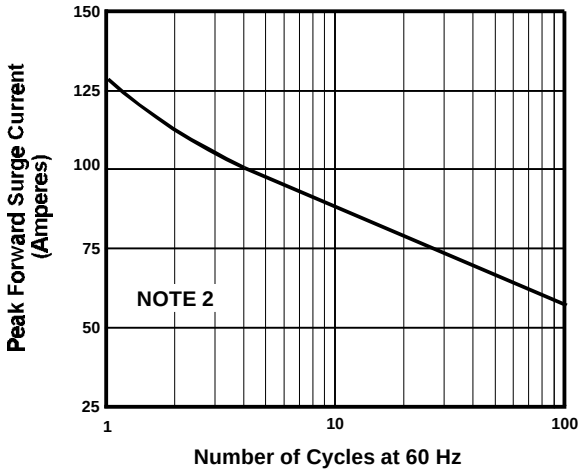

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

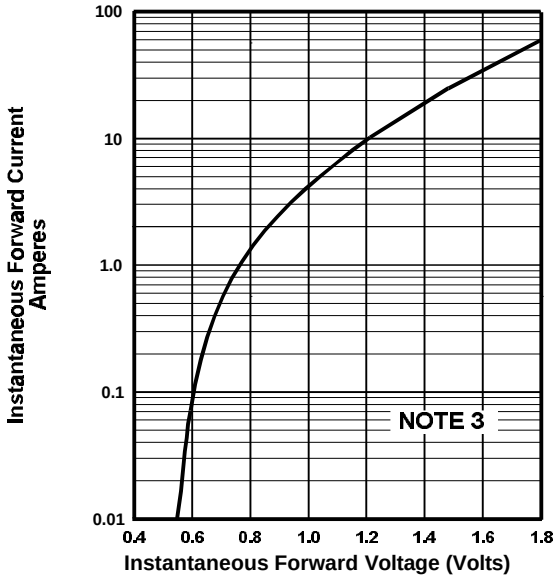

FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

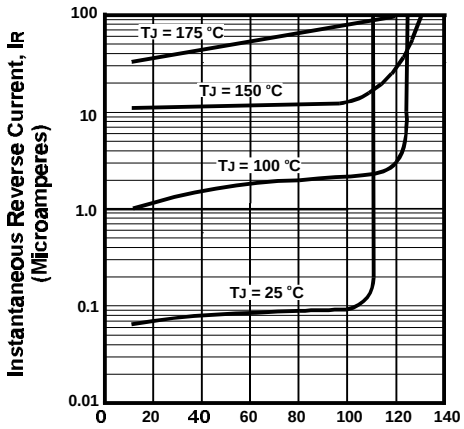

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

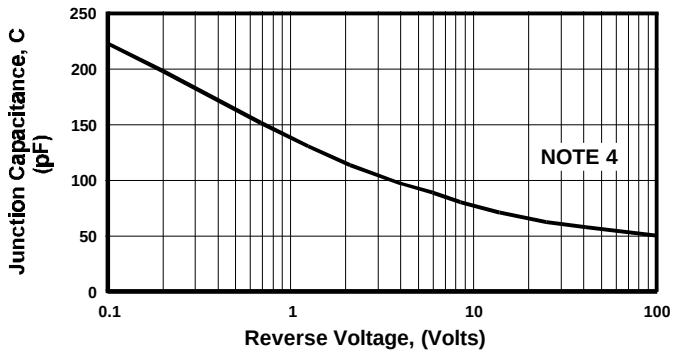

FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) Single Phase, Half Wave, 60 Hz; Lead Length = 0.375" (9.5mm)

(2) JEDEC Method, 8.3 mSec. Single Half Sine Wave; T_A =55 °C

(3) T_J = 25 °C, Pulse Width = 300 μSec, 1.0% Duty Cycle

(4) T_J =25 °C, f = 1.0 MHz, V_{SIG} = 50 mV P-P

DIOTEC ELECTRONICS CORP.
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Data Sheet No. SESA-301-1B

3 AMP ULTRAFAST RECOVERY DIODES

FEATURES

- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability
- High reliability

MECHANICAL DATA

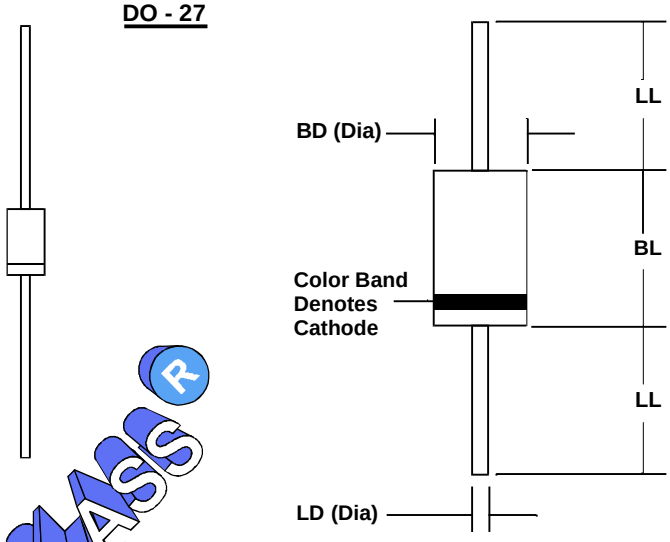
- Case: JEDEC DO-27 molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.04 Ounces (1.12 Grams)

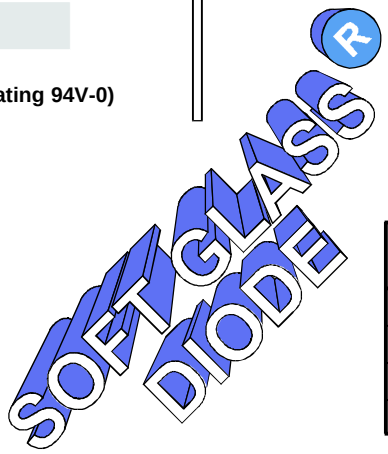
MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-27 PACKAGE

SERIES UFR300 - UFR310

DO - 27





Sym	Minimum		Maximum	
	In	mm	In	mm
BL			0.365	9.28
BD			0.205	5.2
LL	1.00	25.4		
LD	0.048	1.2	0.052	1.3

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS									UNITS
Series Number		UFR 300	UFR 301	UFR 302	UFR 303	UFR 304	UFR 305	UFR 306	UFR 308	UFR 310	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	300	400	500	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	210	280	350	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	300	400	500	600	800	1000	
Average Forward Rectified Current @ T_A = 55 °C	I_O	3									AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	160									
Maximum Forward Voltage at 3 Amps DC	V_{FM}	1.25					1.7				VOLTS
Maximum Average DC Reverse Current @ T_C = 25°C At Rated DC Blocking Voltage @ T_C = 125°C	I_{RM}	5 50									µA
Typical Thermal Resistance, Junction to Lead	$R_{\theta JA}$	20									°C/W
Typical Junction Capacitance (Note 1)	C_J	45									pF
Maximum Reverse Recovery Time (I_F=0.5A, I_R=1A, I_{RR}=0.25A)	T_{RR}	50					75				nSec
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150									°C

NOTES: (1) Measured at 1 MHz and an applied reverse voltage of 4 volts.

3.01 ufr300

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3 AMP ULTRAFAST RECOVERY DIODES

RATING & CHARACTERISTIC CURVES FOR SERIES UFR300 - UFR310

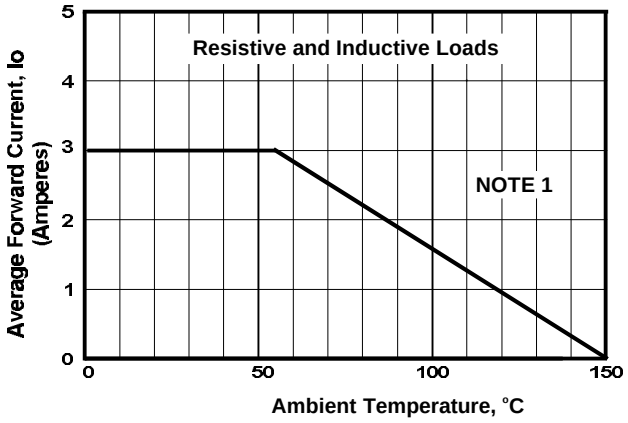

FIGURE 1. FORWARD CURRENT DERATING CURVE

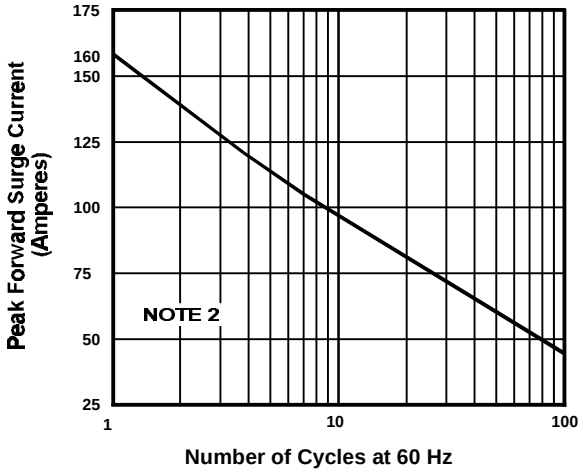

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

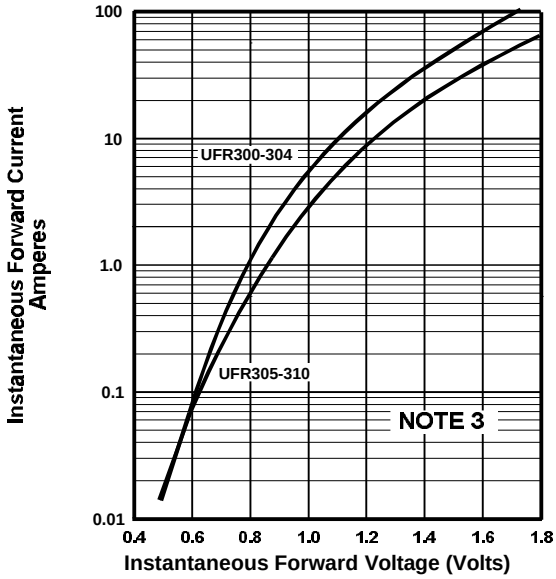

FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

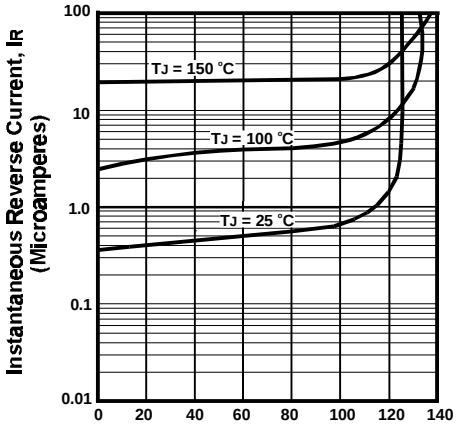

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

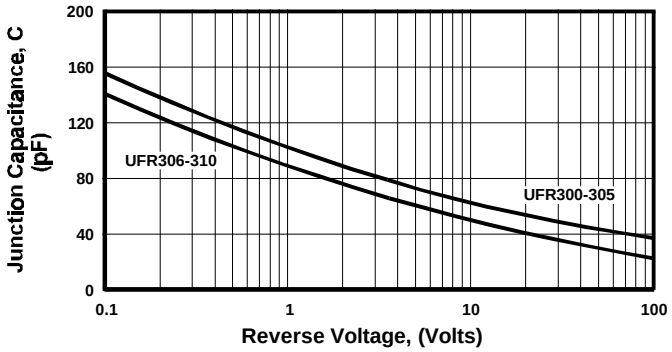

FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) Single Phase, Half Wave, 60 Hz; Lead Length = 0.375" (9.5mm)

(2) JEDEC Method, 8.3 mSec. Single Half Sine Wave;

(3) T_J = 25 °C, Pulse Width = 300 μSec, 2.0% Duty Cycle

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Data Sheet No. SESA-401-1C

4 AMP ULTRAFAST RECOVERY DIODES

FEATURES

- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability
- High reliability

MECHANICAL DATA

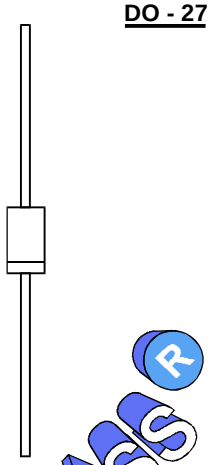
- Case: JEDEC DO-27 molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.04 Ounces (1.12 Grams)

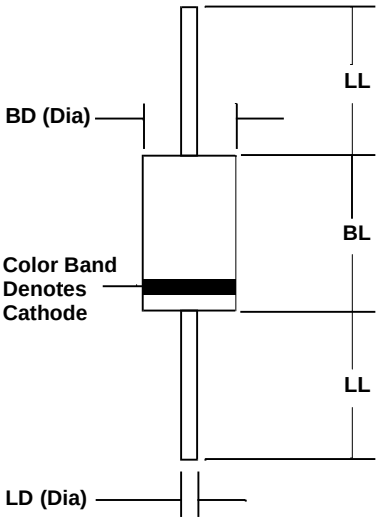
MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-27 PACKAGE

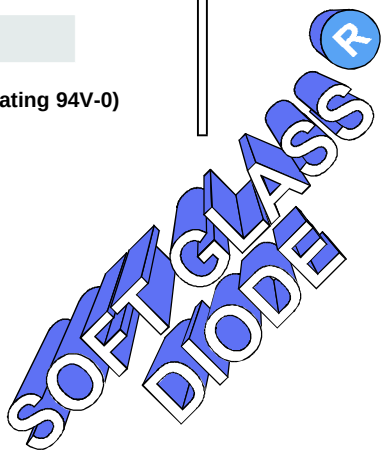
SERIES UFR400 - UFR410

DO - 27





Sym	Minimum		Maximum	
	In	mm	In	mm
BL			0.365	9.28
BD			0.205	5.2
LL	1.00	25.4		
LD	0.048	1.2	0.052	1.3



MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS									UNITS
Series Number		UFR 400	UFR 401	UFR 402	UFR 403	UFR 404	UFR 406	UFR 408	UFR 409	UFR 410	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	300	400	600	800	900	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	210	280	420	560	630	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	300	400	600	800	900	1000	
Average Forward Rectified Current @ T_A = (as shown)	I_O	4 @T_A=80°C					4 @T_A=55°C				AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	200									
Maximum Forward Voltage at: 3-Amps DC 4-Amps DC	V_{FM}	1.20 1.25					1.70 1.85				VOLTS
Maximum Average DC Reverse Current @ T_J = 25 °C At Rated DC Blocking Voltage @ T_J = 125 °C	I_{RM}	5 50					10 50				µA
Typical Thermal Resistance: Junction to Lead Junction to Air	$R_{\theta JL}$ $R_{\theta JA}$	7.5 18.0									°C/W
Typical Junction Capacitance (Note 1)	C_J	45									pF
Maximum Reverse Recovery Time (I_F=0.5A, I_R=1A, I_{RR}=0.25A)	T_{RR}	50			60			75			nSec
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175									°C

NOTES: (1) Measured at 1MHz and an applied reverse voltage of 4 volts.

3.01 ufr400

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4 AMP ULTRAFAST RECOVERY DIODES

RATING & CHARACTERISTIC CURVES FOR SERIES UFR400 - UFR410

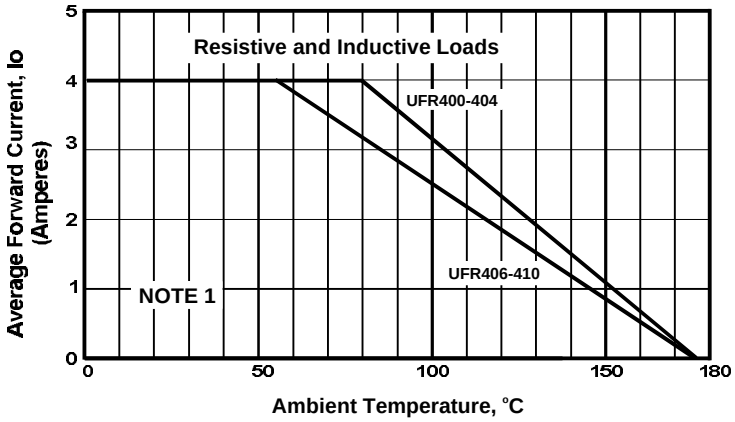

FIGURE 1. FORWARD CURRENT DERATING CURVE

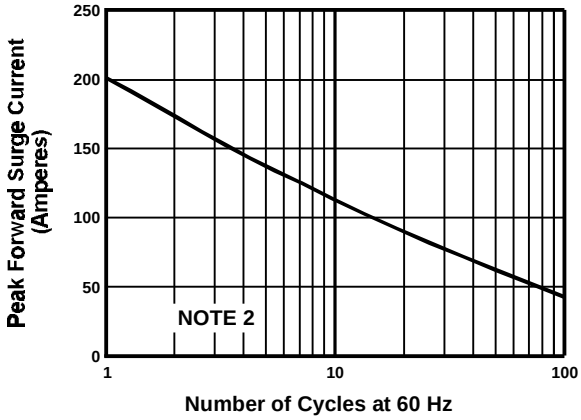

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

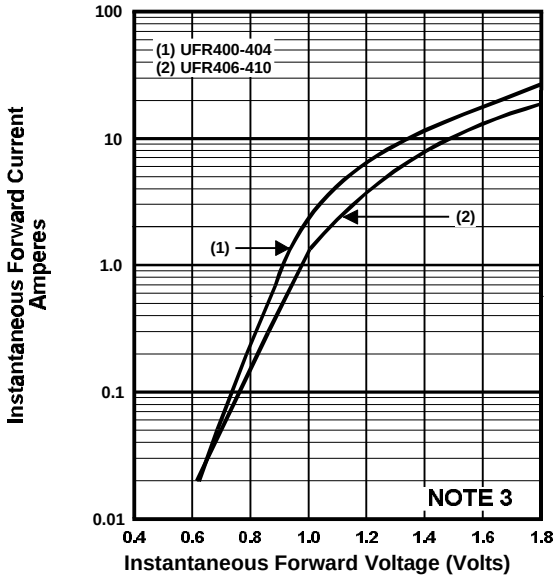

FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

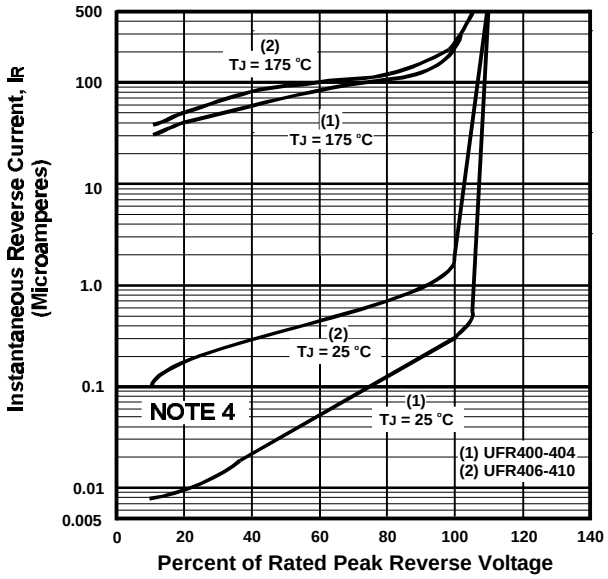

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

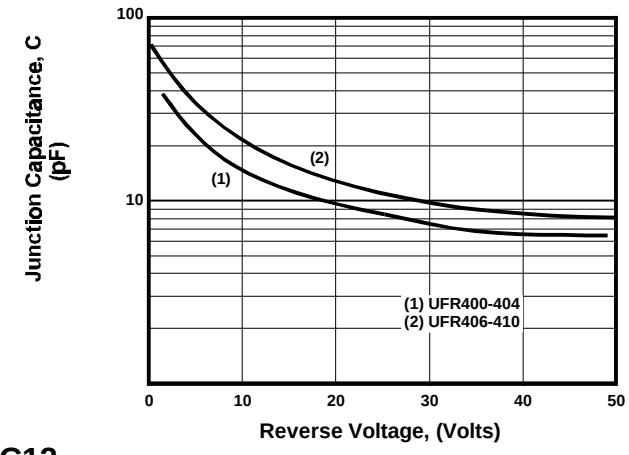

FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) Lead Length = 0.375" (9.5mm)

(2) JEDEC Method, 8.3 mSec. Single Half Sine Wave

(3) T_J = 25 °C, Pulse Width = 300 μSec, 2.0% Duty Cycle

(4) These Curves Are Typical For The Highest Voltage Diode in The Voltage Grouping.

DIOTEC ELECTRONICS CORP.
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Data Sheet No. SESA-500-1B

5 AMP SUPER-EFFICIENT RECTIFIERS

FEATURES

- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability
- High reliability

MECHANICAL DATA

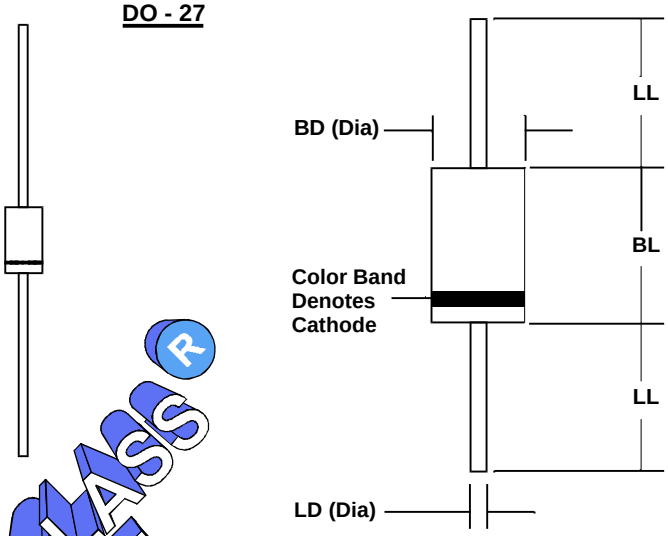
- Case: JEDEC DO-27 molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.04 Ounces (1.12 Grams)

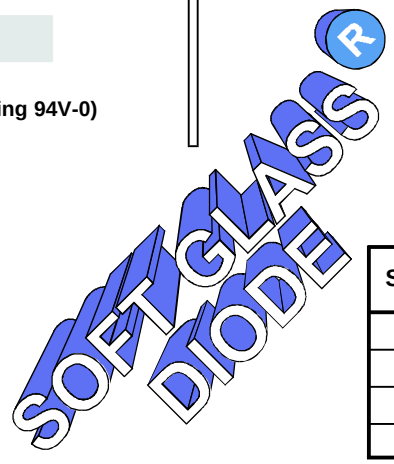
MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-27 PACKAGE

SERIES SPR51 - SPR54

DO - 27





Sym	Minimum		Maximum	
	In	mm	In	mm
BL			0.365	9.28
BD			0.205	5.2
LL	1.00	25.4		
LD	0.048	1.2	0.052	1.3

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS				UNITS
Series Number		SPR51	SPR52	SPR53	SPR54	
Maximum DC Blocking Voltage	V_{RM}	100	200	300	400	VOLTS
Maximum RMS Voltage	V_{RMS}	70	140	210	280	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	100	200	300	400	
Average Forward Rectified Current @ T_A = 55 °C	I_O	5				AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	150				
Maximum Forward Voltage at 5 Amps DC	V_{FM}	1.25				VOLTS
Maximum Average DC Reverse Current @ T_C = 25 °C At Rated DC Blocking Voltage @ T_C = 100 °C	I_{RM}	5 50				µA
Typical Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	20				°C/W
Typical Junction Capacitance (Note 1)	C_J	75				pF
Maximum Reverse Recovery Time (I_F=0.5A, I_R=1A, I_{RR}=0.25A)	T_{RR}	50				nSec
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150				°C

NOTES: (1) Measured at 1 MHz and an applied reverse voltage of 4 volts.

4.97fsesa5

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5 AMP SUPER EFFICIENT RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES SPR51 - SPR54

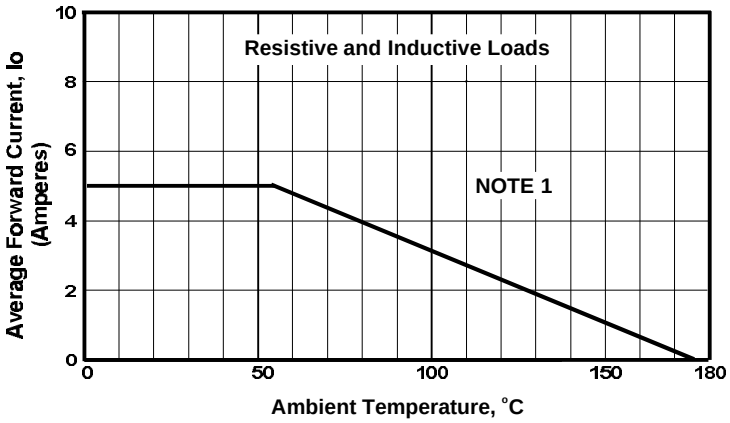

FIGURE 1. FORWARD CURRENT DERATING CURVE

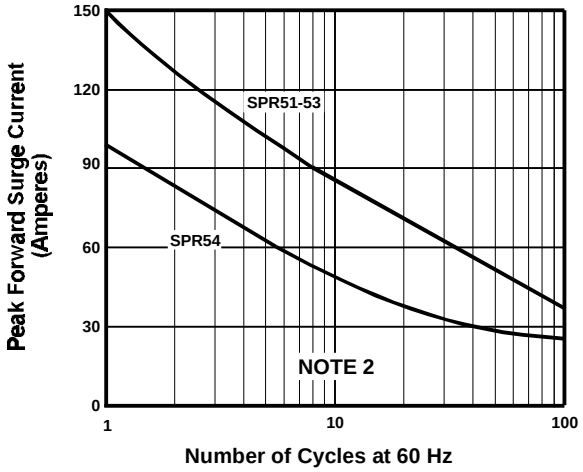

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

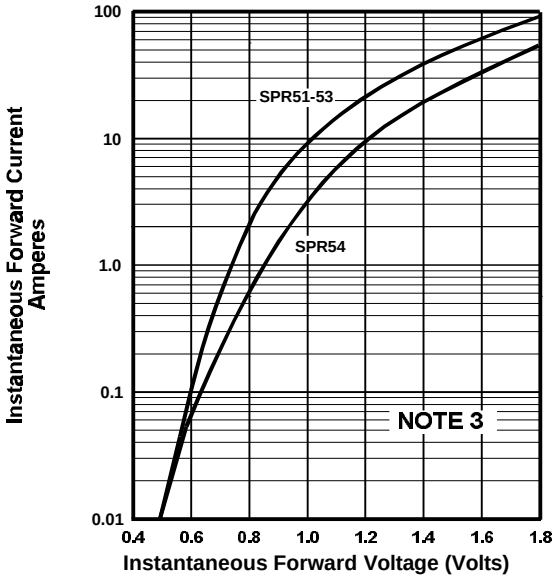

FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

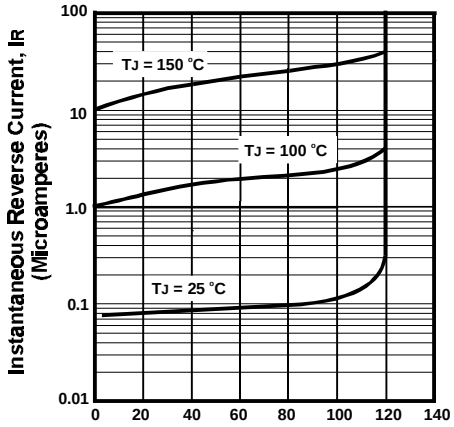

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

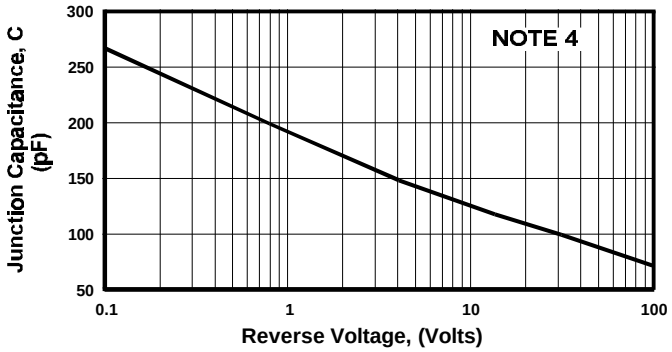

FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) Single Phase, Half Wave, 60 Hz; Lead Length = 0.375" (9.5mm)

(2) JEDEC Method, 8.3 mSec. Single Half Sine Wave; T_L = 55 °C

(3) T_J = 25 °C, Pulse Width = 300 µSec, 1.0% Duty Cycle

(4) T_J = 25 °C, f = 1 MHz, V_{SIG} = 50 mV P-P

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Data Sheet No. SESA-600-1C

6 AMP ULTRAFAST RECOVERY DIODES

FEATURES

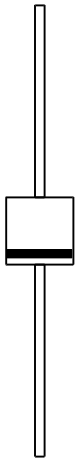
- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability
- High reliability

MECHANICAL DATA

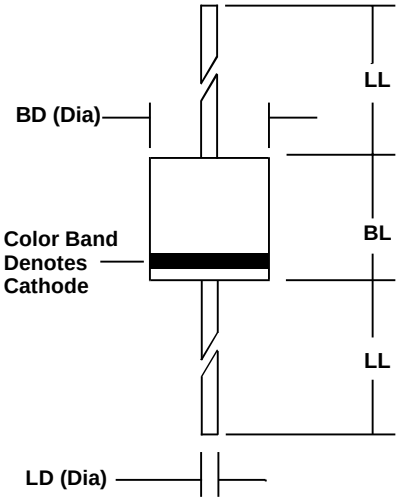
- Case: Molded epoxy (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.07 Ounces (2.1 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF UFR600 PACKAGE



SERIES UFR600 - UFR608



Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.340	8.6	0.360	9.1
BD	0.340	8.6	0.360	9.1
LL	1.00	25.4		
LD	0.048	1.2	0.052	1.3

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		UFR 600	UFR 601	UFR 602	UFR 603	UFR 604	UFR 606	UFR 608	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	300	400	600	800	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	210	280	420	560	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	300	400	600	800	
Average Forward Rectified Current @ T_A = 55 °C	I_O	6							AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	300							
Maximum Forward Voltage at 6 Amps DC	V_{FM}	1.25					1.4		VOLTS
Maximum Average DC Reverse Current @ T_C = 25 °C At Rated DC Blocking Voltage @ T_C = 100 °C	I_{RM}	10 200							µA
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	10							°C/W
Typical Junction Capacitance (Note 1)	C_J	100							pF
Maximum Reverse Recovery Time (I_F=0.5A, I_R=1A, I_{RR}=0.25A)	T_{RR}	60			75		90		nSec
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150							°C

NOTES: (1) Measured at 1 MHz and an applied reverse voltage of 4 volts.

01.00 fsesa6

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6 AMP ULTRAFAST RECOVERY DIODES

RATING & CHARACTERISTIC CURVES FOR SERIES UFR600 - UFR608

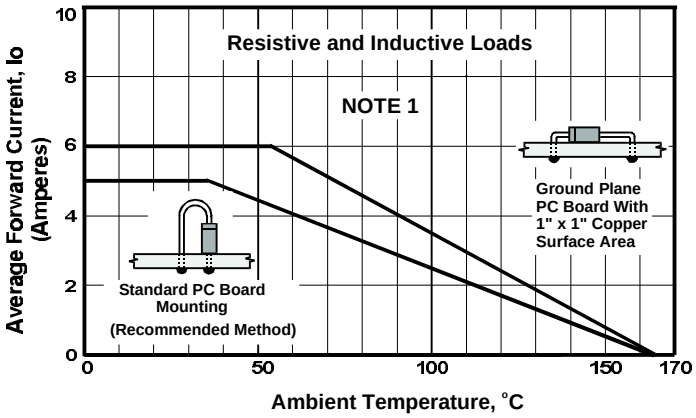


FIGURE 1. FORWARD CURRENT DERATING CURVE

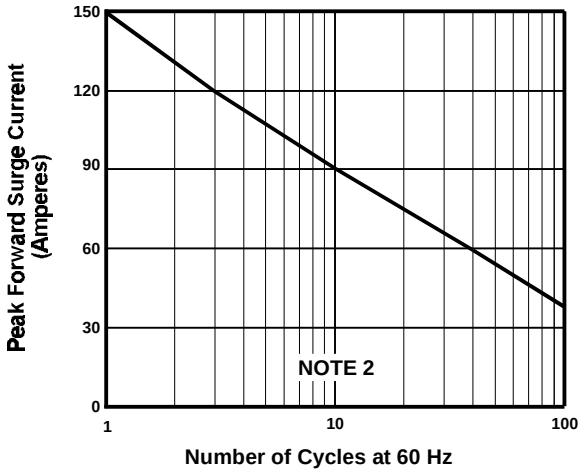


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

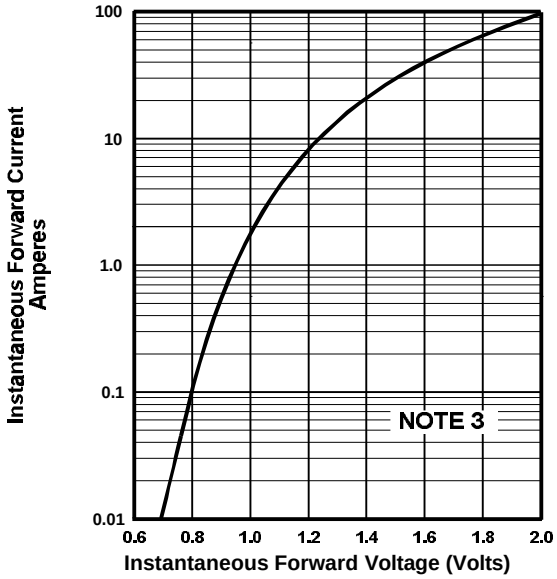


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

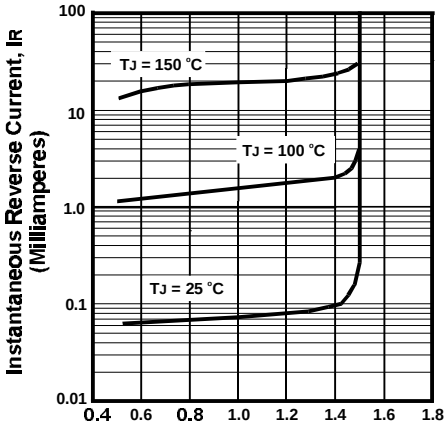


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

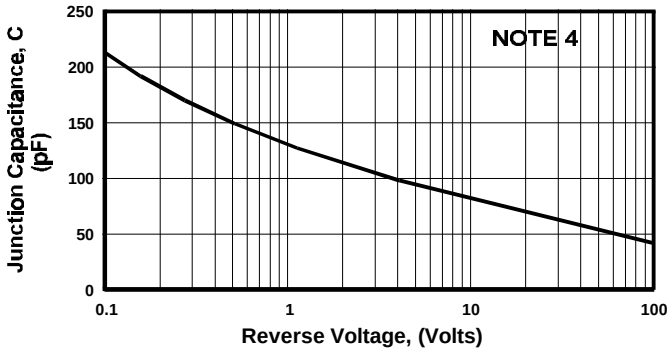


FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) Single Phase, Half Wave, 60 Hz

(2) JEDEC Method, 8.3 mSec. Single Half Sine Wave;

(3) T_J = 25 °C, Pulse Width = 300 μSec, 2.0% Duty Cycle

(4) T_J = 25 °C, f = 1 MHz, V_{SIG} = 50 mV P-P

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. SESA-601-1B

6 AMP SUPER-EFFICIENT RECTIFIERS

FEATURES

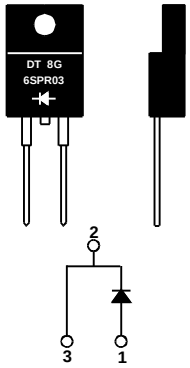
- Glass Passivated for high reliability/temperature performance
- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability

MECHANICAL DATA

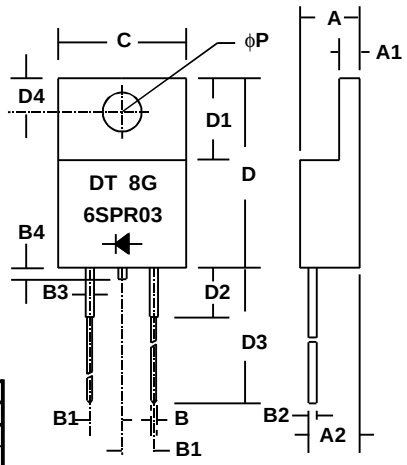
- Case: TO-220 molded plastic (Fully Insulated)
  (U/L Flammability Rating 94V-0)
- Terminals: Rectangular pins w/ standoff
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Diode depicted on product
- Mounting Position: Any
- Weight: 0.06 Ounces (1.7 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF TO-220AC PACKAGE



FULLY INSULATED PACKAGE



Sym	Minimum		Maximum	
	in	mm	in	mm
A			0.187	4.75
A1	0.121*	4.75*		
A2	0.14*	3.56*		
B	0.035	0.9	0.043	1.1
B1	0.09	2.3	0.102	2.6
B2	0.025*	0.64*		
B3	0.050*	1.27*		
B4			0.04	1.0
C			0.413	10.5
D	0.59	15.0	0.61	15.5
D1	0.262*	6.6*		
D2			0.16	4.0
D3	0.54	13.7	0.60	15.2
D4	0.108*	2.75*		
ϕP	0.126*	3.2*		

ITO - 220AC

SERIES 6SPR01 - 6SPR05

*** These dimensions are "Typicals".**

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
Series Number		6SPR01	6SPR02	6SPR03	6SPR04	6SPR05	
Maximum DC Blocking Voltage	V_{RM}	100	200	300	400	500	VOLTS
Maximum RMS Voltage	V_{RMS}	70	140	210	280	350	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	100	200	300	400	500	
Average Forward Rectified Current @ Tc = 100 °C	I_O	6					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	80					
Maximum Forward Voltage at 6 Amps DC	V_{FM}	1.05		1.3			VOLTS
Maximum Average DC Reverse Current @ Tc = 25 °C At Rated DC Blocking Voltage @ Tc = 100 °C	I_{RM}	10 500					µA
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	5					°C/W
Typical Junction Capacitance (Note 1)	C_J	65					pF
Maximum Reverse Recovery Time (I_F=6.0A, di/dt=50A/µS, T_J=25°C)	T_{RR}	35		45			nSec
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150					°C

NOTES: (1) Measured at 1 MHz and an applied reverse voltage of 4 volts.

4.97fsesa6a

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

6 AMP SUPER EFFICIENT RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES 6SPR01 - 6SPR05

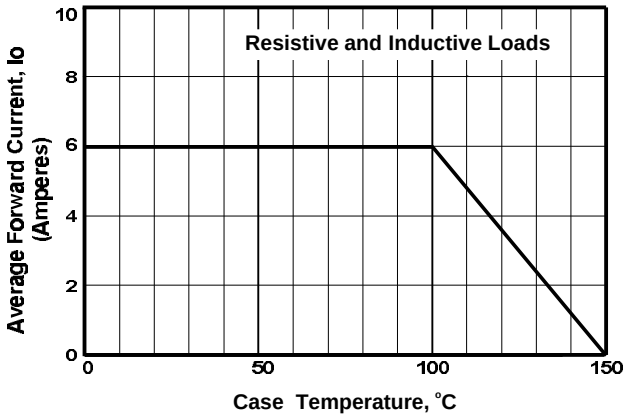


FIGURE 1. FORWARD CURRENT DERATING CURVE

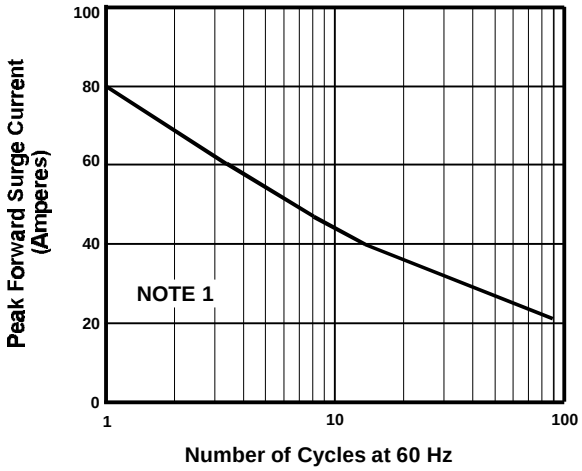


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

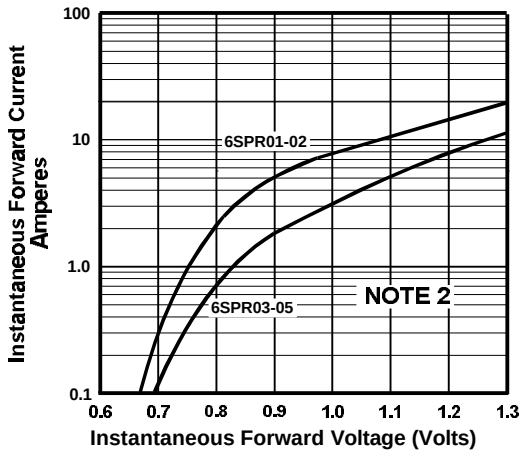


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

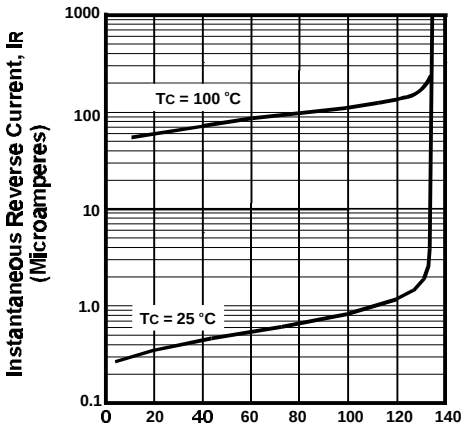


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

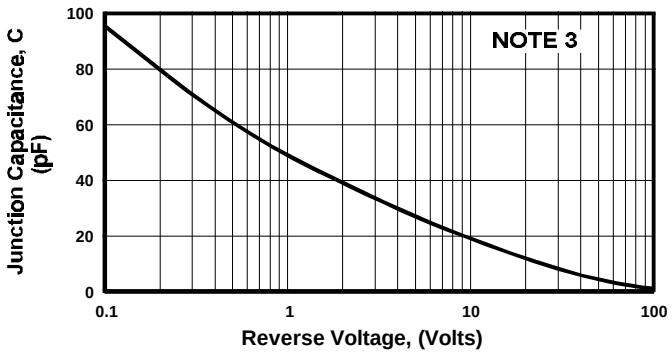


FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) JEDEC Method, 8.3 mSec. Single Half Sine Wave

(2) T_J = 25 °C, Pulse Width = 300 µSec, 2.0% Duty Cycle

(3) T_C = 25 °C, f = 1 MHz, V_{SIG} = 50 mV P-P

4.97bsesa6a

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1054 Fax: (310) 767-7958

Data Sheet No. SESA-801-1B

8 AMP SUPER-EFFICIENT RECTIFIERS

FEATURES

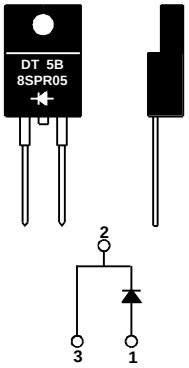
- Glass Passivated for high reliability/temperature performance
- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability

MECHANICAL DATA

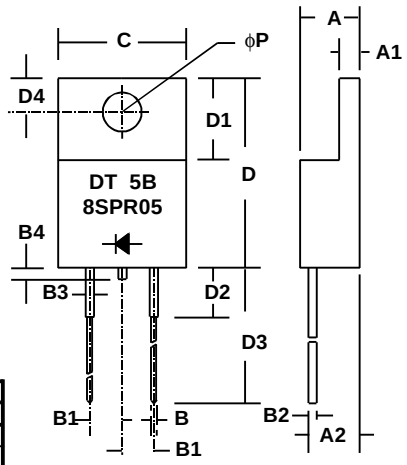
- Case: TO-220 molded plastic (Fully Insulated)
  (U/L Flammability Rating 94V-0)
- Terminals: Rectangular pins w/ standoff
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Diode depicted on product
- Mounting Position: Any
- Weight: 0.06 Ounces (1.7 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF TO-220AC PACKAGE



FULLY INSULATED PACKAGE



Sym	Minimum		Maximum	
	in	mm	in	mm
A			0.187	4.75
A1	0.121*	4.75*		
A2	0.14*	3.56*		
B	0.035	0.9	0.043	1.1
B1	0.09	2.3	0.102	2.6
B2	0.025*	0.64*		
B3	0.050*	1.27*		
B4			0.04	1.0
C			0.413	10.5
D	0.59	15.0	0.61	15.5
D1	0.262*	6.6*		
D2			0.16	4.0
D3	0.54	13.7	0.60	15.2
D4	0.108*	2.75*		
ϕP	0.126*	3.2*		

* These dimensions are "Typicals".

ITO - 220AC

SERIES 8SPR01 - 8SPR05

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
Series Number		8SPR01	8SPR02	8SPR03	8SPR04	8SPR05	
Maximum DC Blocking Voltage	V_{RM}	100	200	300	400	500	VOLTS
Maximum RMS Voltage	V_{RMS}	70	140	210	280	350	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	100	200	300	400	500	
Average Forward Rectified Current @ Tc = 110 °C	I_O	8					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	120					
Maximum Forward Voltage at 8 Amps DC	V_{FM}	1.0		1.2			VOLTS
Maximum Average DC Reverse Current @ Tc = 25 °C At Rated DC Blocking Voltage @ Tc = 100 °C	I_{RM}	10 500					µA
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.5					°C/W
Typical Junction Capacitance (Note)	C_J	45					pF
Maximum Reverse Recovery Time (I_F=8.0A, di/dt=50A/µS, T_J=25°C)	T_{RR}	35		45			nSec
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150					°C

NOTES: (1) Measured at 1 MHz and an applied reverse voltage of 4 volts.

4.97fsesa8

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

8 AMP SUPER EFFICIENT RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES 8SPR01 - 8SPR05

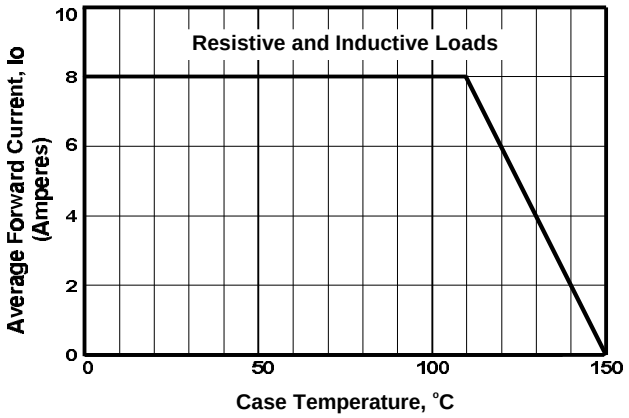


FIGURE 1. FORWARD CURRENT DERATING CURVE

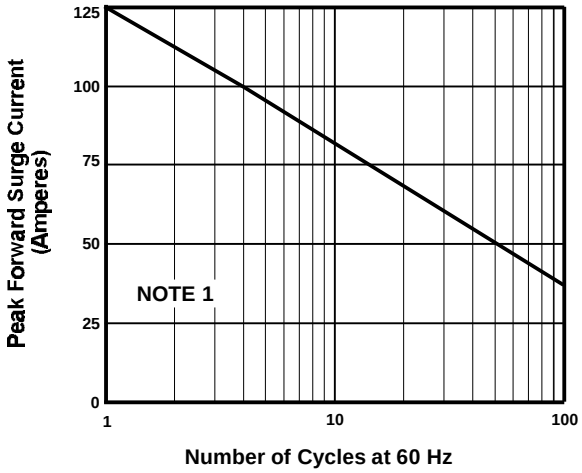


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

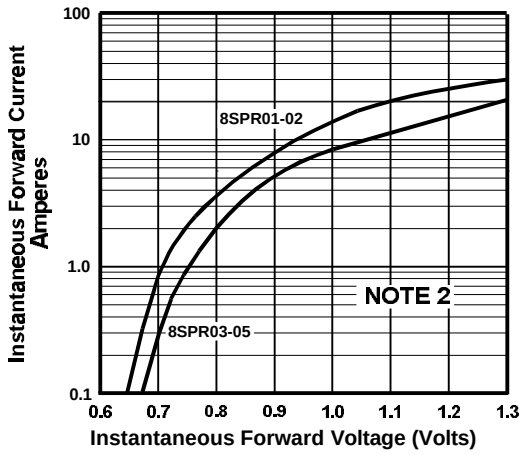


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

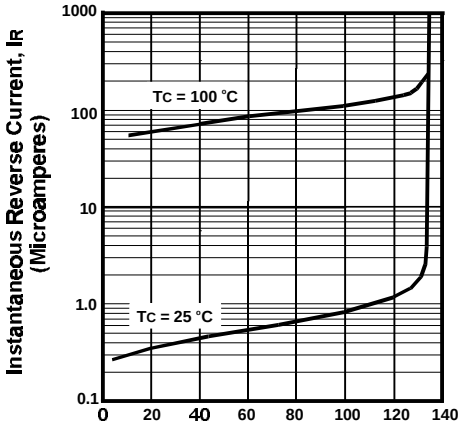


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

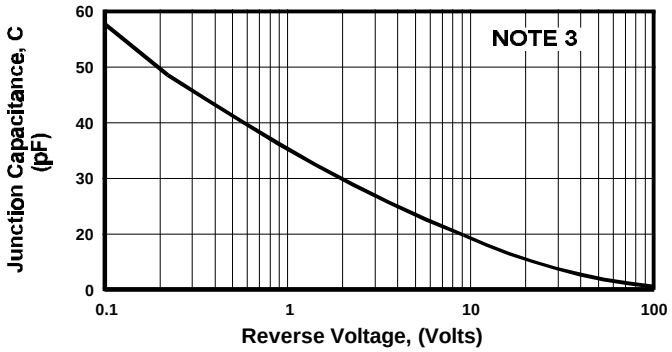


FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) JEDEC Method, 8.3 mSec. Single Half Sine Wave

(2) T_J = 25 °C, Pulse Width = 300 µSec, 2.0% Duty Cycle

(3) T_C = 25 °C, f = 1 MHz, V_{SIG} = 50 mV P-P

DIOTEC ELECTRONICS C0RP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-11052 Fax: (310) 767-7958

Data Sheet No. SESA-802-1B

8 AMP SUPER-EFFICIENT RECTIFIERS

FEATURES

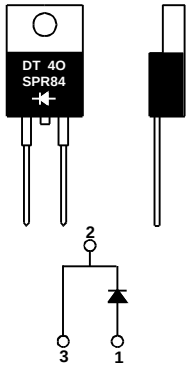
- Glass Passivated for high reliability/temperature performance
- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability

MECHANICAL DATA

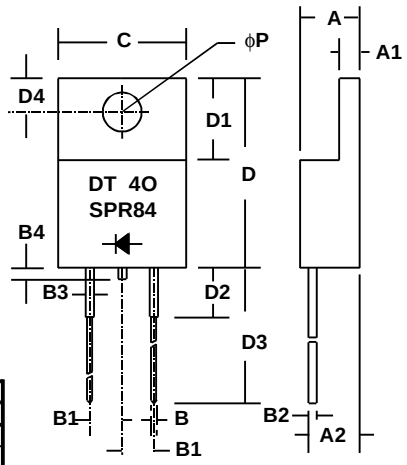
- Case: TO-220 molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Rectangular pins w/ standoff
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Diode depicted on product
- Mounting Position: Any
- Weight: 0.08 Ounces (2.2 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF TO-220AC PACKAGE



NON - INSULATED PACKAGE



Sym	Minimum		Maximum	
	in	mm	in	mm
A			0.187	4.75
A1	0.121*	4.75*		
A2	0.14*	3.56*		
B	0.035	0.9	0.043	1.1
B1	0.09	2.3	0.102	2.6
B2	0.025*	0.64*		
B3	0.050*	1.27*		
B4			0.04	1.0
C			0.413	10.5
D	0.59	15.0	0.61	15.5
D1	0.262*	6.6*		
D2			0.16	4.0
D3	0.54	13.7	0.60	15.2
D4	0.108*	2.75*		
ϕP	0.126*	3.2*		

TO - 220AC

SERIES SPR81 - SPR86

*** These dimensions are "Typicals".**

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS						UNITS
Series Number		SPR81	SPR82	SPR83	SPR84	SPR85	SPR86	
Maximum DC Blocking Voltage	V_{RM}	100	200	300	400	500	600	VOLTS
Maximum RMS Voltage	V_{RMS}	70	140	210	280	350	420	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	100	200	300	400	500	600	
Average Forward Rectified Current @ Tc = 110 °C	I_O	8						AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	125						
Maximum Forward Voltage at 8 Amps DC	V_{FM}	1.0			1.2			VOLTS
Maximum Average DC Reverse Current @ Tc = 25 °C At Rated DC Blocking Voltage @ Tc = 100 °C	I_{RM}	10 500						µA
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	3						°C/W
Typical Junction Capacitance (Note 1)	C_J	65						pF
Maximum Reverse Recovery Time (I_F=0.5A, I_R=1.0A, I_{RR}=0.25A)	T_{RR}	35			45			nSec
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150						°C

NOTES: (1) Measured at 1 MHz and an applied reverse voltage of 4 volts.

4.97fsesa8a

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

8 AMP SUPER EFFICIENT RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES SPR81 - SPR86

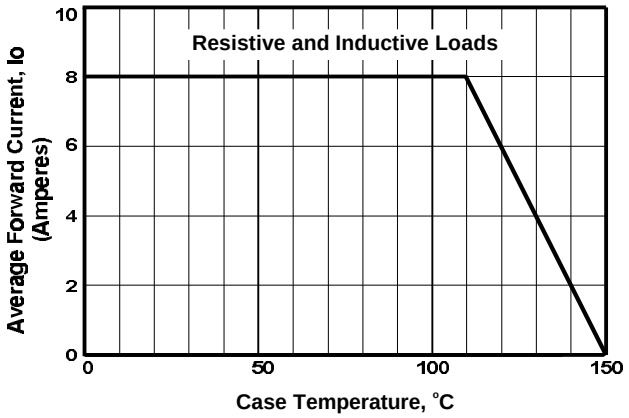


FIGURE 1. FORWARD CURRENT DERATING CURVE

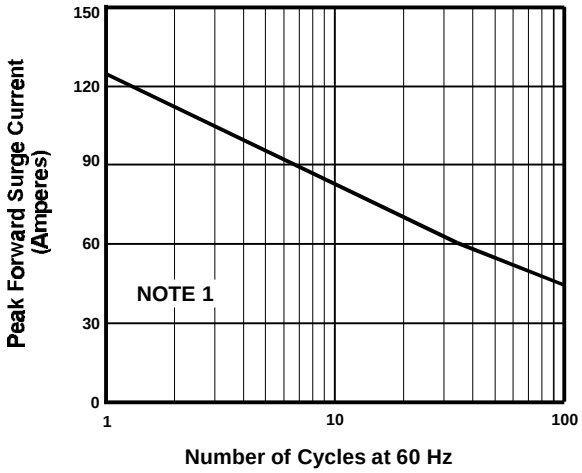


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

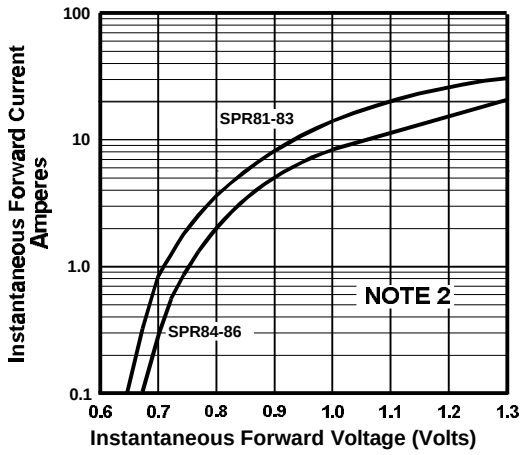


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

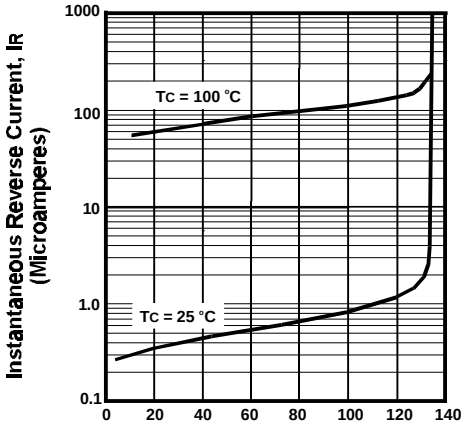


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

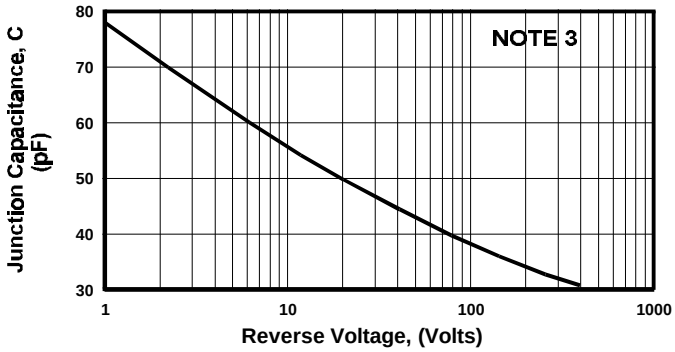


FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) JEDEC Method, 8.3 mSec. Single Half Sine Wave

(2) T_J = 25 °C, Pulse Width = 300 µSec, 2.0% Duty Cycle

(3) T_C = 25 °C, f = 1 MHz, V_{SIG} = 50 mV P-P

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. SESA-1201-1B

12 AMP SUPER-EFFICIENT RECTIFIERS

FEATURES

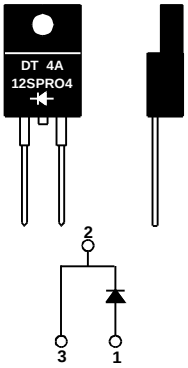
- Glass Passivated for high reliability/temperature performance
- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability

MECHANICAL DATA

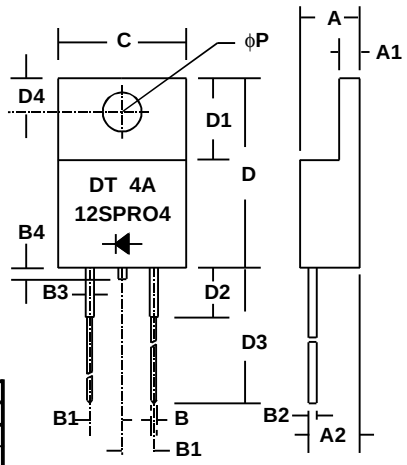
- Case: TO-220 molded plastic (Full Insulated)
  (U/L Flammability Rating 94V-0)
- Terminals: Rectangular pins w/ standoff
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Diode depicted on product
- Mounting Position: Any
- Weight: 0.06 Ounces (1.7 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF TO-220AC PACKAGE



FULLY INSULATED PACKAGE



Sym	Minimum		Maximum	
	in	mm	in	mm
A			0.187	4.75
A1	0.121*	4.75*		
A2	0.14*	3.56*		
B	0.035	0.9	0.043	1.1
B1	0.09	2.3	0.102	2.6
B2	0.025*	0.64*		
B3	0.050*	1.27*		
B4			0.04	1.0
C			0.413	10.5
D	0.59	15.0	0.61	15.5
D1	0.262*	6.6*		
D2			0.16	4.0
D3	0.54	13.7	0.60	15.2
D4	0.108*	2.75*		
ϕP	0.126*	3.2*		

*** These dimensions are "Typicals".**

ITO - 220AC

SERIES 12SPR01 - 12SPR05

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
Series Number		12SPR01	12SPR02	12SPR03	12SPR04	12SPR05	
Maximum DC Blocking Voltage	V_{RM}	100	200	300	400	500	VOLTS
Maximum RMS Voltage	V_{RMS}	70	140	210	280	350	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	100	200	300	400	500	
Average Forward Rectified Current @ Tc = 110 °C	I_O	12					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	120					
Maximum Forward Voltage at 12 Amps DC	V_{FM}	1.05		1.20			VOLTS
Maximum Average DC Reverse Current @ Tc = 25 °C At Rated DC Blocking Voltage @ Tc = 100 °C	I_{RM}	10 500					µA
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.5					°C/W
Typical Junction Capacitance (Note 1)	C_J	45					pF
Maximum Reverse Recovery Time (I_F=8.0A, di/dt=50A/µS, T_J=25°C)	T_{RR}	35		45			nSec
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150					°C

NOTES: (1) Measured at 1 MHz and an applied reverse voltage of 4 volts.

4.97fsesa12

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

12 AMP SUPER EFFICIENT RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES 12SPR001 - 12SPR05

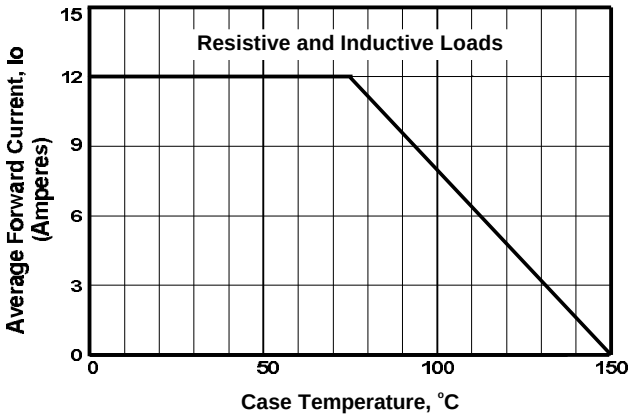


FIGURE 1. FORWARD CURRENT DERATING CURVE

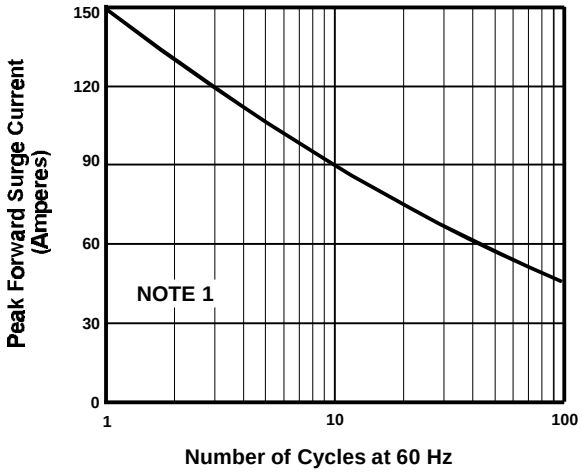


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

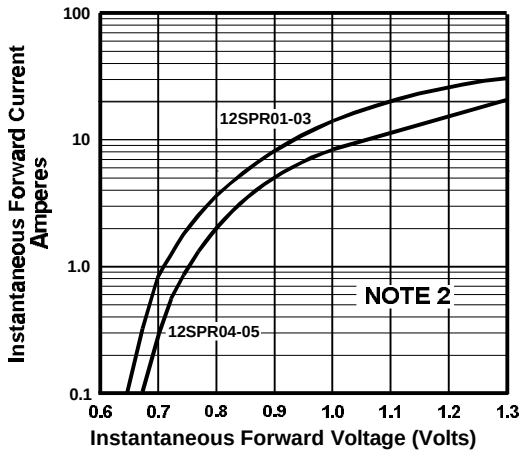


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

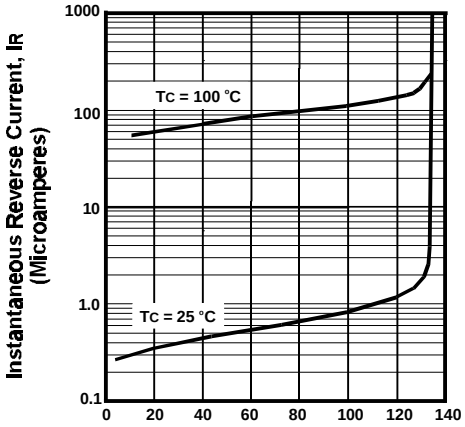


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

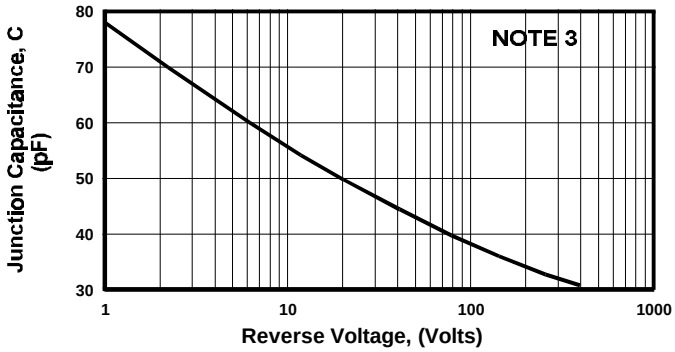


FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) JEDEC Method, 8.3 mSec. Single Half Sine Wave

(2) T_J = 25 °C, Pulse Width = 300 µSec, 2.0% Duty Cycle

(3) T_C = 25 °C, f = 1 MHz, V_{SIG} = 50 mV P-P

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
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Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. SESA-1502-1B

15 AMP SUPER-EFFICIENT RECTIFIERS

FEATURES

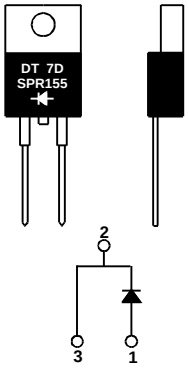
- Glass Passivated for high reliability/temperature performance
- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability

MECHANICAL DATA

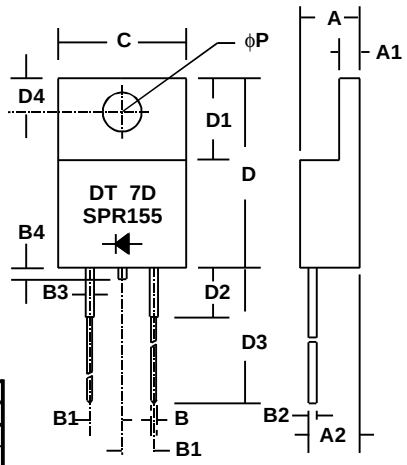
- Case: TO-220 molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Rectangular pins w/ standoff
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Diode depicted on product
- Mounting Position: Any
- Weight: 0.08 Ounces (2.2 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF TO-220AC PACKAGE



NON - INSULATED PACKAGE



Sym	Minimum		Maximum	
	in	mm	in	mm
A			0.187	4.75
A1	0.121*	4.75*		
A2	0.14*	3.56*		
B	0.035	0.9	0.043	1.1
B1	0.09	2.3	0.102	2.6
B2	0.025*	0.64*		
B3	0.050*	1.27*		
B4			0.04	1.0
C			0.413	10.5
D	0.59	15.0	0.61	15.5
D1	0.262*	6.6*		
D2			0.16	4.0
D3	0.54	13.7	0.60	15.2
D4	0.108*	2.75*		
ϕP	0.126*	3.2*		

TO - 220AC

SERIES SPR150 - SPR156

*** These dimensions are "Typicals".**

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		SPR 150	SPR 151	SPR 152	SPR 153	SPR 154	SPR 155	SPR 156	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	300	400	500	600	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	210	280	350	420	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	300	400	500	600	
Average Forward Rectified Current @ Tc = 110 °C	I_O	15							AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	250							
Maximum Forward Voltage at 15 Amps DC	V_{FM}	0.95			1.25		1.5		VOLTS
Maximum Average DC Reverse Current @ Tc = 25 °C At Rated DC Blocking Voltage @ Tc = 100 °C	I_{RM}	10 500							µA
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.5							°C/W
Typical Junction Capacitance (Note 1)	C_J	65							pF
Maximum Reverse Recovery Time (I_F=0.5A, I_R=1.0A, I_{RR}=0.25A)	T_{RR}	35				50			nSec
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150							°C

NOTES: (1) Measured at 1 MHz and an applied reverse voltage of 4 volts.

4.97fsesa15

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18020 Hobart Blvd., Unit B
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15 AMP SUPER EFFICIENT RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES SPR150 - SPR156

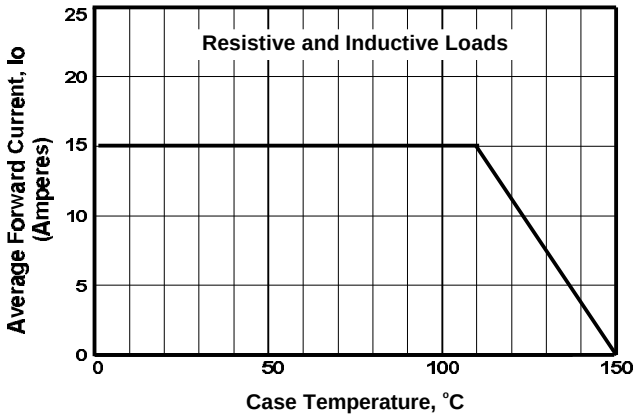


FIGURE 1. FORWARD CURRENT DERATING CURVE

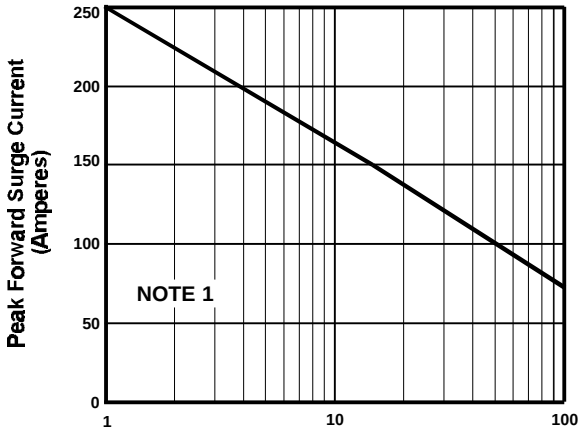


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

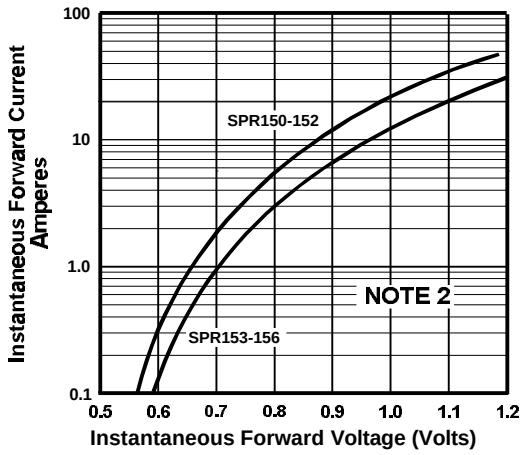


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

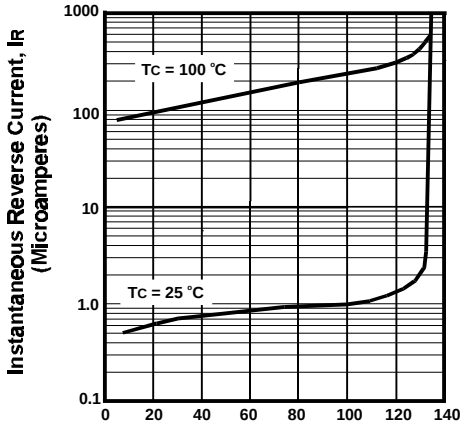


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

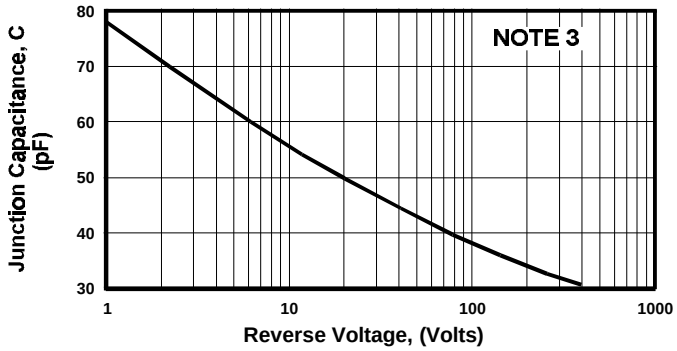


FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) JEDEC Method, 8.3 mSec. Single Half Sine Wave

(2) T_J = 25 °C, Pulse Width = 300 µSec, 1.0% Duty Cycle

(3) T_C = 25 °C, f = 1 MHz, V_{SIG} = 50 mV P-P

SECTION D

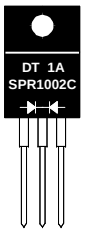
SUPER EFFICIENT and ULTRA FAST RECOVERY DIODES

Dual Diode Products

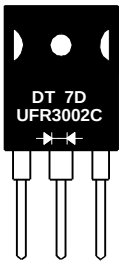
3 PIN TO-220AB AND TO-247AB PACKAGES

6 TO 30 AMPERES

100 TO 600 VOLTS



TO - 220AB



TO - 247AB

DIOTEC ELECTRONICS CORP. • **18020 Hobart Blvd., Unit B** • **Gardena, CA 90248 U.S.A.** • **PH: 310-767-1052 - FX: 310-767-7958**

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. SEDR-600-1B

6 AMP SUPER-EFFICIENT RECTIFIERS

FEATURES

- Glass Passivated for high reliability/temperature performance
- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability

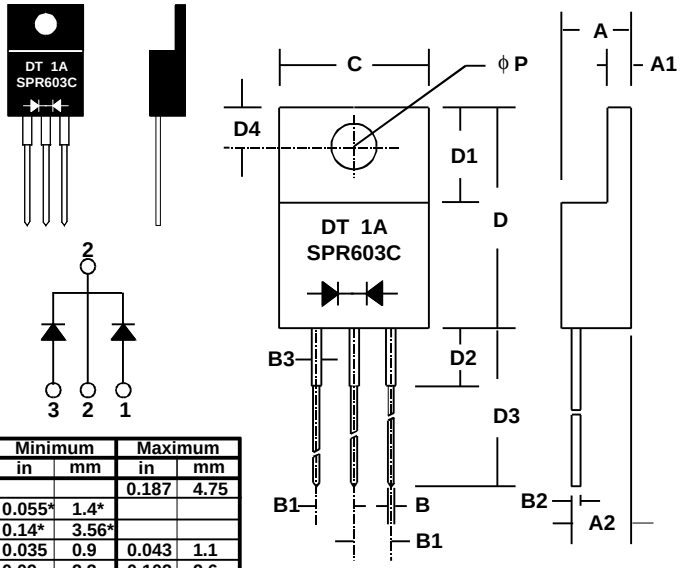
MECHANICAL DATA

- Case: TO-220 molded plastic (Fully Insulated) (U/L Flammability Rating 94V-0)
- Terminals: Rectangular pins w/ standoff
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Diodes depicted on product
- Mounting Position: Any
- Weight: 0.06 Ounces (1.75 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF TO-220AB PACKAGE

FULLY INSULATED PACKAGE



Sym	Minimum		Maximum	
	in	mm	in	mm
A			0.187	4.75
A1	0.055*	1.4*		
A2	0.14*	3.56*		
B	0.035	0.9	0.043	1.1
B1	0.09	2.3	0.102	2.6
B2	0.028*	0.66*		
B3	0.051*	1.3*		
C			0.410	10.4
D	0.59	15.0	0.61	15.5
D1	0.25*	6.4*		
D2			0.16	4.0
D3	0.53	13.5	0.57	14.8
D4	0.108*	2.75*		
ϕP	0.141*	3.58*		

* These dimensions are "Typicals".

ITO - 220AB

SERIES SPR601C - SPR605C

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
Series Number		SPR 601C	SPR 602C	SPR 603C	SPR 604C	SPR 605C	
Maximum DC Blocking Voltage	V_{RM}	100	200	300	400	500	VOLTS
Maximum RMS Voltage	V_{RMS}	70	140	210	280	350	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	100	200	300	400	500	
Average Forward Rectified Current @ Tc = 120 °C	I_O	6					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	60					
Maximum Forward Voltage (per diode) at 3 Amps DC	V_{FM}	1.0		1.25			VOLTS
Maximum Average DC Reverse Current @ Tc = 25 °C At Rated DC Blocking Voltage @ Tc = 100 °C	I_{RM}	10 500					µA
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	4					°C/W
Typical Junction Capacitance (Note 1)	C_J	65					pF
Maximum Reverse Recovery Time (I_F=3.0A, di/dt=50A/µS, T_J=25°C)	T_{RR}	30					nSec
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150					°C

NOTES: (1) Measured at 1 MHz and an applied reverse voltage of 4 volts.

4.97fsedr6

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
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6 AMP SUPER EFFICIENT RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES SPR601C - SPR605C

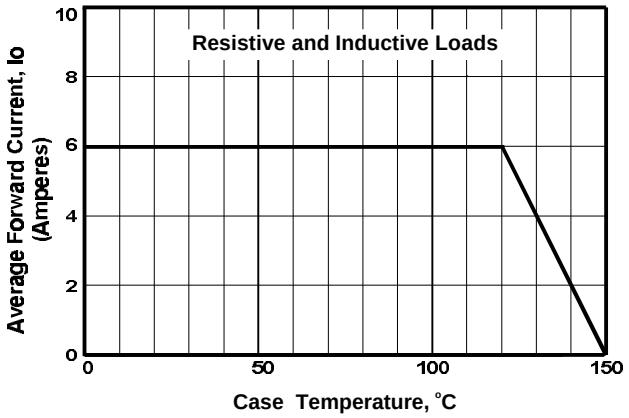


FIGURE 1. FORWARD CURRENT DERATING CURVE

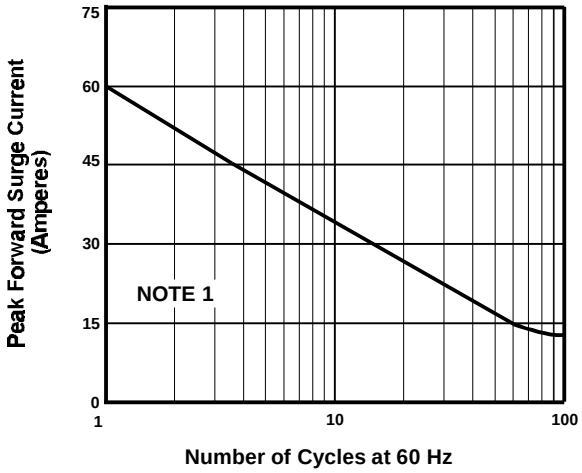


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

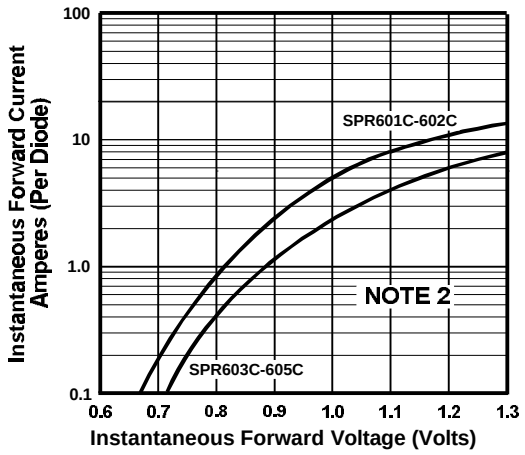


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

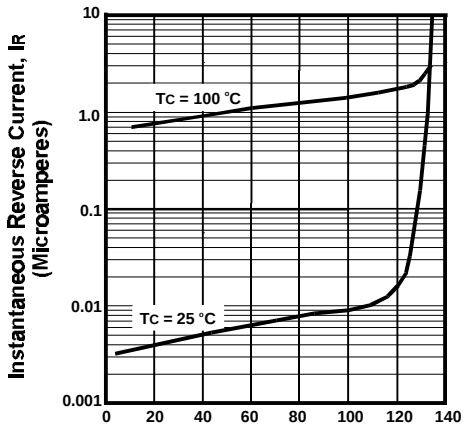


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

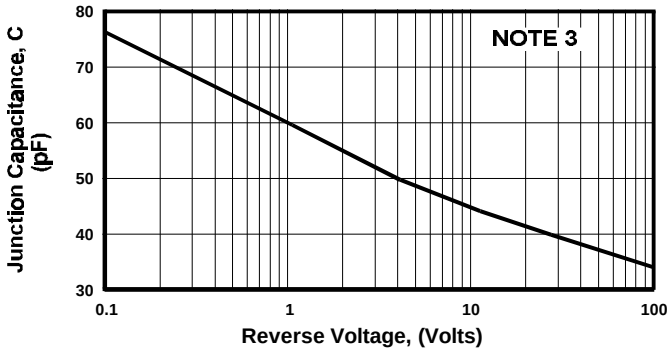


FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) JEDEC Method, 8.3 mSec. Single Half Sine Wave

(2) T_J = 25 °C, Pulse Width = 300 µSec, 2.0% Duty Cycle

(3) T_C = 25 °C

4.97bsedr6

DIOTEC ELECTRONICS CORP
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. SEDR-1000-1B

10 AMP SUPER-EFFICIENT RECTIFIERS

FEATURES

- Glass Passivated for high reliability/temperature performance
- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability

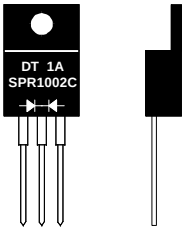
MECHANICAL DATA

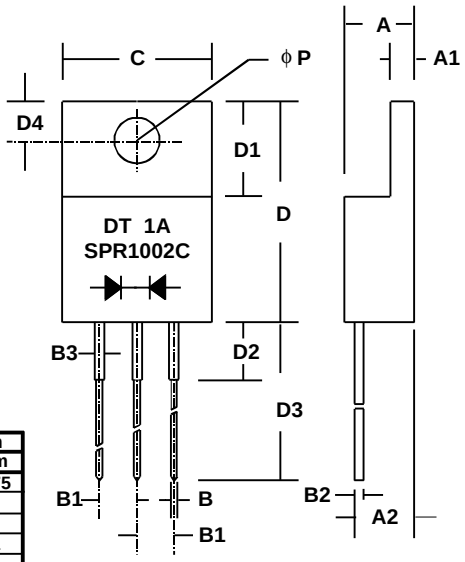
- Case: TO-220 molded plastic (Fully Insulated) (U/L Flammability Rating 94V-0)
- Terminals: Rectangular pins w/ standoff
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Diodes depicted on product
- Mounting Position: Any
- Weight: 0.06 Ounces (1.75 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF TO-220AB PACKAGE

FULLY INSULATED PACKAGE





Sym	Minimum		Maximum	
	in	mm	in	mm
A			0.187	4.75
A1	0.055*	1.4*		
A2	0.14*	3.56*		
B	0.035	0.9	0.043	1.1
B1	0.09	2.3	0.102	2.6
B2	0.028*	0.66*		
B3	0.051*	1.3*		
C			0.410	10.4
D	0.59	15.0	0.61	15.5
D1	0.25*	6.4*		
D2			0.16	4.0
D3	0.53	13.5	0.57	14.8
D4	0.108*	2.75*		
ϕP	0.141*	3.58*		

*** These dimensions are "Typicals".**

ITO - 220AB

SERIES SPR1001C - SPR1005C

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
Series Number		SPR 1001C	SPR 1002C	SPR 1003C	SPR 1004C	SPR 1005C	
Maximum DC Blocking Voltage	V_{RM}	100	200	300	400	500	VOLTS
Maximum RMS Voltage	V_{RMS}	70	140	210	280	350	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	100	200	300	400	500	
Average Forward Rectified Current @ Tc = 120 °C	I_O	10					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	100					
Maximum Forward Voltage (per diode) at 5 Amps DC	V_{FM}	1.0		1.25			VOLTS
Maximum Average DC Reverse Current @ Tc = 25 °C At Rated DC Blocking Voltage @ Tc = 100 °C	I_{RM}	10 500					µA
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	3					°C/W
Typical Junction Capacitance (Note 1)	C_J	65					pF
Maximum Reverse Recovery Time (I_F=5.0A, di/dt=50A/µS, T_J=25°C)	T_{RR}	35		45			nSec
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150					°C

4.97fsedr10

NOTES: (1) Measured at 1 MHz and an applied reverse voltage of 4 volts.

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
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10 AMP SUPER EFFICIENT RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES SPR1001C - SPR1005C

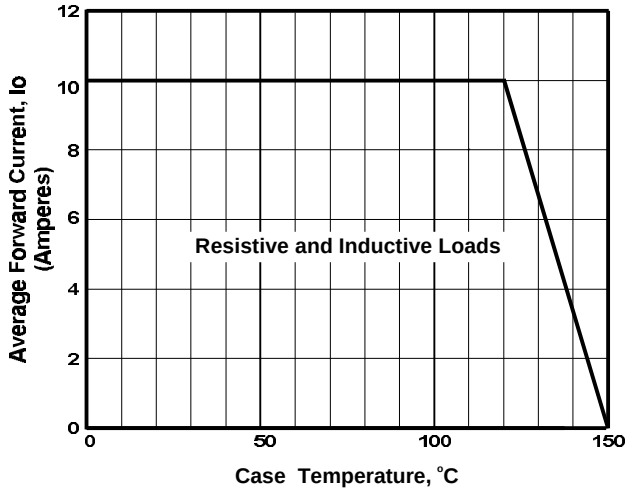


FIGURE 1. FORWARD CURRENT DERATING CURVE

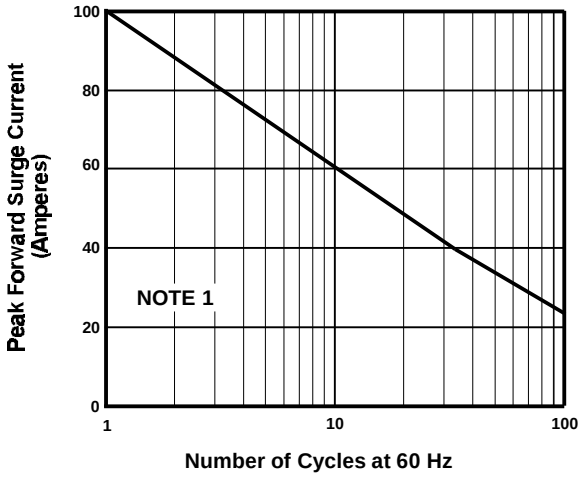


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

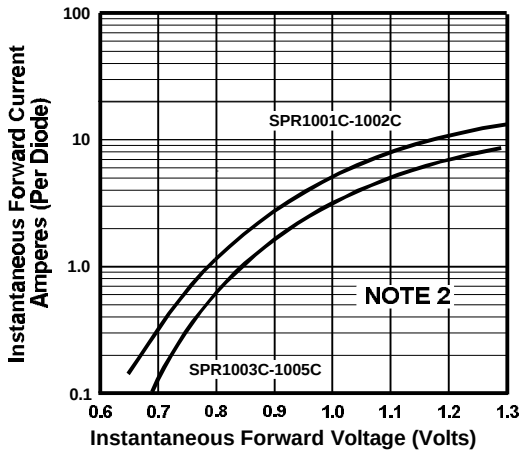


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

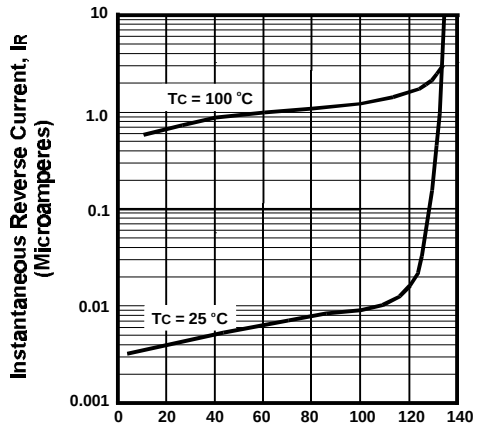


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

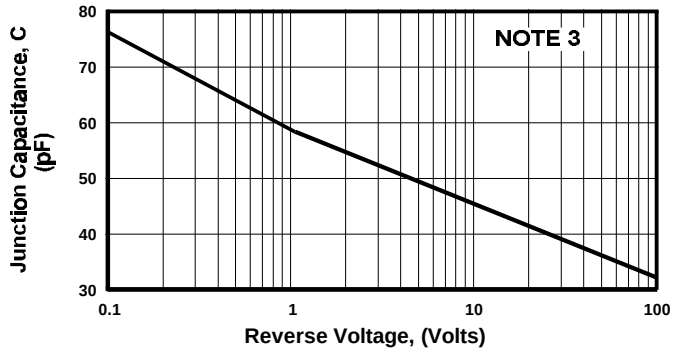


FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) JEDEC Method, 8.3 mSec. Single Half Sine Wave

(2) T_J = 25 °C, Pulse Width = 300 μSec, 2.0% Duty Cycle

(3) T_J = 25 °C

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. SEDR-1600-1B

16 AMP SUPER-EFFICIENT RECTIFIERS

FEATURES

- Glass Passivated for high reliability/temperature performance
- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability

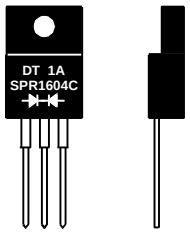
MECHANICAL DATA

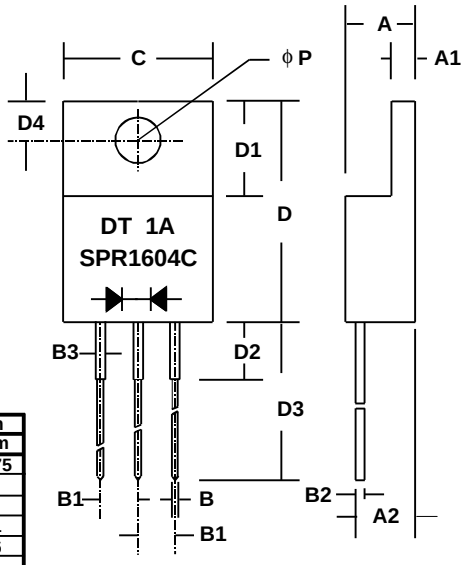
- Case: TO-220 molded plastic- Fully Insulated (U/L Flammability Rating 94V-0)
- Terminals: Rectangular pins w/ standoff
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Diodes depicted on product
- Mounting Position: Any
- Weight: 0.08 Ounces (2.2 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF TO-220AB PACKAGE

FULLY INSULATED PACKAGE





Sym	Minimum		Maximum	
	in	mm	in	mm
A			0.187	4.75
A1	0.055*	1.4*		
A2	0.14*	3.56*		
B	0.035	0.9	0.043	1.1
B1	0.09	2.3	0.102	2.6
B2	0.028*	0.66*		
B3	0.051*	1.3*		
C			0.410	10.4
D	0.59	15.0	0.61	15.5
D1	0.25*	6.4*		
D2			0.16	4.0
D3	0.53	13.5	0.57	14.8
D4	0.108*	2.75*		
ϕP	0.141*	3.58*		

* These dimensions are "Typicals".

TO - 220AB

SERIES SPR1601C - SPR1605C

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
Series Number		SPR 1601C	SPR 1602C	SPR 1603C	SPR 1604C	SPR 1605C	
Maximum DC Blocking Voltage	V_{RM}	100	200	300	400	500	VOLTS
Maximum RMS Voltage	V_{RMS}	70	140	210	280	350	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	100	200	300	400	500	
Average Forward Rectified Current @ Tc = 100 °C	I_O	16					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	150					
Maximum Forward Voltage (per diode) at 8 Amps DC	V_{FM}	1.0		1.2			VOLTS
Maximum Average DC Reverse Current @ Tc = 25 °C At Rated DC Blocking Voltage @ Tc = 100 °C	I_{RM}	10 500					µA
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	3					°C/W
Typical Junction Capacitance (Note 1)	C_J	65					pF
Maximum Reverse Recovery Time (I_F=8.0A, di/dt=50A/µS, T_J=25°C)	T_{RR}	35		45			nSec
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150					°C

NOTES: (1) Measured at 1 MHz and an applied reverse voltage of 4 volts.

7.99SPR1601C

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

16 AMP SUPER EFFICIENT RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES SPR1601C - SPR1605C

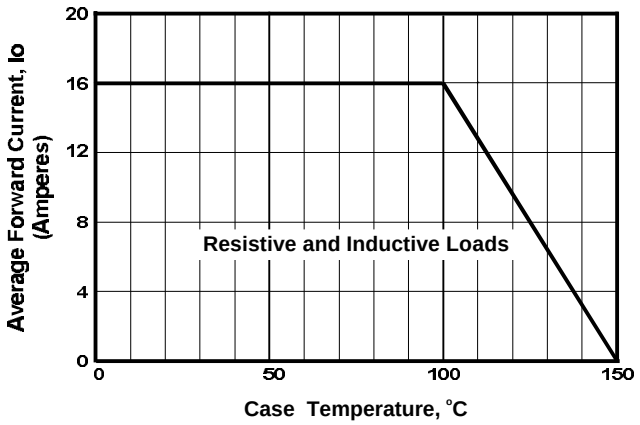


FIGURE 1. FORWARD CURRENT DERATING CURVE

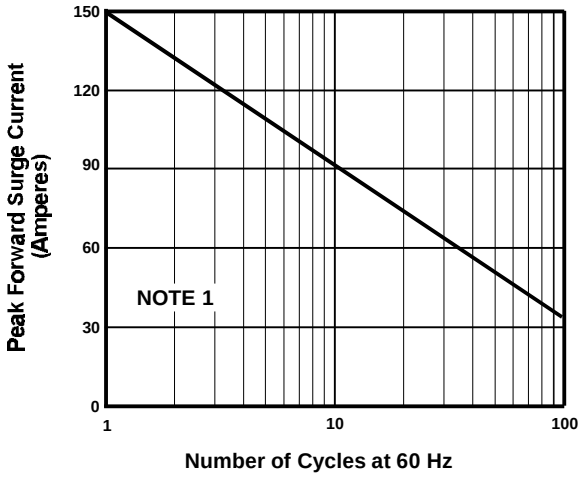


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

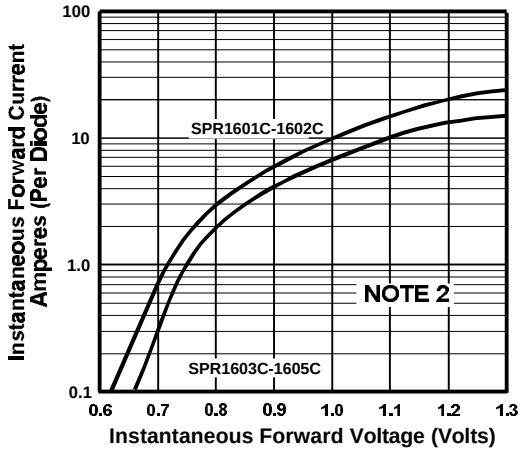


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

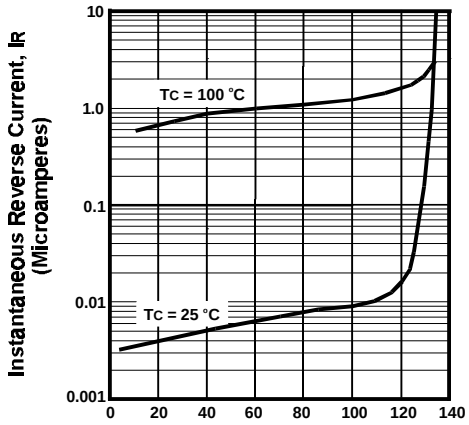


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

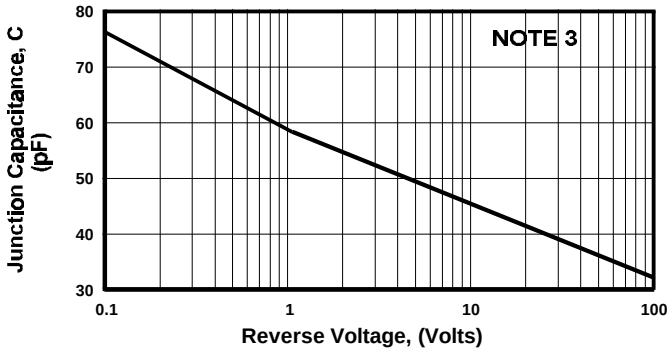


FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) JEDEC Method, 8.3 mSec. Single Half Sine Wave

(2) T_J = 25 °C, Pulse Width = 300 μSec, 2.0% Duty Cycle

(3) T_J = 25 °C

DIOTEC ELECTRONICS CORP.
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Data Sheet No. SEDR-160C-1B

16 AMP SUPER-EFFICIENT RECTIFIERS

FEATURES

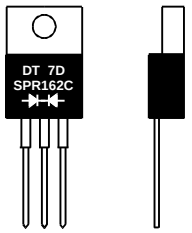
- Glass Passivated for high reliability/temperature performance
- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability

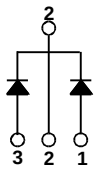
MECHANICAL DATA

- Case: TO-220 molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Rectangular pins w/ standoff
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Diodes depicted on product
- Mounting Position: Any
- Weight: 0.08 Ounces (2.2 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF TO-220AB PACKAGE

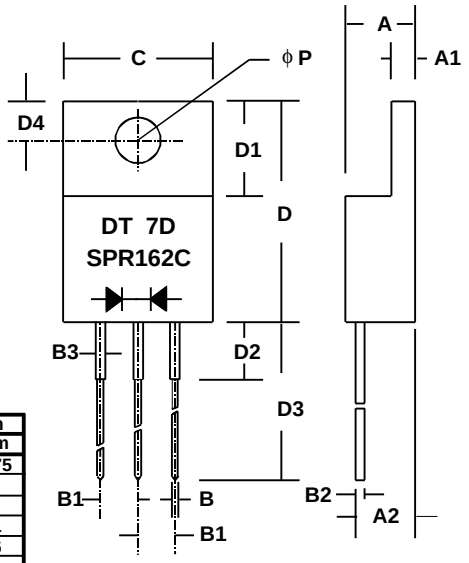




Sym	Minimum		Maximum	
	in	mm	in	mm
A			0.187	4.75
A1	0.055*	1.4*		
A2	0.14*	3.56*		
B	0.035	0.9	0.043	1.1
B1	0.09	2.3	0.102	2.6
B2	0.028*	0.66*		
B3	0.051*	1.3*		
C			0.410	10.4
D	0.59	15.0	0.61	15.5
D1	0.25*	6.4*		
D2			0.16	4.0
D3	0.53	13.5	0.57	14.8
D4	0.108*	2.75*		
ϕP	0.141*	3.58*		

* These dimensions are "Typicals".

NON - INSULATED PACKAGE



TO - 220AB

SERIES SPR161C - SPR166C

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS						UNITS
Series Number		SPR 161C	SPR 162C	SPR 163C	SPR 164C	SPR 165C	SPR 166C	
Maximum DC Blocking Voltage	V_{RM}	100	200	300	400	500	600	VOLTS
Maximum RMS Voltage	V_{RMS}	70	140	210	280	350	420	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	100	200	300	400	500	600	
Average Forward Rectified Current @ Tc = 100 °C	I_O	16						AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	200						
Maximum Forward Voltage at 8 Amps DC	V_{FM}	0.975		1.3		1.5		VOLTS
Maximum Average DC Reverse Current @ Tc = 25 °C At Rated DC Blocking Voltage @ Tc = 100 °C	I_{RM}	10 500						µA
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	3						°C/W
Typical Junction Capacitance (Note 1)	C_J	65						pF
Maximum Reverse Recovery Time (I_F=0.5A, I_R=1.0A, I_{RR}=0.25A)	T_{RR}	35		50				nSec
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150						°C

NOTES: (1) Measured at 1 MHz and an applied reverse voltage of 4 volts.

4.97fsedr16c

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18020 Hobart Blvd., Unit B
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16 AMP SUPER EFFICIENT RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES SPR161C - SPR166C

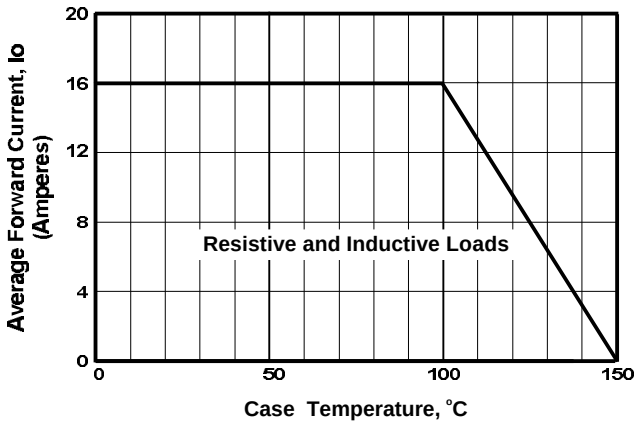

FIGURE 1. FORWARD CURRENT DERATING CURVE

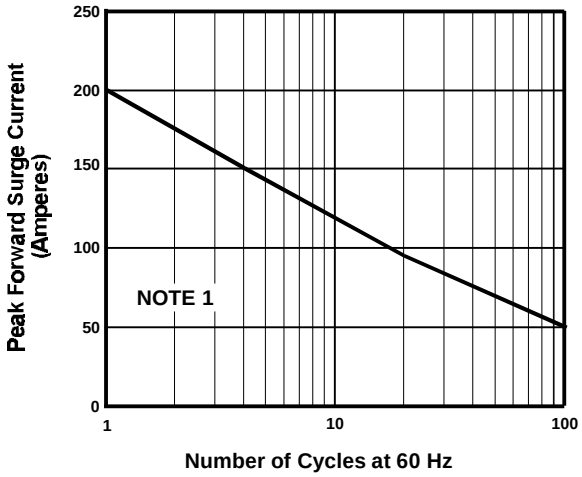

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

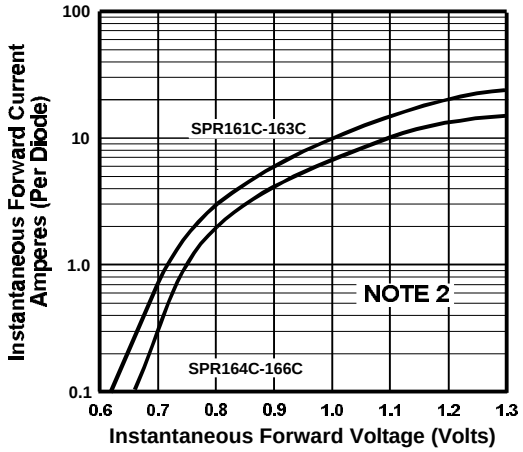

FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

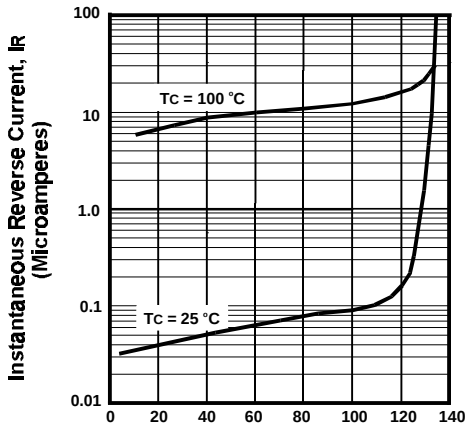

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

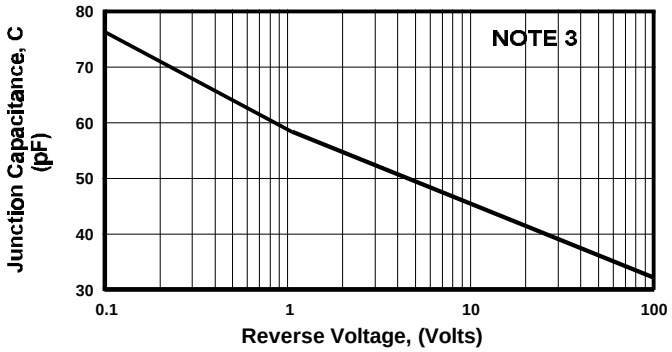

FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) JEDEC Method, 8.3 mSec. Single Half Sine Wave

(2) T_J = 25 °C, Pulse Width = 300 μSec, 2.0% Duty Cycle

(3) T_J = 25 °C

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Data Sheet No. SEDR-3000-1B

30 AMP ULTRAFAST RECOVERY DIODES

FEATURES

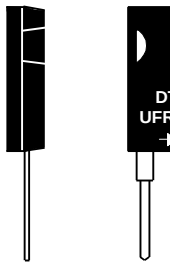
- Glass Passivated for high reliability/temperature performance
- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High switching capability
- High surge capability

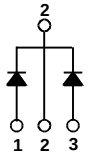
MECHANICAL DATA

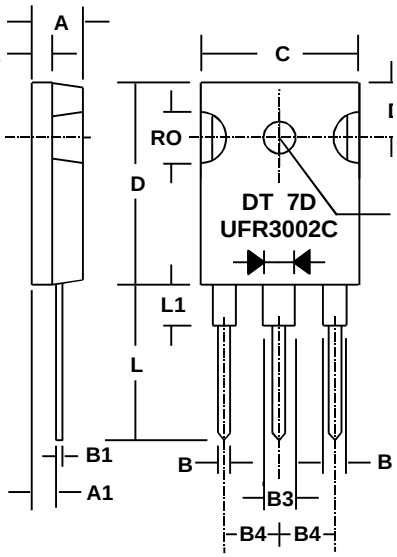
- Case: TO-247(TO-3P) molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Rectangular pins w/ standoff
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Diodes depicted on product
- Mounting Position: Any
- Weight: 0.2 Ounces (5.55 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF TO-247AB (TO-3PAB) PACKAGE







*Applies to Pins 1 and 3

Sym	Minimum		Maximum	
	in	mm	in	mm
A	0.19	4.82	0.205	5.2
A1	0.087	2.21	0.102	2.6
A2	0.075	1.9	0.085	2.16
B	0.045	1.14	0.055	1.4
B1	0.022	0.56	0.032	0.81
B2	0.079	2.01	0.094	2.39
B3	0.116	2.95	0.126	3.2
B4			0.215	5.46
C	0.602	15.29	0.625	15.88
D	0.776	19.7	0.799	20.3
D1	0.209	5.31	0.224	5.69
L	0.559	14.2	0.582	14.8
L1	0.146	3.71	0.189	4.8
RO	0.209	5.3	0.224	5.7
ϕP	0.13	3.3	0.145	3.7

TO-247AB (TO-3PAB)

SERIES UFR3001C - UFR3005C

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
Series Number		UFR 3001C	UFR 3002C	UFR 3003C	UFR 3004C	UFR 3005C	
Maximum DC Blocking Voltage	V_{RM}	100	200	300	400	500	VOLTS
Maximum RMS Voltage	V_{RMS}	70	140	210	280	350	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	100	200	300	400	500	
Average Forward Rectified Current @ Tc = 100 °C	I_O	30					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	250		200			
Maximum Forward Voltage (per diode) at 15 Amps DC	V_{FM}	1.0		1.25			VOLTS
Maximum Average DC Reverse Current @ Tc = 25 °C At Rated DC Blocking Voltage @ Tc = 100 °C	I_{RM}	10 500					µA
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	2					°C/W
Typical Junction Capacitance (Note 1)	C_J	150					pF
Maximum Reverse Recovery Time (I_F=15.0A, di/dt=50A/µS, T_J=25°C)	T_{RR}	50		60			nSec
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150					°C

NOTES: (1) Measured at 1 MHz and an applied reverse voltage of 4 volts.

4.97fsedr10

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Tel.: (310) 767-1052 Fax: (310) 767-7958

30 AMP ULTRAFAST RECOVERY DIODES

RATING & CHARACTERISTIC CURVES FOR SERIES UFR3001C - UFR3005C

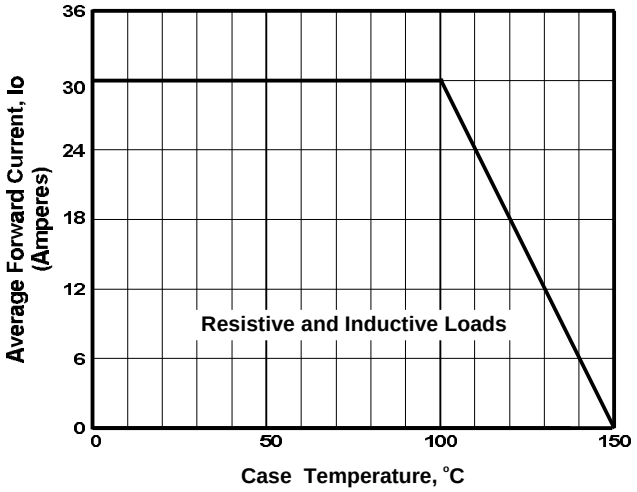


FIGURE 1. FORWARD CURRENT DERATING CURVE

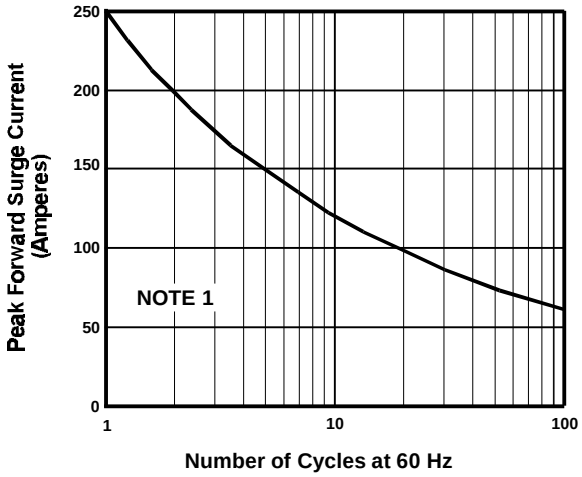


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

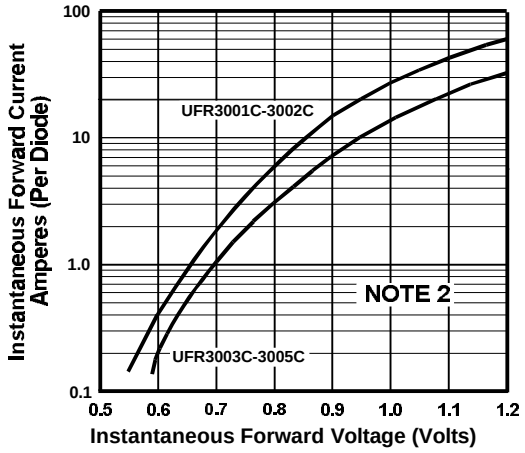


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

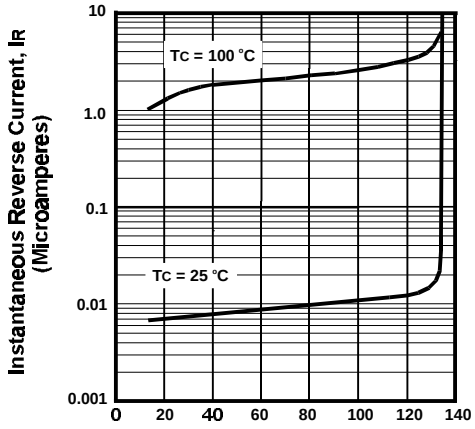


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

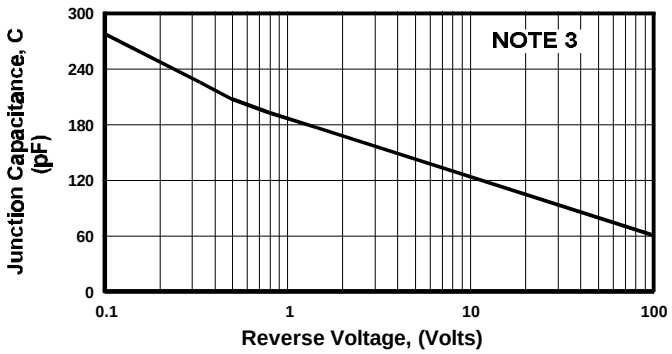


FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) JEDEC Method, 8.3 mSec. Single Half Sine Wave

(2) T_J = 25 °C, Pulse Width = 300 µSec, 2.0% Duty Cycle

(3) T_C = 25 °C, f = 1 MHz, V_{SIG} = 50 mV P-P

SECTION E

STANDARD RECOVERY FULL WAVE BRIDGE RECTIFIERS

DUAL IN-LINE PACKAGE

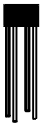
1 AMPERE

50 to 1000 VOLTS

CYLINDRICAL PACKAGE

1 to 2 AMPERES

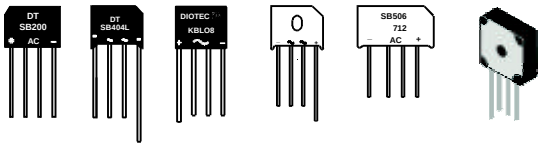
50 to 1000 VOLTS



VERTICAL, SIDE LOOKING, PACKAGE

2 to 50 AMPERES

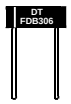
50 to 1000 VOLTS



RECTANGULAR HORIZONTAL PACKAGE

3 to 10 AMPERES

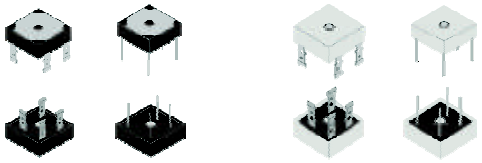
50 to 1000 VOLTS



RECTANGULAR HORIZONTAL PACKAGES

15 to 50 AMPERES

50 to 1000 VOLTS



DIOTEC ELECTRONICS CORP. ● 18020 Hobart Blvd., Unit B - Gardena, CA 90248 U.S.A. ● PH: 310-767-1052 ● FX: 310-767-7958

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BRDI-100-1C

1 AMP MINIATURE BRIDGE RECTIFIERS

FEATURES

- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 50 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- **UL RECOGNIZED - FILE #E124962**

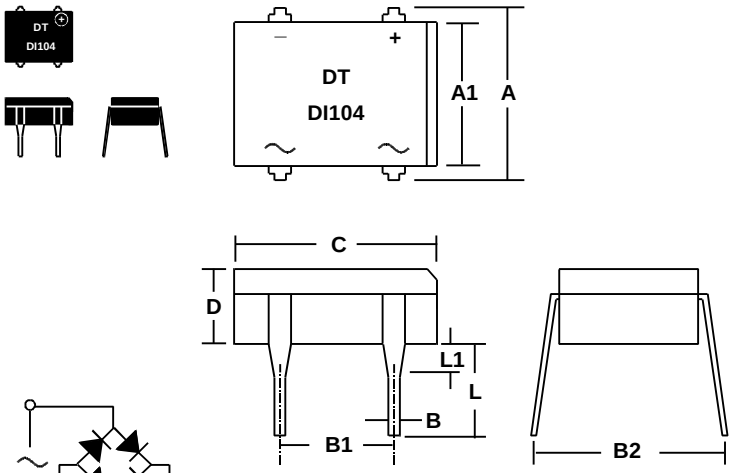
MECHANICAL DATA

- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Rectangular pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on case
- Mounting Position: Any
- Weight: 0.05 Ounces (1.3 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF THE DI PACKAGE

SERIES DI100 - DI110



Sym	Minimum		Maximum	
	in	mm	in	mm
A	0.290	7.4	0.310	7.9
A1	0.245	6.2	0.255	6.5
B	0.016	0.41	0.020	0.51
B1	0.195	5.0	0.205	5.2
B2	0.300	7.6	0.350	8.9
C	0.355	9.3	0.365	9.3
D	0.125	3.2	0.135	3.4
L	0.155	3.9	0.165	4.3
L1	0.060*	1.5*		

*** This dimension is "Typical".**

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		DI100	DI101	DI102	DI104	DI106	DI108	DI110	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 40°C	I_O	1							AMPS
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method).	I_{FSM}	50							
Maximum Forward Voltage (Per Diode) at 1 Amp DC	V_{FM}	1.1							VOLTS
Maximum Average DC Reverse Current @ T_A = 25°C At Rated DC Blocking Voltage @ T_A = 100°C	I_{RM}	5.0 0.5							µA mA
Typical Thermal Resistance Junction to Ambient (Note 1) Junction to Lead (Note 1)	$R_{\theta JA}$ $R_{\theta JL}$	40 15							°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							°C

NOTES: (1) Bridge mounted on PC Board with 0.5" sq. (13 mm sq.) copper pads

3.01 01di

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1 AMP MINIATURE BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES DI100 - DI110

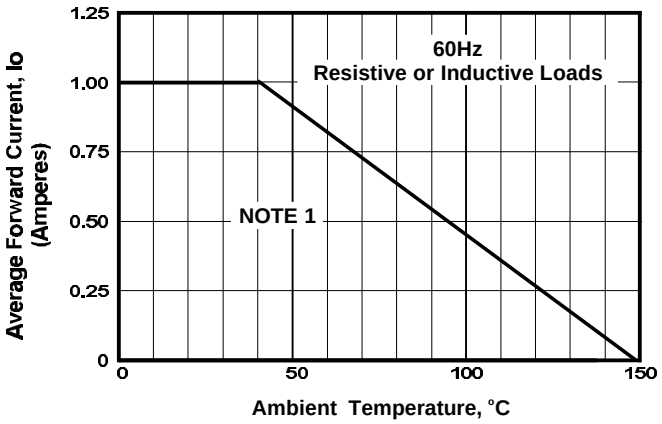

FIGURE 1. FORWARD CURRENT DERATING CURVE

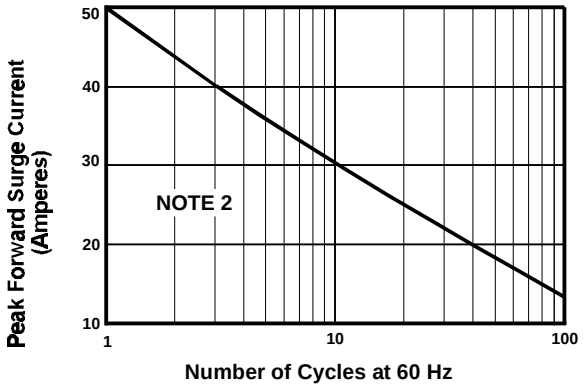

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

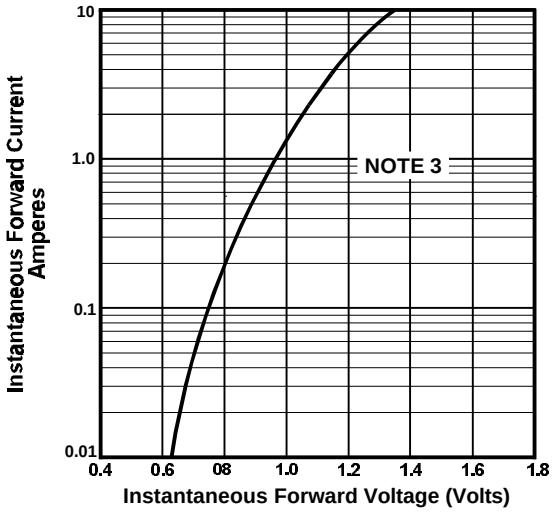

FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

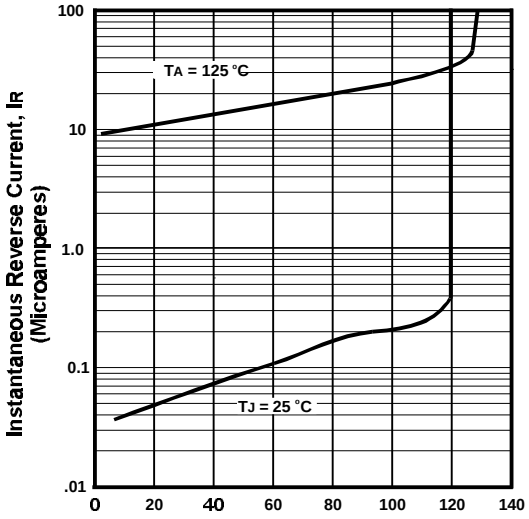

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

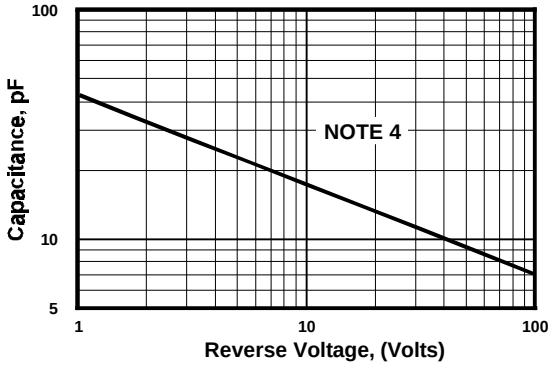

FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

NOTES

(1) Mounted on PC Board With 0.5" Sq. (13 mm Sq,) Copper Pads And Bridge Lead Length of 0.06" (1.5 mm)

(2) T_J = 150 °C

(3) T_J = 25° C; Pulse Width = 300 μSec, 1% Duty Cycle

(4) T_J = 25° C; f = 1 MHz; Vsig = 50mVp-p

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Data Sheet No. BRDI-101-1C

1 AMP MINIATURE BRIDGE RECTIFIERS

FEATURES

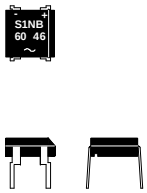
- Glass Passivated for high reliability/temperature performance
- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 30 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications

MECHANICAL DATA

- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Rectangular pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on case
- Mounting Position: Any

MECHANICAL SPECIFICATION

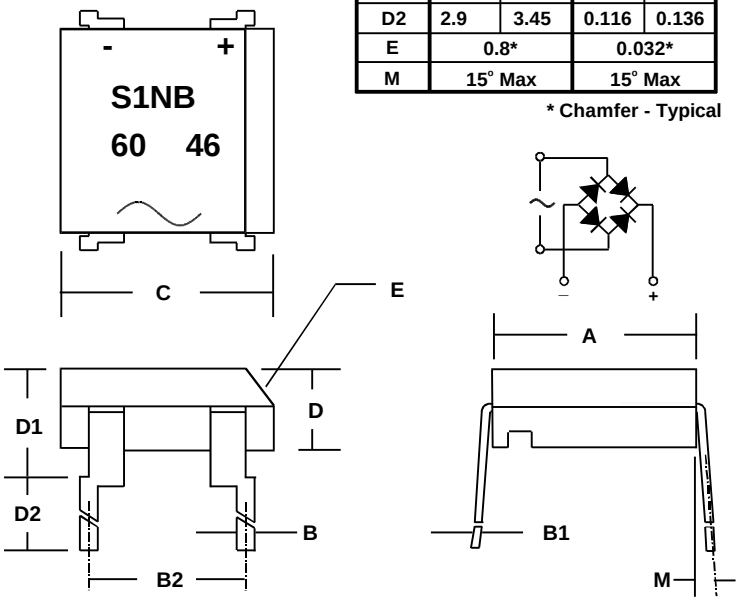
ACTUAL SIZE OF MDI PACKAGE



SERIES S1NB05 - S1NB100

SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.25	6.767	0.246	0.266
B	0.43	0.69	0.017	0.027
BI	0.127	0.381	0.005	0.015
B2	4.75	5.26	0.187	0.207
C	6.55	7.06	0.258	0.278
D	2.27	2.8	0.09	0.11
D1		3.7		0.146
D2	2.9	3.45	0.116	0.136
E	0.8*		0.032*	
M	15° Max		15° Max	

* Chamfer - Typical



MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		S1NB 05	S1NB 10	S1NB 20	S1NB 40	S1NB 60	S1NB 80	S1NB 100	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 40°C	I_O	1							AMPS
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method).	I_{FSM}	50							
Maximum Forward Voltage (Per Diode) at 1 Amp DC	V_{FM}	1.05							VOLTS
Maximum Average DC Reverse Current @ T_A = 25°C At Rated DC Blocking Voltage @ T_A = 125°C	I_{RM}	5.0 0.5							µA mA
Typical Thermal Resistance Junction to Ambient (Note 1) Junction to Lead (Note 1)	$R_{\theta JA}$ $R_{\theta JL}$	40 15							°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							°C

NOTES: (1) Bridge mounted on PC Board with 0.5" sq. (13mm sq.) copper pads

3.0101s1nb

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1 AMP MINIATURE BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES S1NB05 - S1NB100

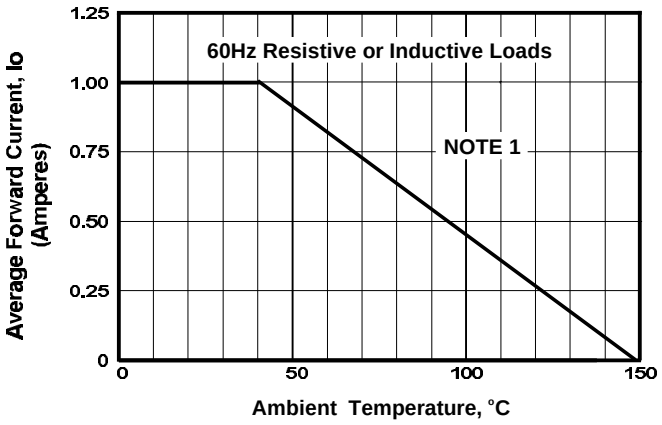

FIGURE 1. FORWARD CURRENT DERATING CURVE

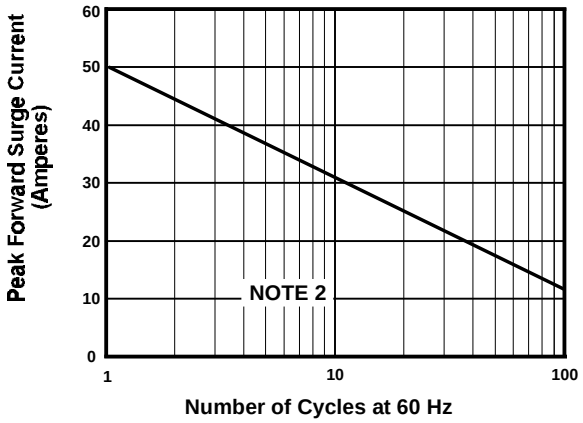

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

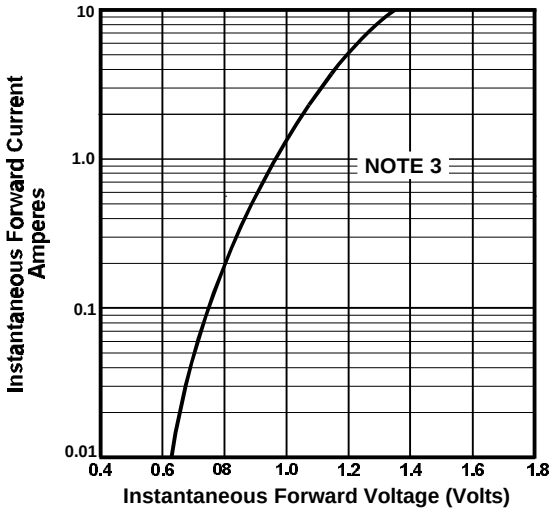

FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

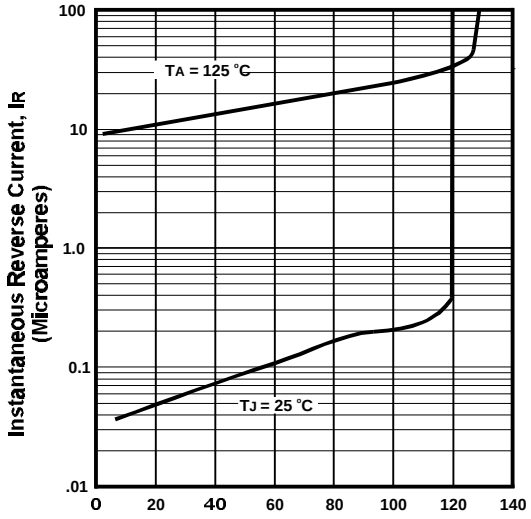

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

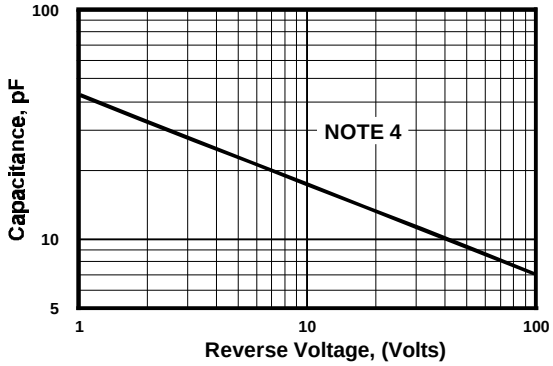

FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

NOTES

(1) Mounted on PC Board With 0.5" Sq. (13 mm Sq.) Solder Pads

(2) T_J = 150°C

(3) T_J = 25°C; Pulse Width = 300 μSec, 1% Duty Cycle

(4) T_J = 25°C; f = 1 MHz; Vsig = 50mVp-p

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1 AMP SILICON BRIDGE RECTIFIERS

FEATURES

- **PRV Ratings from 50 to 1000 Volts**
- **Surge overload rating to 50 Amps peak**
- **Reliable low cost molded plastic construction**
- **Ideal for printed circuit board applications**
- **UL RECOGNIZED - FILE #E141956**

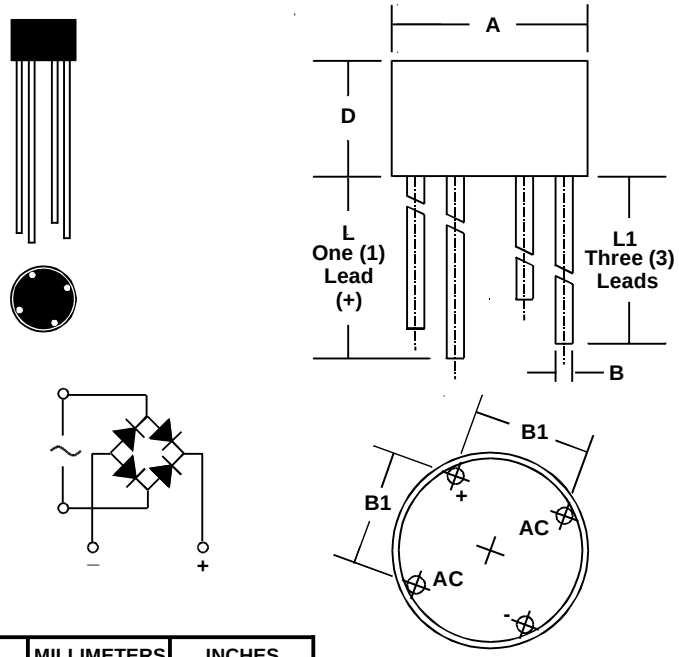
MECHANICAL DATA

- **Case: Molded plastic, U/L Flammability Rating 94V-0**
- **Terminals: Round silver plated pins**
- **Soldering: Per MIL-STD 202 Method 208 guaranteed**
- **Polarity: Marked on case**
- **Mounting Position: Any**
- **Weight: 0.05 Ounces (1.3 Grams)**

MECHANICAL SPECIFICATION

ACTUAL SIZE OF WB PACKAGE

SERIES WB100 - WB110



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.6	8.89	0.340	0.350
B	0.76	0.81	0.030	0.032
B1	4.6	5.6	0.180	0.220
D	5.1	5.6	0.200	0.220
L	30.5	n/a	1.20	n/a
L1	25.4	n/a	1.0	n/a

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		WB 100	WB 101	WB 102	WB 104	WB 106	WB 108	WB 110	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 50°C	I_O	1							AMPS
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T_J = 125°C	I_{FSM}	50							
Maximum Forward Voltage (Per Diode) at 1 Amp DC	V_{FM}	1.0							VOLTS
Maximum Average DC Reverse Current At Rated DC Blocking Voltage @ T_A = 25°C	I_{RM}	10 (Typical < 0.1μA)							μA
Typical Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	40							°C/W
Typical Thermal Resistance Junction to Lead (Note 1)	$R_{\theta JL}$	15							
Operating and Storage Temperature Range	T_J, T_{STG}	-40 to +125 (Junction), -40 to +150 (Storage)							°C

NOTES: (1) Bridge mounted on PC Board with 0.2" sq. (5.5mm sq.) copper pads and lead length of 0.375" (9.5mm).

3.0101wb

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1 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES WB100 - WB110

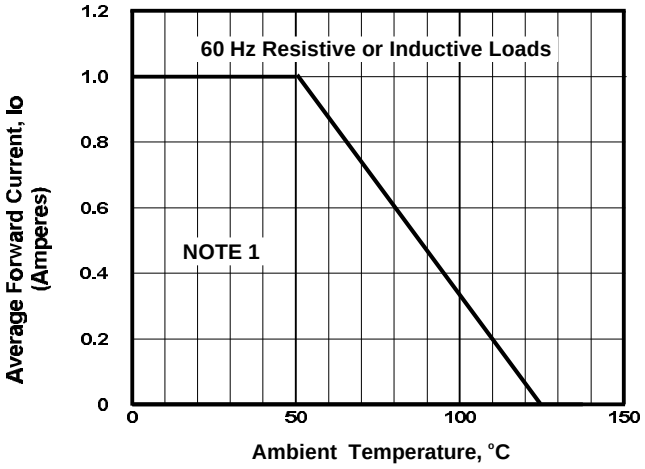

FIGURE 1. FORWARD CURRENT DERATING CURVE

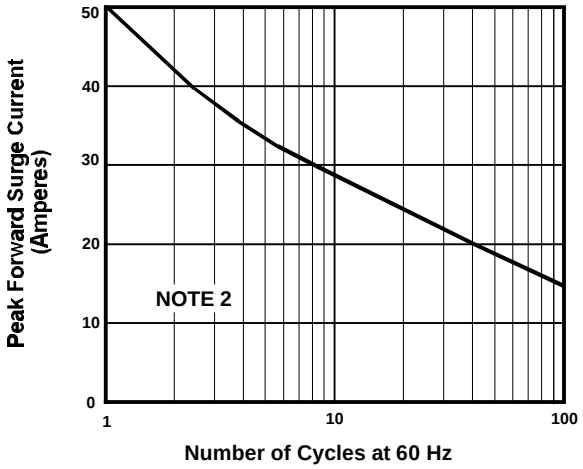

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

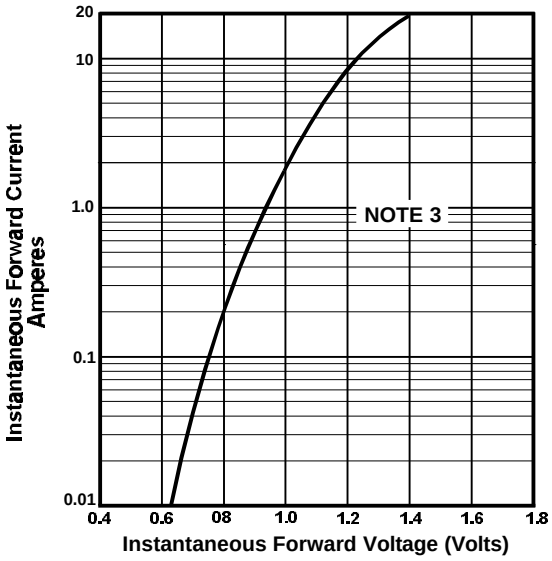

FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

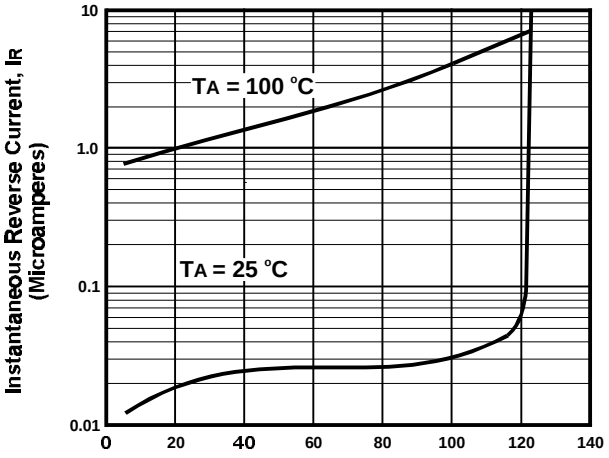

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

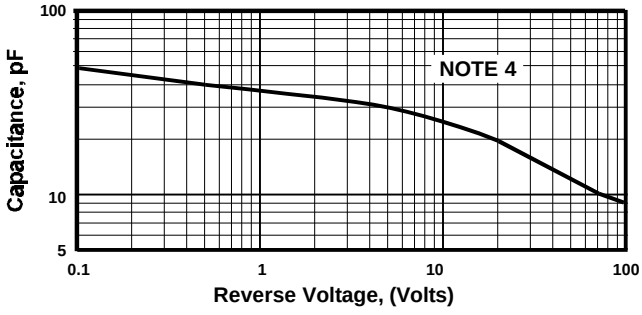

FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

NOTES

(1) Bridge Mounted on PC Board With 0.2" Sq. (5.5mm Sq.) Cooper Pads and Bridge Lead Length of 0.375" (9.5mm)

(2) T_J = 125°C

(3) T_J = 25°C; Pulse Width = 300 μSec, 1% Duty Cycle

(4) T_J = 25°C; f = 1 MHz; V_{SIG} = 50mV_{P-P}

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Data Sheet No. BRWB-150-1C

1.5 AMP SILICON BRIDGE RECTIFIERS

FEATURES

- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 50 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- **UL RECOGNIZED - FILE #E141956**

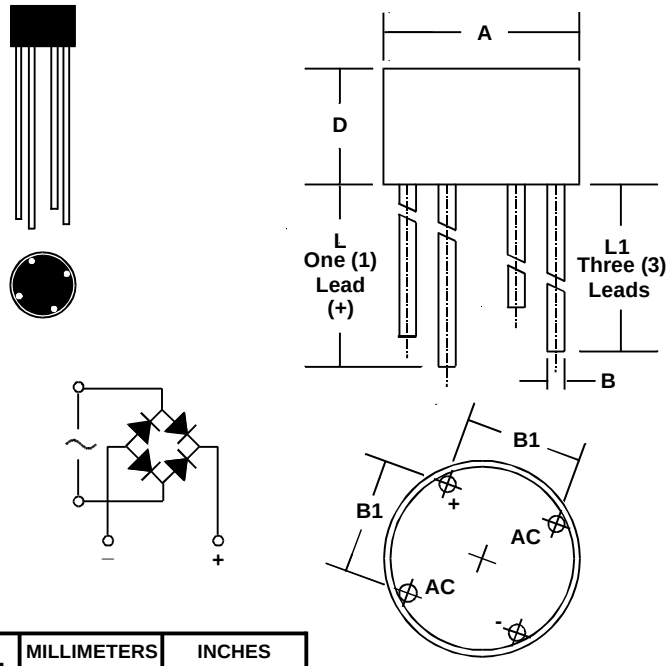
MECHANICAL DATA

- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on case
- Mounting Position: Any
- Weight: 0.05 Ounces (1.3 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF WB PACKAGE

SERIES WB150 - WB1510



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.6	8.89	0.340	0.350
B	0.76	0.81	0.030	0.032
B1	4.6	5.6	0.180	0.220
D	5.1	5.6	0.200	0.220
L	30.5	n/a	1.20	n/a
L1	25.4	n/a	1.0	n/a

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		WB 150	WB 151	WB 152	WB 154	WB 156	WB 158	WB 1510	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 25°C	I_O	1.5							AMPS
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T_J = 125°C	I_{FSM}	50							
Maximum Forward Voltage (Per Diode) at 1 Amp DC	V_{FM}	1.0							VOLTS
Maximum Average DC Reverse Current At Rated DC Blocking Voltage @ T_A = 25°C	I_{RM}	10 (Typical < 0.1μA)							μA
Typical Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	35							°C/W
Typical Thermal Resistance Junction to Lead (Note 1)	$R_{\theta JL}$	15							
Operating and Storage Temperature Range	T_J, T_{STG}	-40 to +125 (Junction), -40 to +150 (Storage)							°C

NOTES: (1) Bridge mounted on PC Board with 0.2" sq. (5.5 mm sq.) copper pads and lead length of 0.375" (9.5 mm).

3.011_5wb

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1.5 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES WB150 - WB1510

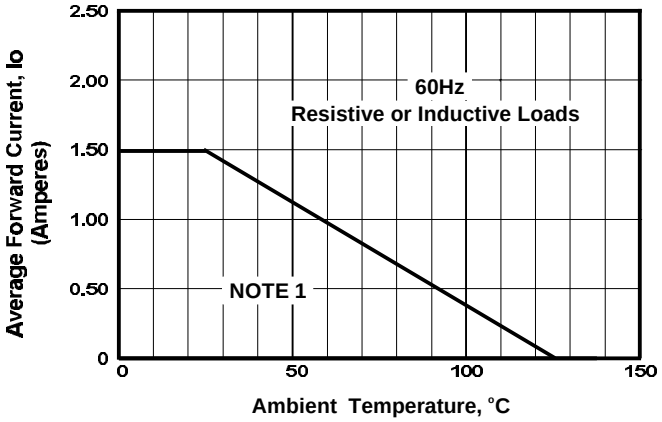

FIGURE 1. FORWARD CURRENT DERATING CURVE

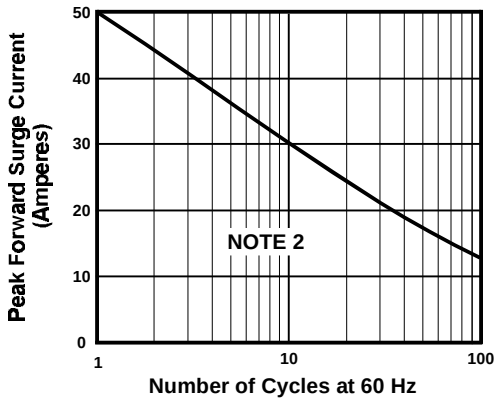

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

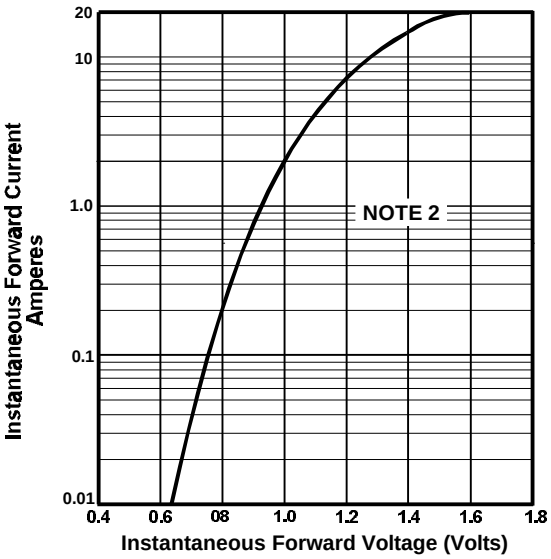

FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

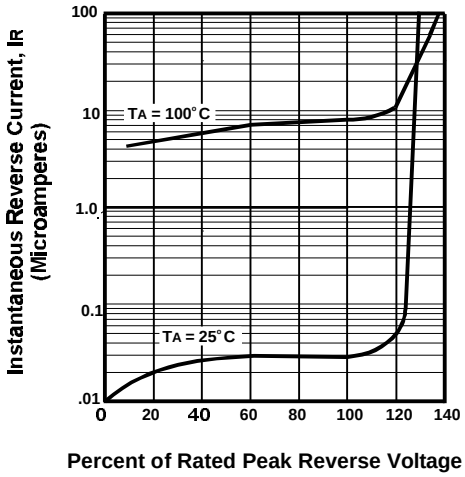

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

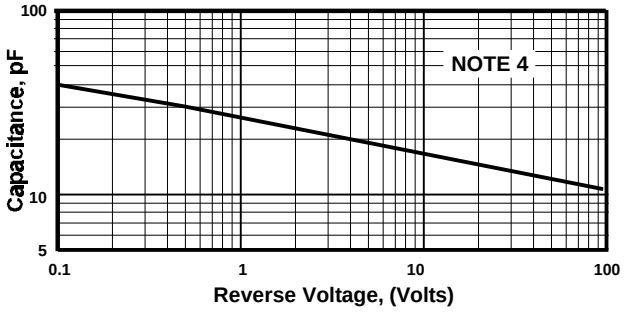

FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

NOTES

(1) Bridge Mounted on PC Board With 0.2" Sq. (5.5mm Sq.) Copper Pads And Bridge Lead Length of 0.375" (9.5mm)

(2) T_J = 125°C

(3) T_J = 25°C; Pulse Width = 300 μSec, 1% Duty Cycle

(4) T_J = 25°C; f = 1 MHz; Vsig = 50mVp-p

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2 AMP SILICON BRIDGE RECTIFIERS

FEATURES

- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 60 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- **UL RECOGNIZED - FILE #E141956**

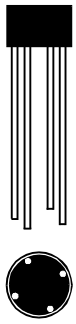
MECHANICAL DATA

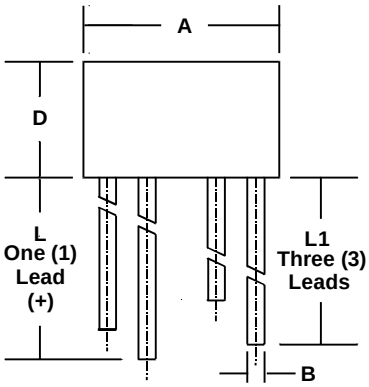
- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on case
- Mounting Position: Any
- Weight: 0.05 Ounces (1.3 Grams)

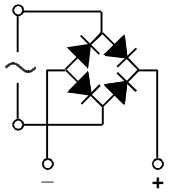
MECHANICAL SPECIFICATION

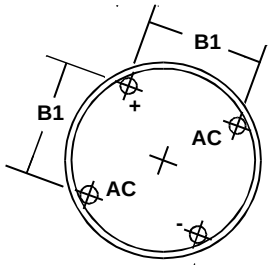
ACTUAL SIZE OF WB PACKAGE

SERIES WB200 - WB210









SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.6	8.89	0.340	0.350
B	0.76	0.81	0.030	0.032
B1	4.6	5.6	0.180	0.220
D	5.1	5.6	0.200	0.220
L	30.5	n/a	1.20	n/a
L1	25.4	n/a	1.0	n/a

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		WB 200	WB 201	WB 202	WB 204	WB 206	WB 208	WB 210	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 25°C	I_O	2							AMPS
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T_J = 150° C	I_{FSM}	60							
Maximum Forward Voltage (Per Diode) at 2 Amp DC	V_{FM}	1.0							VOLTS
Maximum Average DC Reverse Current @ T_A = 25°C At Rated DC Blocking Voltage @ T_A = 100°C	I_{RM}	10 (Typical < 0.1μA) 1							μA mA
Typical Thermal Resistance Junction to Ambient (Note 1) Junction to Lead (Note 1)	$R_{\theta JA}$ $R_{\theta JL}$	40 15							°C/W
Operating and Storage Temperature Range	T_J ,T_{STG}	-55 to +150							°C

NOTES: (1) Bridge mounted on PC Board with 0.2" sq. (5.5mm sq.) copper pads and lead length of 0.375" (9.5 mm).

3.0102wb

DIOTEC ELECTRONICS CORP.
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2 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES WB200 - WB210

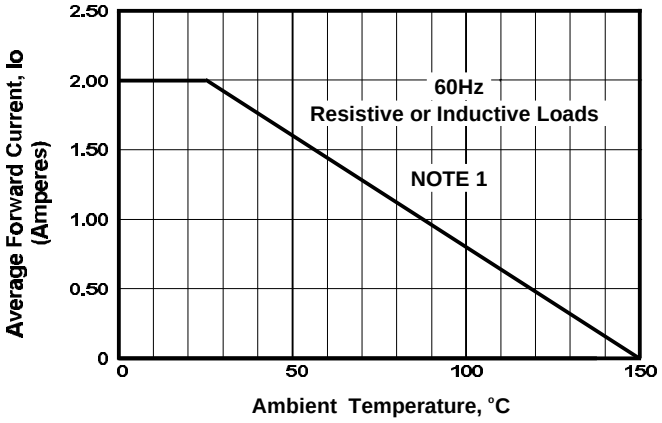

FIGURE 1. FORWARD CURRENT DERATING CURVE

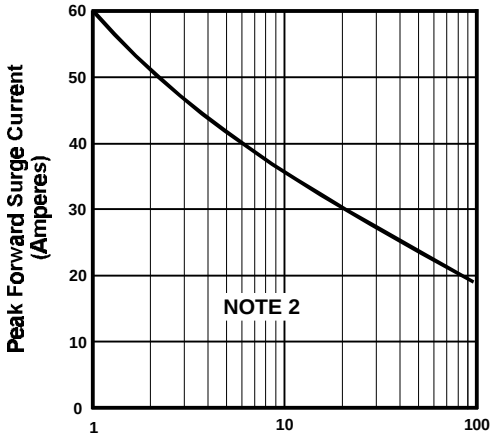

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

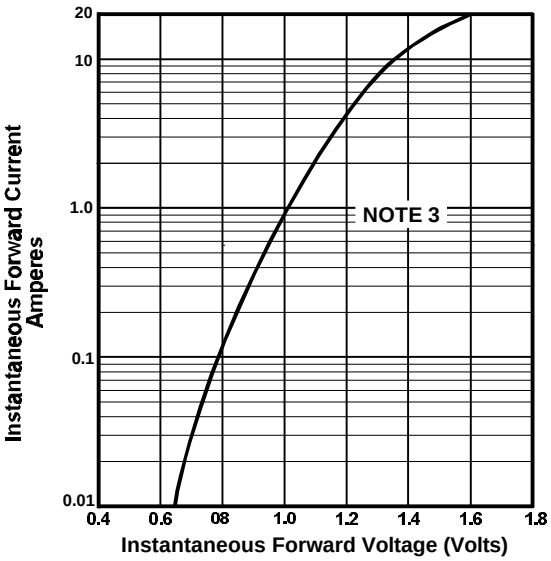

FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

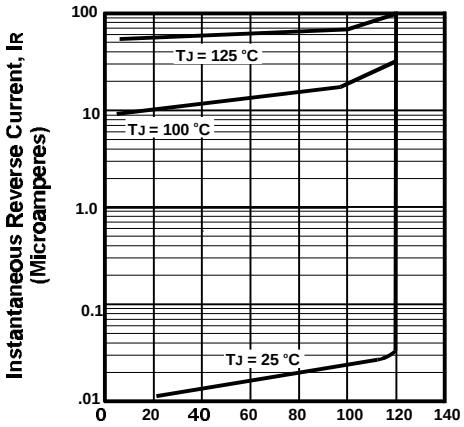

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

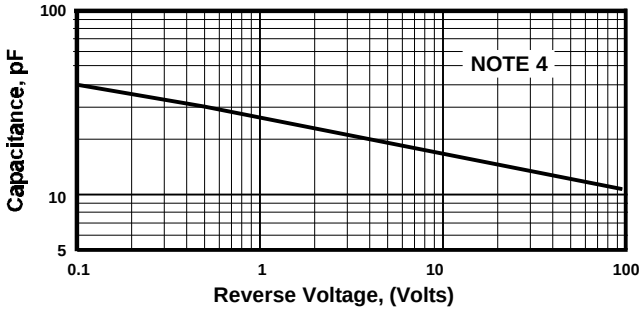

FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

NOTES

(1) Bridge Mounted on PC Board With 0.22" Sq. (5.5mm Sq.) Copper Pads And Bridge Lead Length of 0.375" (9.5mm)

(2) T_J = 150°C

(3) T_J = 25°C; Pulse Width = 300 μSec, 1% Duty Cycle

(4) T_J = 25°C; f = 1 MHz; Vsig = 50mVp-p

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Data Sheet No. BRSB-200-1C

2 AMP SILICON BRIDGE RECTIFIERS

FEATURES

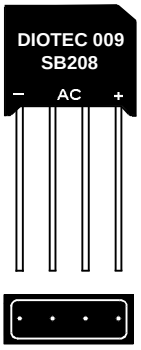
- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 60 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- **UL RECOGNIZED - FILE #E124962**

MECHANICAL DATA

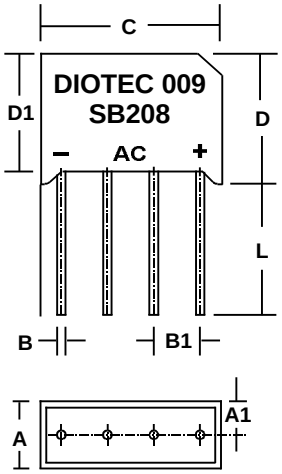
- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on case
- Mounting Position: Any
- Weight: 0.1 Ounces (2.8 Grams)

MECHANICAL SPECIFICATION

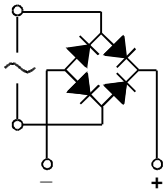
ACTUAL SIZE OF SB2 PACKAGE



SERIES SB200 - SB210



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.99	7.01	0.236	0.276
A1	2.99	3.51	0.118	0.138
B	0.71	0.89	0.028	0.035
B1	3.55	4.00	0.140	0.160
C	16.0	18.0	0.63	0.71
D	14.0	15.0	0.55	0.59
D1	13.2	13.7	0.52	0.54
L	12.7	n/a	0.50	n/a



MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		SB 200	SB 201	SB 202	SB 204	SB 206	SB 208	SB 210	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 55° C	I_O	2							AMPS
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T_J = 150° C	I_{FSM}	60							
Maximum Forward Voltage (Per Diode) at 1 Amp DC	V_{FM}	1.05							VOLTS
Maximum Average DC Reverse Current @ T_A = 25° C At Rated DC Blocking Voltage @ T_A = 125° C	I_{RM}	10 500							µA
Typical Thermal Resistance. Junction to Ambient (Note 1) Junction to Lead (Note 1)	$R_{\theta JA}$ $R_{\theta JL}$	30 11							°C/W
Operating and Storage Temperature Range	T_J ,T_{STG}	-55 to +150							°C

NOTES: (1) Bridge mounted on PC Board with 0.47" sq.(12mm sq.) copper pads.

3.01 02sb

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2 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SB200 - SB210 SERIES

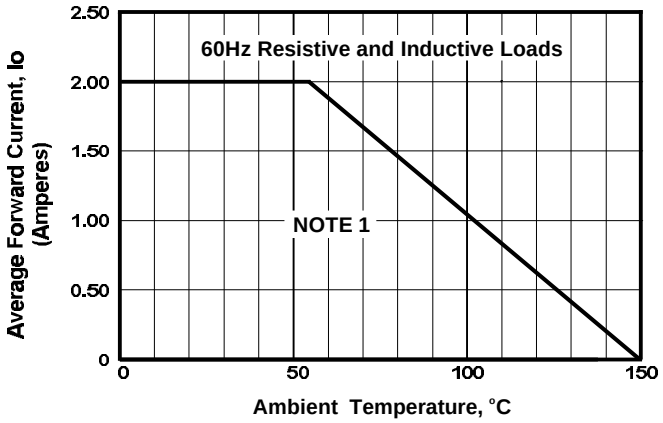

FIGURE 1. FORWARD CURRENT DERATING CURVE

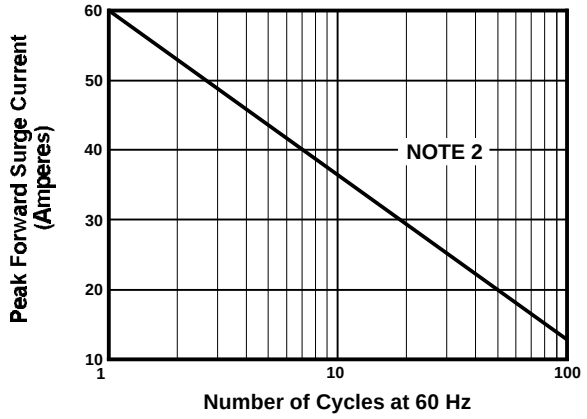

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

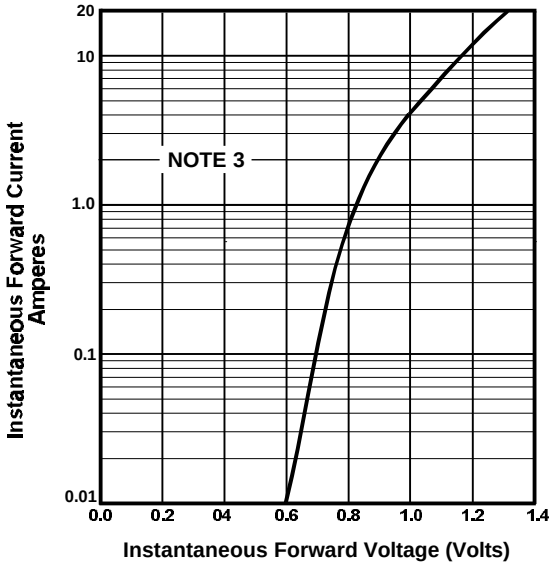

FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

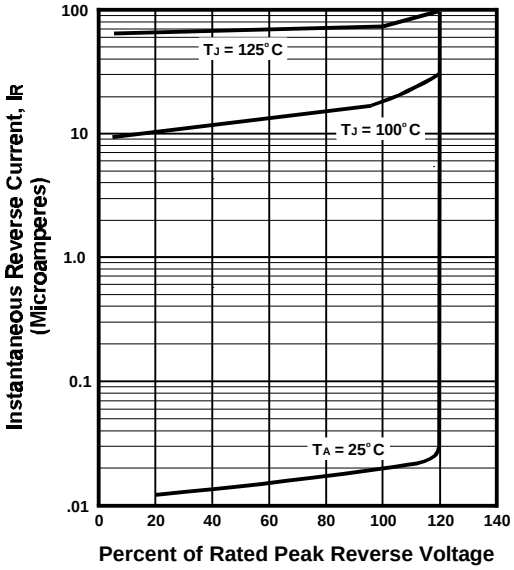

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

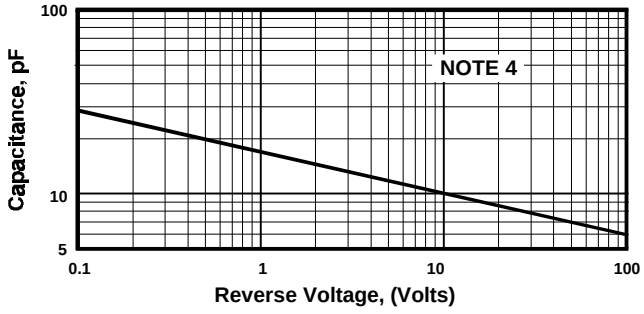

FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

NOTES

(1) Bridge Mounted on PC Board With 0.47" Sq. (12mm Sq.) Copper Pads

(2) $T_J = 150^\circ C$

(3) $T_J = 25^\circ C$; Pulse Width = 300 μSec, 1% Duty Cycle

(4) $T_J = 25^\circ C$; f = 1 MHz; $V_{SIG} = 50mV_{P-P}$

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Data Sheet No. BRDB-300-1C
ABDB-300-1C

3 AMP SILICON BRIDGE RECTIFIERS

FEATURES

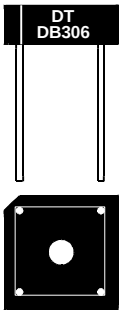
- PRV Ratings from 50 to 1000 Volts
- High surge overload rating of 60 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- **UL RECOGNIZED - FILE #E124962**

MECHANICAL DATA

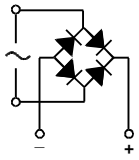
- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated copper pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed (NOTE 1)
- Polarity: Marked on top of case; positive lead at beveled corner
- Mounting Position: Any. Thru hole provided for #6 screw (NOTE 2)
- Weight: 0.13 Ounces (3.6 Grams)

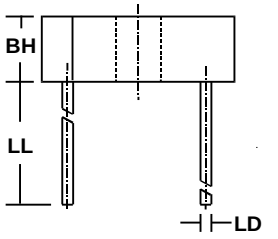
MECHANICAL SPECIFICATION

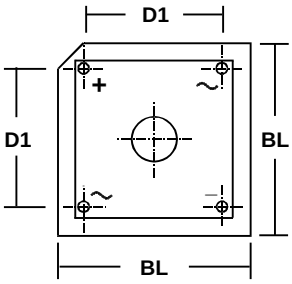
ACTUAL SIZE



SERIES DB300-DB310 and ADB304-ADB308







SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	14.7	15.7	0.58	0.62
BH	4.8	5.3	0.19	0.21
D1	10.3	11.3	0.405	0.445
LL	19.0	n/a	0.75	n/a
LD	0.7	0.9	0.028	0.035

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, 60Hz, resistive or inductive load. For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS										UNITS
		CONTROLLED AVALANCHE			NON-CONTROLLED AVALANCHE							
Series Number		ADB 304	ADB 306	ADB 308	DB 300	DB 301	DB 302	DB 304	DB 306	DB 308	DB 310	
Maximum DC Blocking Voltage	V_{RM}	400	600	800	50	100	200	400	600	800	1000	VOLTS
Working Peak Reverse Voltage	V_{RWM}											
Maximum Peak Recurrent Reverse Voltage	V_{RRM}											
RMS Reverse Voltage	$V_{R\ (RMS)}$	280	420	560	35	70	140	280	420	560	700	
Power Dissipation in $V_{(BR)}$ Region for 100 µS Square Wave	P_{RM}	300			n/a							WATTS
Continuous Power Dissipation in $V_{(BR)}$ Region @ T_{HS}=80 °C (Heat Sink Temp)	P_R	1			n/a							
Thermal Energy (Rating for Fusing) t < 8.3mSec	I^2t	15										AMPS² SEC
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). Tc = 60° C	I_{FSM}	60										AMPS
Average Forward Rectified Current @ T_C = 60° C (Note 2) @ T_A = 25° C (Note 3)	I_O	3 2										
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150										°C
Minimum Avalanche Voltage	$V_{(BR)\ Min}$	450	650	850	n/a							VOLTS
Maximum Avalanche Voltage	$V_{(BR)\ Max}$	900	1100	1300	n/a							
Maximum Forward Voltage (Per Diode) at 1.5 Amps DC	V_{FM}	0.95 (Typical < 0.9)										
Typical Junction Capacitance (Note 4)	C_J	21										pF
Maximum Reverse Current at Rated V_{RM} @ T_A = 25° C @ T_A = 125° C	I_{RM}	5 (Typical < 0.1µA) 500										µA
Minimum Insulation Breakdown Voltage (Circuit to Case)	V_{ISO}	2500										VOLTS
Typical Thermal Resistance Junction to Ambient (Note 2) Junction to Case (Note 2)	$R_{\theta JA}$ $R_{\theta JC}$	12.0 8.0										°C/W

3.01 03db

NOTES: (1) Bolt bridge on heat sink with #6 screw, using silicon thermal compound between bridge and mounting surface for maximum heat transfer.
(2) Bridge mounted on 4.0" sq. x 0.11" thick (10.5cm sq. x 0.3cm) aluminum plate
(3) Bridge mounted on PC Board with 0.5" sq. (12mm sq.) copper pads and bridge lead length of 0.375" (9.5mm)
(4) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

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Data Sheet No. BRDB-300-2C
ABDB-300-2C

3 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES DB300 - DB310 and SERIES ADB304 - ADB308

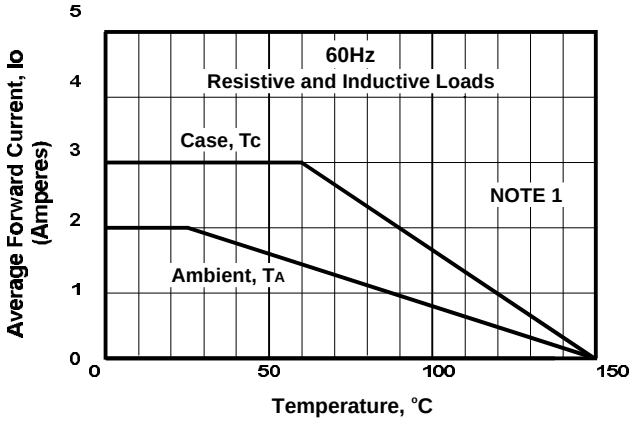

FIGURE 1. FORWARD CURRENT DERATING CURVE

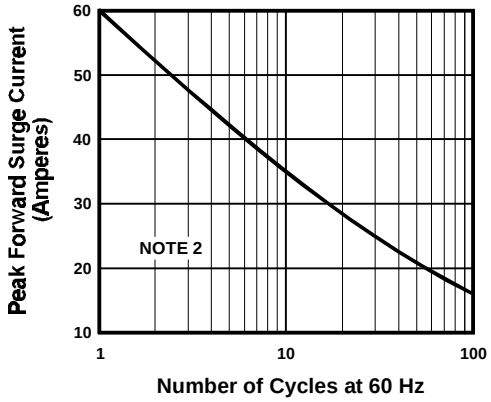

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

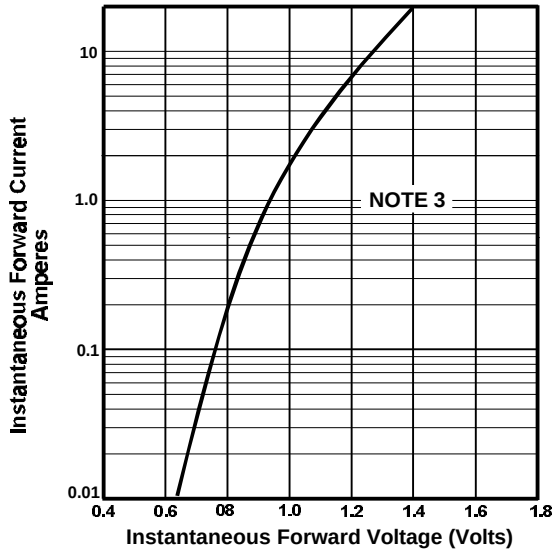

FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

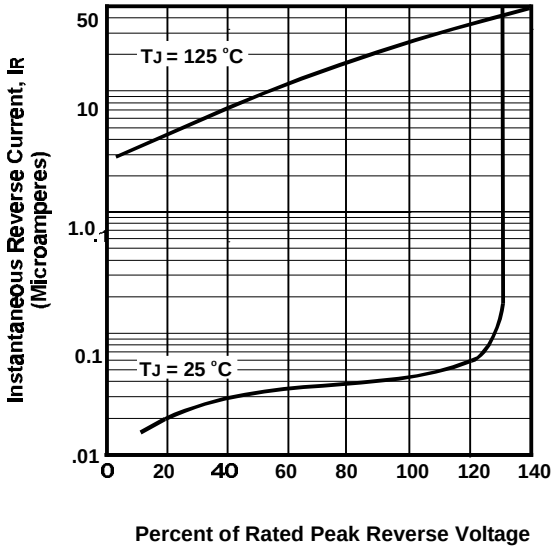

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

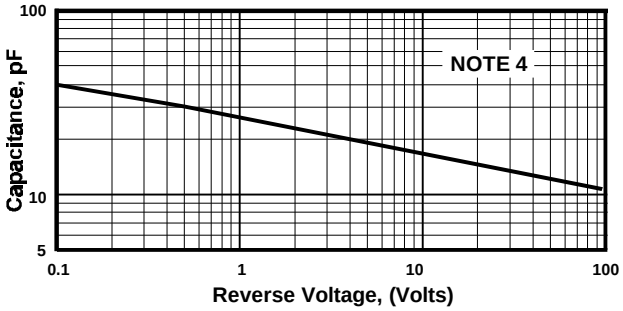

FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

NOTES

(1) Case Temperature, TC, With Bridge Mounted on 4" Sq. x 0.11" Thick (10.5cm Sq. x 0.3cm) Aluminum Plate

Ambient Temperature, TA, With Bridge Mounted on PC Board With 0.5" Sq. (12mm Sq.) Pads and Lead Length of 0.375" (9.5mm)

(2) TC = 60° C

(3) TJ = 25° C; Pulse Width = 300μSec; 1% Duty Cycle

(4) TJ = 25° C; f = 1 MHz; Vsig = 50mVp-p

DIOTEC ELECTRONICS CORP.
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Data Sheet No. BRSB-400-1C
ABSB-400-1C

4 AMP SILICON BRIDGE RECTIFIERS

FEATURES

- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 200 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- **UL RECOGNIZED - FILE #E124962**

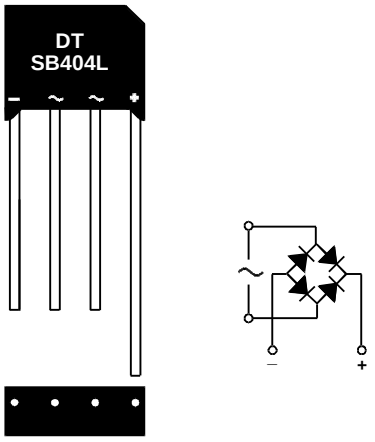
MECHANICAL DATA

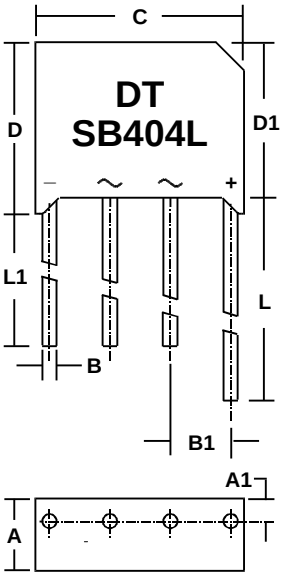
- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated copper pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed (NOTE 1)
- Polarity: Marked on case
- Mounting Position: Any.
- Weight: 0.2 Ounces (5.6 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF SB4 PACKAGE

SERIES: SB400L - SB410L
ASB404L - ASB408L





SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.4	6.65	0.252	0.262
A1	2.06	2.18	0.061	0.065
B	1.22	1.32	0.048	0.052
B1	4.57	5.59	0.180	0.220
C	19.1	19.3	0.750	0.760
D	15.62	15.88	0.615	0.625
D1	14.38*	n/a	0.566*	n/a
L	27.94	n/a	1.2	n/a
L1	25.4	n/a	1.0	n/a

* This measurement is "Typical"

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS										UNITS
		CONTROLLED AVALANCHE			NON-CONTROLLED AVALANCHE							
Series Number		ASB 404L	ASB 406L	ASB 408L	SB 400L	SB 401L	SB 402L	SB 404L	SB 406L	SB 408L	SB 410L	
Maximum DC Blocking Voltage	V_{RM}	400	600	800	50	100	200	400	600	800	1000	VOLTS
Working Peak Reverse Voltage	V_{RWM}											
Maximum Peak Recurrent Reverse Voltage	V_{RRM}											
RMS Reverse Voltage	$V_{R\ (RMS)}$	280	420	560	35	70	140	280	420	560	700	
Thermal Energy (Rating for Fusing)	I^2t	93										$AMPS^2$ SEC
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method) $T_J = 150°C$	I_{FSM}	200										AMPS
Average Forward Rectified Current @ $T_A = 50°C$	I_O	4										
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150										°C
Minimum Avalanche Voltage	$V_{(BR)\ MIN}$	450	650	850	n/a							VOLTS
Maximum Avalanche Voltage	$V_{(BR)\ MAX}$	900	1100	1300	n/a							
Maximum Forward Voltage (Per Diode) at 4 Amps DC	V_{FM}	0.95 (Typical < 0.90)										
Maximum Reverse Current at Rated V_{RM} @ $T_A = 25°C$	I_{RM}	5										µA
@ $T_A = 125°C$		1										mA
Minimum Insulation Breakdown Voltage (Circuit to Case)	V_{ISO}	2500										VOLTS
Typical Thermal Resistance Junction to Ambient (Note 1)	$R_{\theta JA}$	19.0										°C/W
Junction to Lead (Note 2)	$R_{\theta JL}$	2.4										

NOTES: (1) Bridge mounted on 3.0" sq. x 0.11" thick (7.5cm sq. x 0.3cm) aluminum plate.
(2) Bridge mounted on PC Board with 0.5" sq. (12mm sq.) copper pads and a lead length of 0.375" (9.5mm).

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Data Sheet No. BRSB-400-2C
ABSB-400-2C

4 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES SB400L - SB410L and SERIES ASB404L - ASB408L

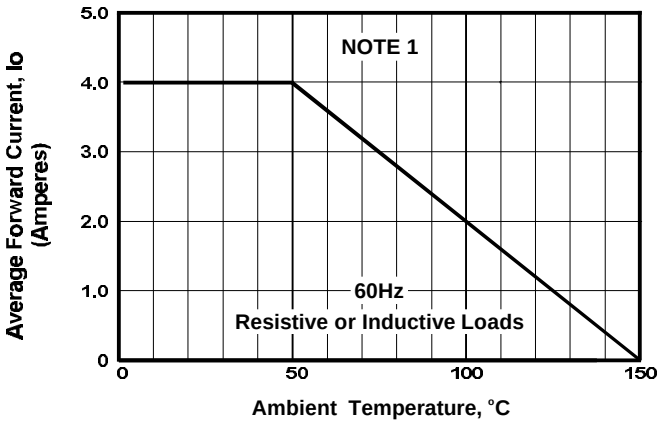

FIGURE 1. FORWARD CURRENT DERATING CURVE

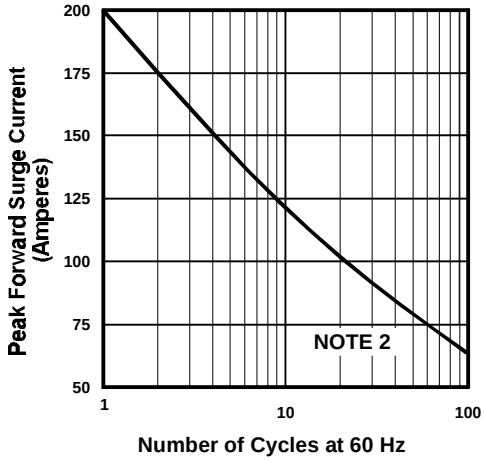

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

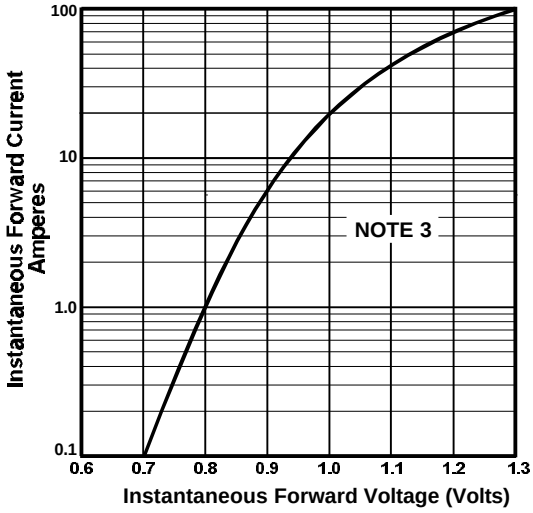

FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

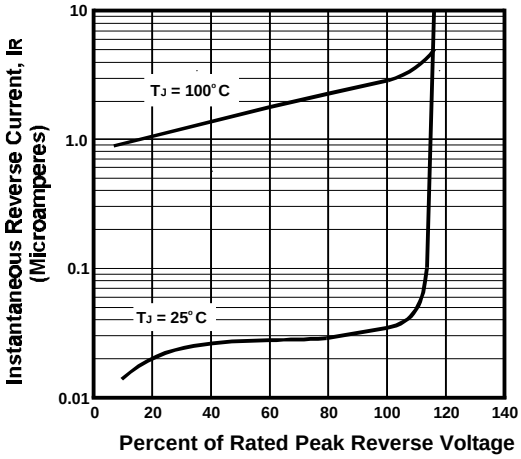

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

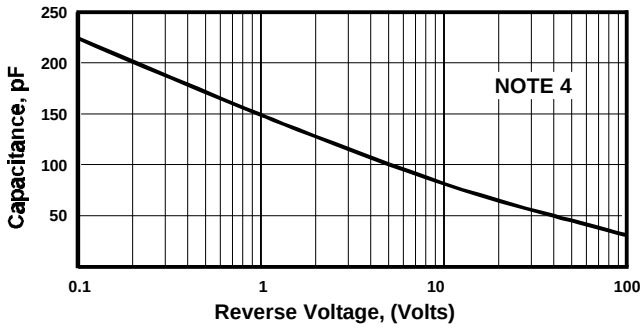

FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

NOTES

(1) Bridge Mounted on 3.0" Sq. x 0.11" Thick (7.5cm Sq. x 015cm) Aluminum Plate

(2) T_J = 150° C

(3) T_J = 25° C; Pulse Width = 300μSec; 1%Duty Cycle

(4) T_J = 25° C; f = 1 MHz; Vsig = 50mVp-p

3.1 04sbl

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
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Data Sheet No. BKBL-400-1C

4 AMP SILICON BRIDGE RECTIFIERS

FEATURES

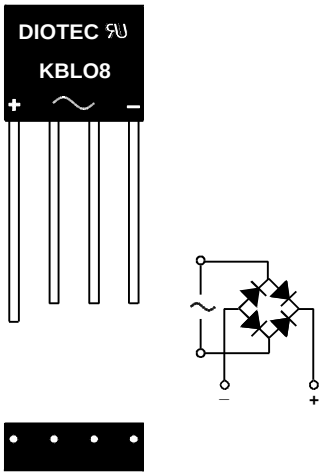
- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 200 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- **UL RECOGNIZED - FILE #E141956**

MECHANICAL DATA

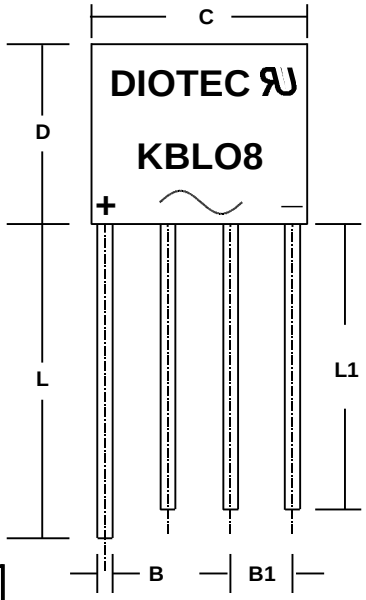
- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on case
- Mounting Position: Any
- Weight: 0.2 Ounces (5.6 Grams)

MECHANICAL SPECIFICATION

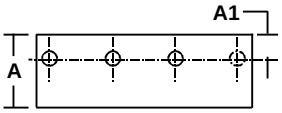
ACTUAL SIZE OF KBL PACKAGE



SERIES KBL00 - KBL10



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.22	6.48	0.245	0.255
A1	2.05	2.18	0.081	0.085
B	1.22	1.32	0.048	0.052
B1	4.57	5.59	0.180	0.220
C	18.90	19.10	0.620	0.630
D	12.1	12.7	0.470	0.500
L	27.94	n/a	1.10	n/a
L1	25.4	n/a	1.00	n/a



MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		KBL 00	KBL 01	KBL 02	KBL 04	KBL 06	KBL 08	KBL 10	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 65°C	I_O	4							AMPS
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T_J = 150°C	I_{FSM}	200							
Maximum Forward Voltage (Per Diode) at 4 Amps DC	V_{FM}	0.95 (Typical < 0.90)							VOLTS
Maximum Average DC Reverse Current @ T_A = 25°C At Rated DC Blocking Voltage @ T_A = 100°C	I_{RM}	5 1							µA mA
Typical Thermal Resistance Junction to Ambient (Note 1) Junction to Lead (Note 2)	$R_{\theta JA}$ $R_{\theta JL}$	19.0 2.4							°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							°C

NOTES: (1) Bridge mounted on 3.0" sq. x 0.11" thick (7.5cm sq. x 0.3cm) aluminum plate.
(2) Bridge mounted on PC Board with 0.5" sq. (12mm sq.) copper pads and a lead length of 0.375" (9.5mm).

3.0104kbl

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4 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES KBL00 - KBL10

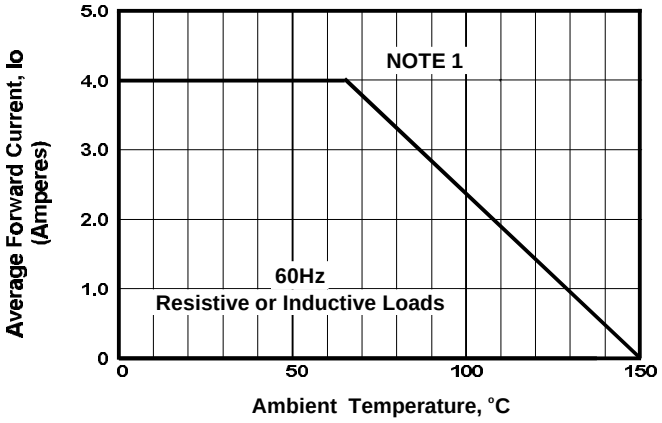

FIGURE 1. FORWARD CURRENT DERATING CURVE

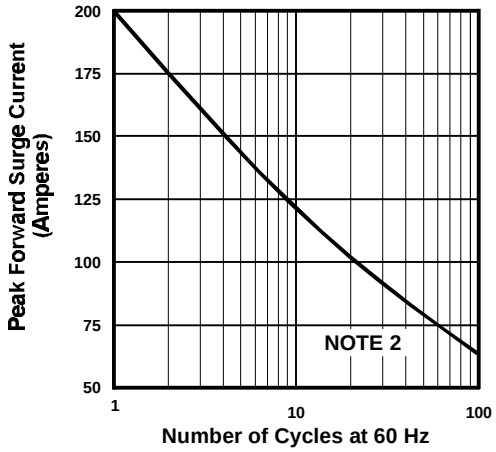

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

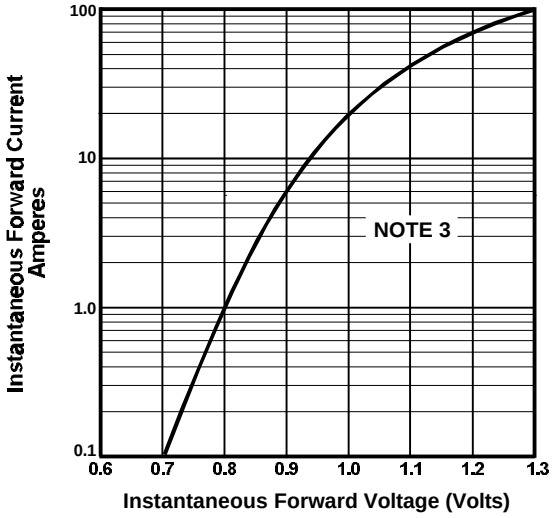

FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

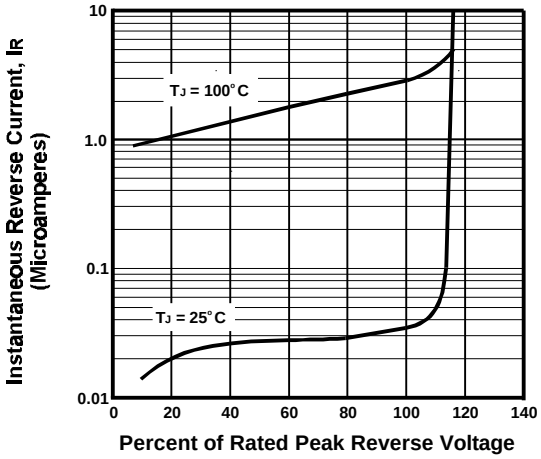

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

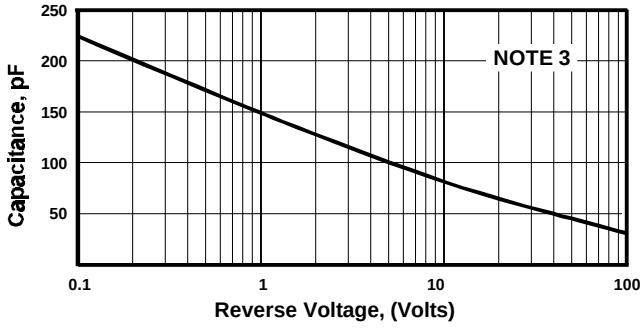

FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

NOTES

(1) Bridge Mounted on 3.0" Sq. x 0.11" Thick (7.5cm Sq. x 0.15cm) Aluminum Plate

(2) T_J = 150° C

(3) T_J = 25° C; Pulse Width = 300μSec; 1%Duty Cycle

(4) T_J = 25° C; f = 1 MHz; Vsig = 50mVp-p

DIOTEC ELECTRONICS CORP.
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Data Sheet No. BSBU-400-1C

4 AMP SILICON BRIDGE RECTIFIERS

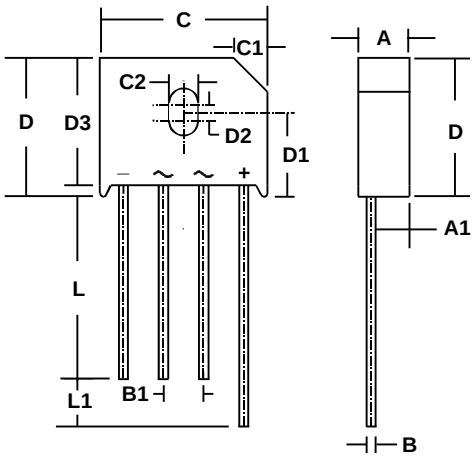
FEATURES

- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 200 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- **UL RECOGNIZED - FILE #E124962**

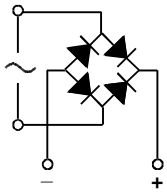
MECHANICAL DATA

- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on case
- Mounting Position: Any. Max. mounting torque = 5 in lb
- Weight: 0.3 Ounces (8 Grams)

MECHANICAL SPECIFICATION



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.6	7.1	0.260	0.280
A1	4.7	5.2	0.185	0.205
B	1.22	1.32	0.048	0.052
B1	4.57	5.59	0.180	0.220
C	22.70	23.24	0.895	0.915
C1	4.2	4.7	0.165	0.185
C2	3.6	4.1	0.140	0.160
D	n/a	19.3	n/a	0.760
D1	10.3	11.3	0.405	0.455
D2	1.7	2.2	0.065	0.085
D3	16.5	17.8	0.660	0.700
L	25.4	n/a	1.0	n/a
L1	4.57	6.8	0.180	0.260



SERIES SBU4A - SBU4M

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, 60Hz, resistive or inductive load. For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		SBU 4A	SBU 4B	SBU 4D	SBU 4G	SBU 4J	SBU 4K	SBU 4M	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current T_C = 100° C (Note 1) T_A = 30° C (Note 2)	I_O	4 4							AMPS
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T_J = 150° C	I_{FSM}	200							
Maximum Forward Voltage (Per Diode) at 4 Amps DC	V_{FM}	0.95 (Typical < 0.90)							VOLTS
Maximum Average DC Reverse Current @ T_A = 25° C At Rated DC Blocking Voltage @ T_A = 100° C	I_{RM}	5 (Typical < 0.1μA) 100							μA
Typical Thermal Resistance Junction to Ambient (Note 2) Junction to Lead (Note 1)	$R_{\theta JA}$ $R_{\theta JL}$	19.0 2.4							°C/W
Operating and Storage Temperature Range	T_J ,T_{STG}	-55 to +150							°C

3.01 04sbu

NOTES: (1) Bridge mounted on 2.0" x 1.6" x 0.3" thick (5cm x 4cm x 0.8cm) aluminum plate
(2) Bridge mounted on PC Board with 0.5" sq. (12mm sq.) copper pads and bridge lead length of 0.375" (9.5mm)
(3) Bolt bridge on heat sink with #6 screw, using silicon thermal compound between bridge and mounting surface for maximum heat transfer.

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4 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES SBU4A - SBU4M

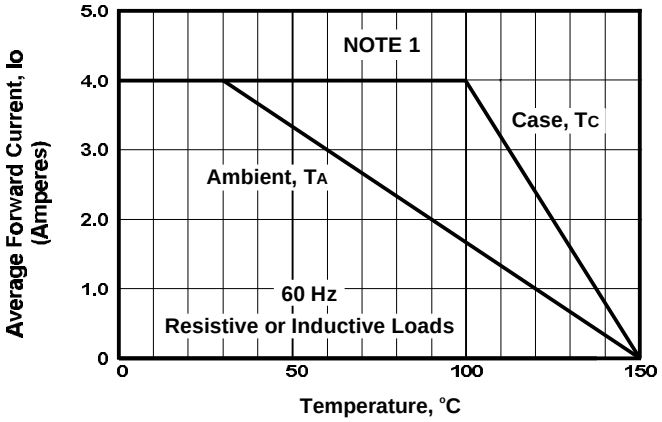

FIGURE 1. FORWARD CURRENT DERATING CURVE

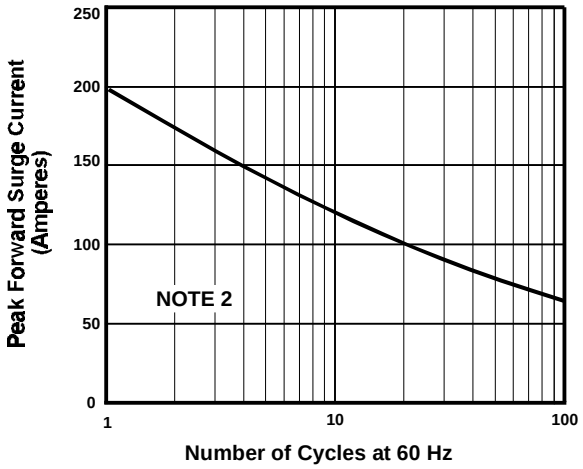

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

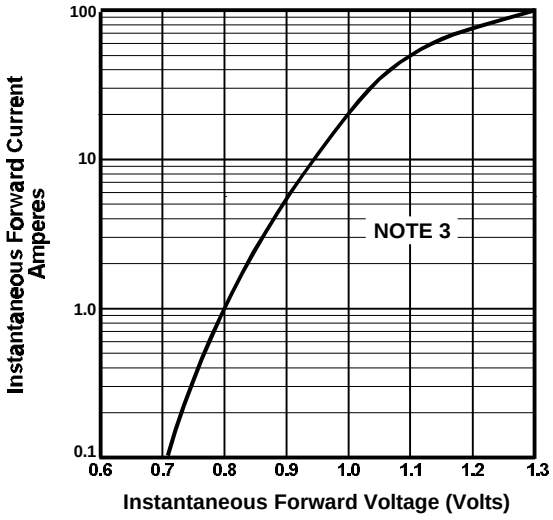

FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

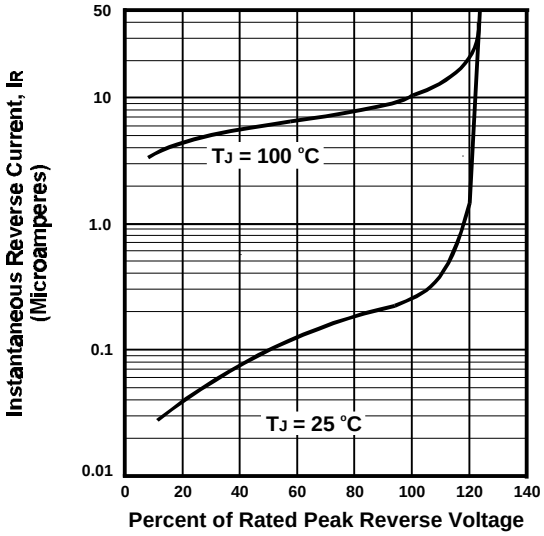

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

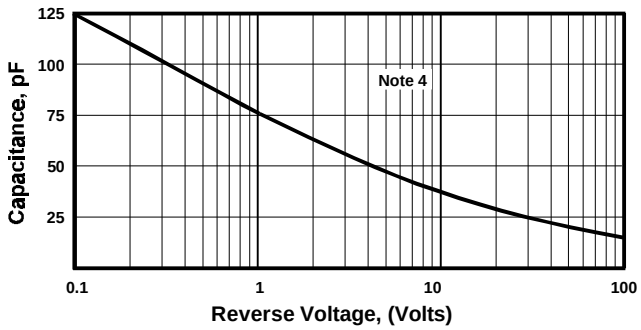

FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

NOTES

(1) Case Temperature, TC, With Bridge Mounted on 2.0" x 1.6" x 0.3" Thick (5cm x 4cm x 0.8cm) Aluminum Plate

Ambient Temperature, TA, With Bridge Mounted on PC Board With 0.5" Sq. (12mm Sq.) Pads and Bridge Lead Length of 0.375" (9.5mm)

(2) TJ = 150°C

(3) TJ = 25°C; Pulse Width = 300μSec; 1% Duty Cycle

(4) TJ = 25°C; f = 1 MHz; Vsig = 50mVp-p

DIOTEC ELECTRONICS CORP.
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5 AMP SILICON BRIDGE RECTIFIERS

FEATURES

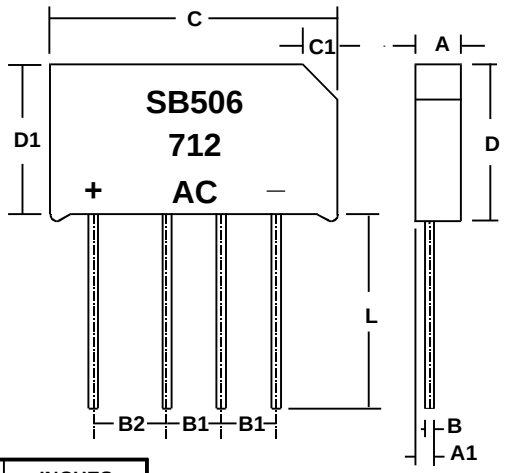
- **PRV Ratings from 50 to 1000 Volts**
- **Surge overload rating to 200 Amps peak**
- **Reliable low cost molded plastic construction**
- **Ideal for printed circuit board applications**

MECHANICAL DATA

- **Case: Molded plastic, U/L Flammability Rating 94V-0**
- **Terminals: Round silver plated pins**
- **Soldering: Per MIL-STD 202 Method 208 guaranteed**
- **Polarity: Marked on case**
- **Mounting Position: Any**
- **Weight: 0.38 Ounces (10.6 Grams)**

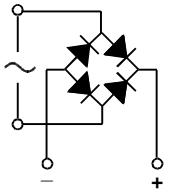
MECHANICAL SPECIFICATION

SB5 PACKAGE SHOWN ACTUAL SIZE



SYM	MILLIMETERS		INCHES	
	TYP	MAX	TYP	MAX
A	6.4		0.250	
A1	2.06		0.070	
B	1.27		0.05	
B1	7.6		0.300	
B2	10.2		0.400	
C	39.9		1.570	
C1	4.8		0.188	
D	21.7		0.855	
D1		21.0		0.820
L	25.4*		1.0*	

*** This measurement is a "Minimum"**



SERIES SB500 - SB510

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		**SB 500**	**SB 501**	**SB 502**	**SB 504**	**SB 506**	**SB 508**	**SB 510**	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 55°C	I_O	5							AMPS
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T_J = 150° C	I_{FSM}	200							
Maximum Forward Voltage (Per Diode) at 5 Amps DC	V_{FM}	1.0 (Typical < 0.95)							VOLTS
Maximum Average DC Reverse Current @ T_A = 25°C At Rated DC Blocking Voltage @ T_A = 100°C	I_{RM}	5 0.5							µA mA
Typical Thermal Resistance Junction to Ambient (Note 1) Junction to Lead (Note 1)	$R_{\theta JA}$ $R_{\theta JL}$	17 3.3							°C/W
Junction Operating Temperature Range	T_J, T_{STG}	-55 to +150							°C

3.01 05sb

NOTES: (1) Unit mounted on 3.0" sq. x 0.11" (7.5cm sq. x 0.3cm) aluminum plate

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5 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES SB500 - SB510

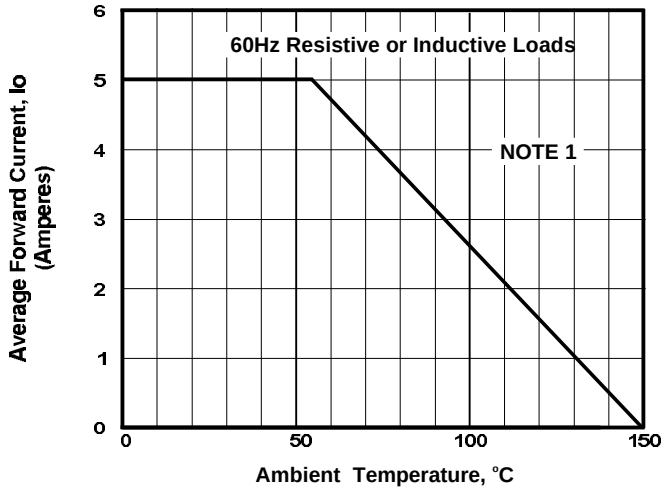

FIGURE 1. FORWARD CURRENT DERATING CURVE

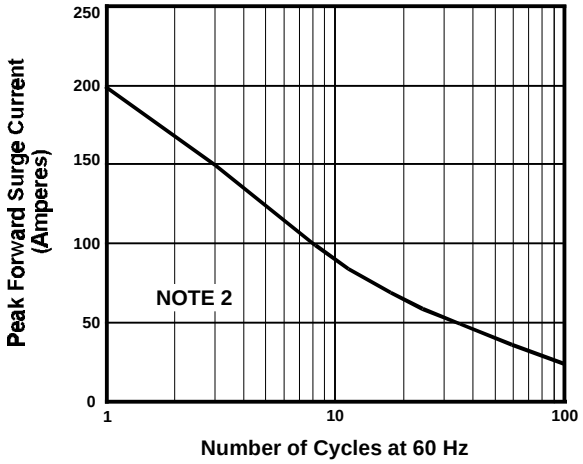

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

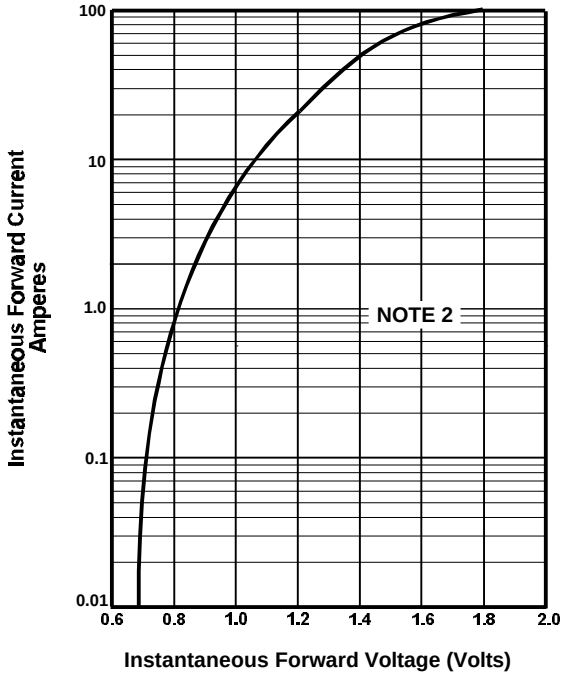

FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

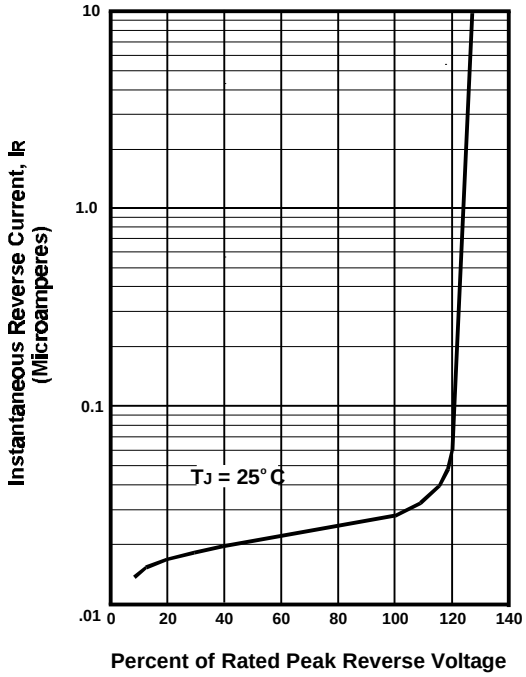

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

NOTES

(1) Bridge Mounted on 3.0" sq. x 0.11" (7.5cm sq. x 0.3cm) Aluminum Plate
(2) T_J = 150° C
(3) T_J = 25° C; Pulse Width = 300 μSec; 1% Duty Cycle

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Data Sheet No. BSBU-600-1C

6 AMP SILICON BRIDGE RECTIFIERS

FEATURES

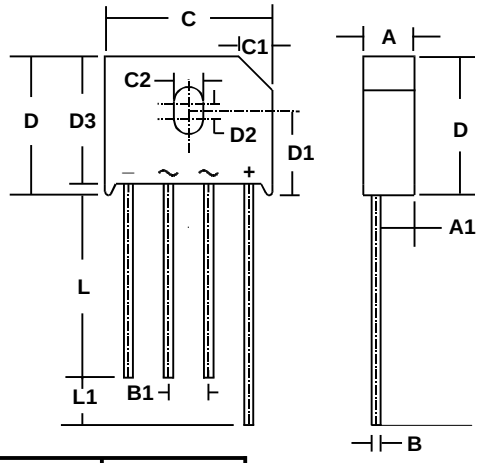
- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 250 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- **UL RECOGNIZED - FILE #E124962**

MECHANICAL DATA

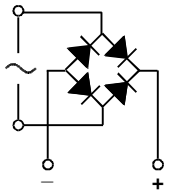
- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on case
- Mounting Position: Any. Max. mounting torque = 5 in lb
- Weight: 0.3 Ounces (8 Grams)

MECHANICAL SPECIFICATION

SBU PACKAGE SHOWN ACTUAL SIZE



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.6	7.1	0.260	0.280
A1	4.7	5.2	0.185	0.205
B	1.22	1.32	0.048	0.052
B1	4.57	5.59	0.180	0.220
C	22.7	23.24	0.895	0.915
C1	4.2	4.7	0.165	0.185
C2	3.6	4.1	0.140	0.160
D	n/a	19.3	n/a	0.760
D1	10.3	11.3	0.405	0.455
D2	1.7	2.2	0.065	0.085
D3	16.5	17.8	0.660	0.700
L	25.4	n/a	1.0	n/a
L1	4.57	6.8	0.180	0.260



SERIES SBU6A - SBU6M

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, 60Hz, resistive or inductive load. For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		SBU 6A	SBU 6B	SBU 6D	SBU 6G	SBU 6J	SBU 6K	SBU 6M	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current T_C = 100°C (Notes 1, 3) T_A = 40°C (Note 2)	I_O	6 6							AMPS
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T_J = 150° C	I_{FSM}	250							
Maximum Forward Voltage (Per Diode) at 6 Amps DC	V_{FM}	0.95 (Typical < 0.90)							VOLTS
Maximum Average DC Reverse Current @ T_A = 25°C At Rated DC Blocking Voltage @ T_A = 100°C	I_{RM}	5 (Typical < 0.5μA) 1							μA mA
Typical Thermal Resistance Junction to Ambient (Note 2) Junction to Case (Note 3)	$R_{\theta JA}$ $R_{\theta JC}$	16.0 3.1							°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							°C

NOTES: (1) Bridge mounted on 2.6" x 1.4" x 0.06" thick (6.5cm x 3.5cm x 0.15cm) aluminum plate
(2) Bridge mounted on PC Board with 0.5" sq. (12mm sq.) copper pads and bridge lead length of 0.375" (9.5mm)
(3) Bolt bridge on heat sink with #6 screw, using silicon thermal compound between bridge and mounting surface for maximum heat transfer.

3.01 06sbu

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6 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES SBU6A - SBU6M

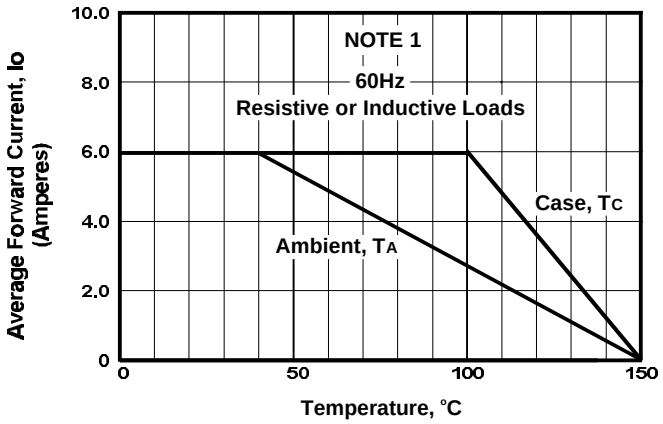

FIGURE 1. FORWARD CURRENT DERATING CURVE

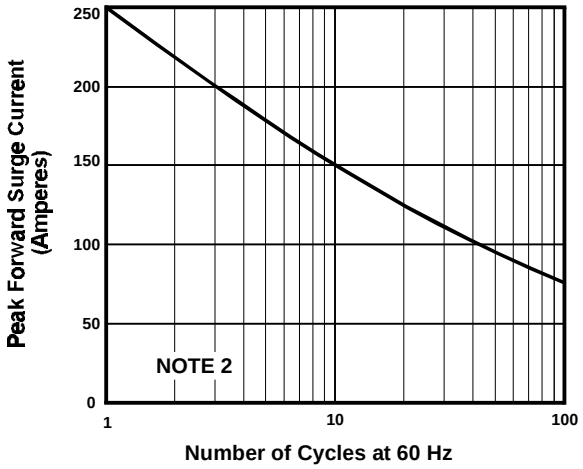

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

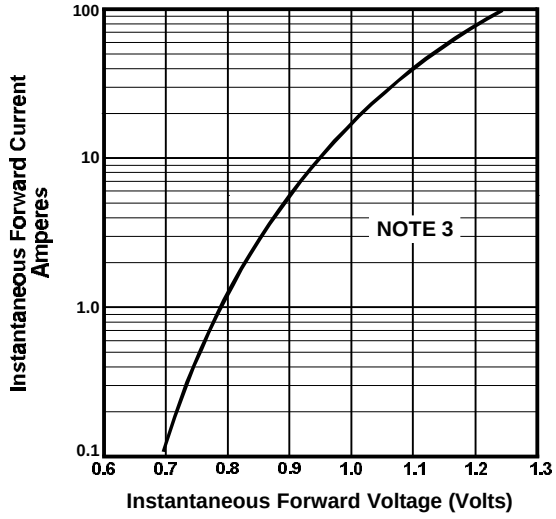

FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

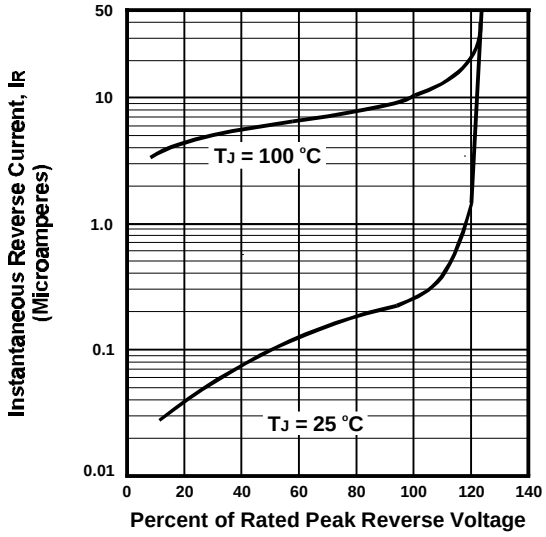

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

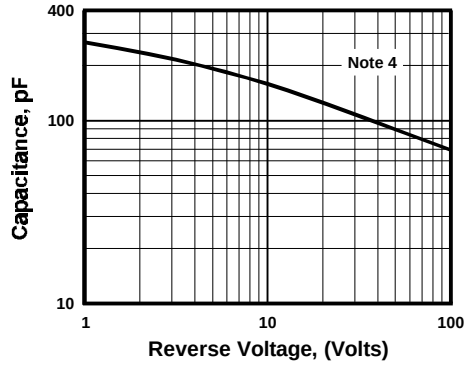

FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

NOTES

(1) Case Temperature, TC, With Bridge Mounted on 2.6" x 1.4" x 0.06" Thick (6.5cm x 3.5cm x 0.15cm) Aluminum Plate

Ambient Temperature, TA, With Bridge Mounted on PC Board With 0.5" Sq. (12mm Sq.) Pads and Bridge Lead Length of 0.375" (9.5mm)

(2) TJ = 150°C

(3) TJ = 25°C; Pulse Width = 300μSec; 1% Duty Cycle

(4) TJ = 25°C; f = 1 MHz; Vsig = 50mVp-p

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Data Sheet No. BRDB-600-1C
ABDB-600-1C

6 AMP SILICON BRIDGE RECTIFIERS

FEATURES

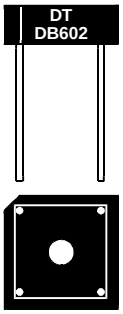
- PRV Ratings from 50 to 1000 Volts
- High surge overload rating of 250 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- **UL RECOGNIZED - FILE #E124962**

MECHANICAL DATA

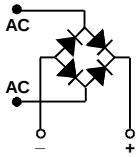
- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated copper pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on side of case; positive lead at beleveled corner
- Mounting Position: Any. Through hole provided for #6 screw
- Weight: 0.13 Ounces (3.6 Grams)

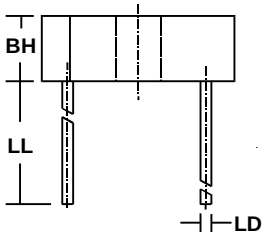
MECHANICAL SPECIFICATION

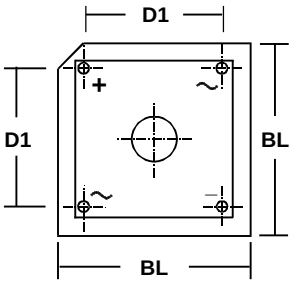
ACTUAL SIZE



SERIES DB600 - DB610 and ADB604 - ADB608







SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	14.7	15.7	0.58	0.62
BH	5.8	6.9	0.23	0.27
D1	10.3	11.3	0.405	0.445
LL	19.0	n/a	0.75	n/a
LD	1.0	1.1	0.039	0.042

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, 60Hz, resistive or inductive load. For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS										UNITS
		CONTROLLED AVALANCHE			NON-CONTROLLED AVALANCHE							
Series Number		ADB 604	ADB 606	ADB 608	DB 600	DB 601	DB 602	DB 604	DB 606	DB 608	DB 610	
Maximum DC Blocking Voltage	V_{RM}	400	600	800	50	100	200	400	600	800	1000	VOLTS
Working Peak Reverse Voltage	V_{RWM}											
Maximum Peak Recurrent Reverse Voltage	V_{RRM}											
RMS Reverse Voltage	$V_{R\ (RMS)}$	280	420	560	35	70	140	280	420	560	700	
Power Dissipation in $V_{(BR)}$ Region for 100 µS Square Wave	P_{RM}	400			n/a							WATTS
Continuous Power Dissipation in $V_{(BR)}$ Region @ T_{HS}=80 °C (Heat Sink Temp)	P_R	2			n/a							
Thermal Energy (Rating for Fusing) t < 8.3 mSec	I^2t	127										AMPS² SEC
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T_J = 150° C	I_{FSM}	250										AMPS
Average Forward Rectified Current @ T_C = 50°C (Notes 1, 2) @ T_A = 40°C (Note 3)	I_O	6 3										
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150										°C
Minimum Avalanche Voltage	$V_{(BR)\ Min}$	450	650	850	n/a							VOLTS
Maximum Avalanche Voltage	$V_{(BR)\ Max}$	900	1100	1300	n/a							
Maximum Forward Voltage (Per Diode) at 3 Amps DC	V_{FM}	0.95 (Typical < 0.90)										
Typical Junction Capacitance (Note 4)	C_J	186	90		186				90			
Maximum Reverse Current at Rated V_{RM} @ T_A = 25° C @ T_A = 100° C	I_{RM}	5 (Typical < 0.5µA) 0.5										µA mA
Minimum Insulation Breakdown Voltage (Circuit to Case)	V_{ISO}	2000										VOLTS
Typical Thermal Resistance Junction to Ambient (Note 3) Junction to Case (Note 2)	$R_{\theta JA}$ $R_{\theta JC}$	16.0 5.7										°C/W

3.01 06db

NOTES: (1) Bolt bridge on heat sink with #6 screw, using silicon thermal compound between bridge and mounting surface for maximum heat transfer.
(2) Bridge mounted on 4.0" sq. x 0.11" thick (10.5cm sq. x 0.3cm) aluminum plate
(3) Bridge mounted on PC Board with 0.5" sq. (12mm sq.) copper pads and bridge lead length of 0.375" (9.5mm)
(4) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

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6 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES DB600 - DB610 and SERIES ADB604 - ADB608

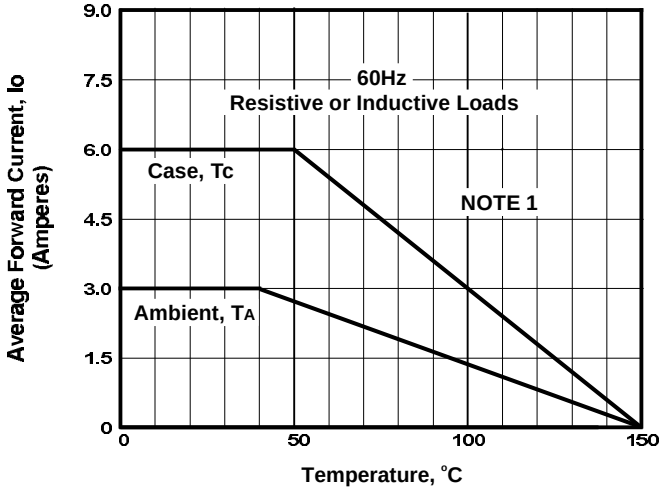

FIGURE 1. FORWARD CURRENT DERATING CURVE

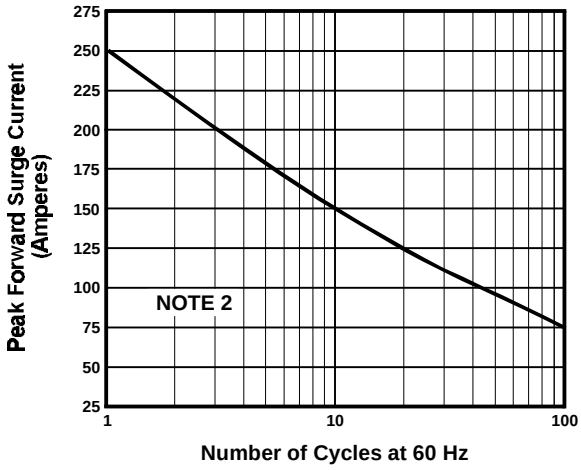

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

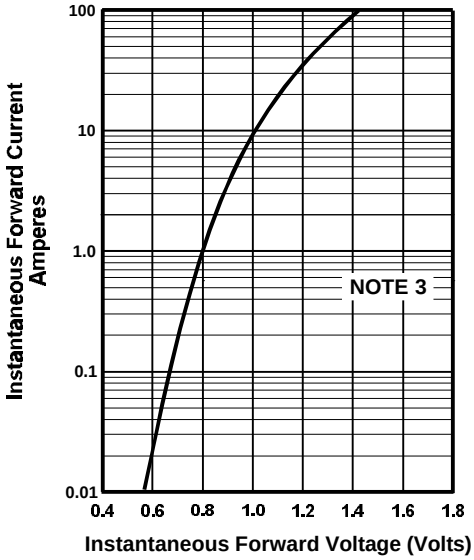

FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

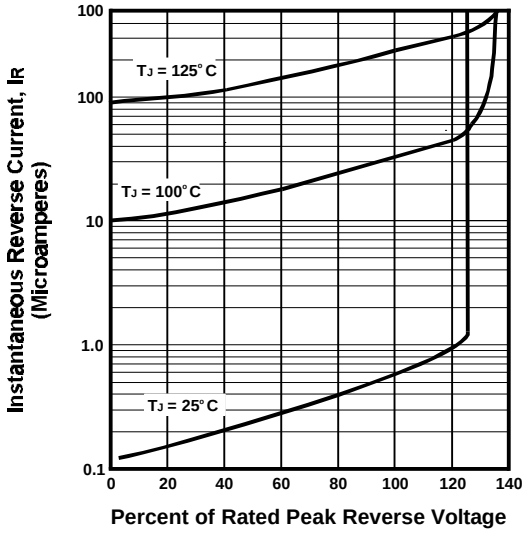

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS PER DIODE

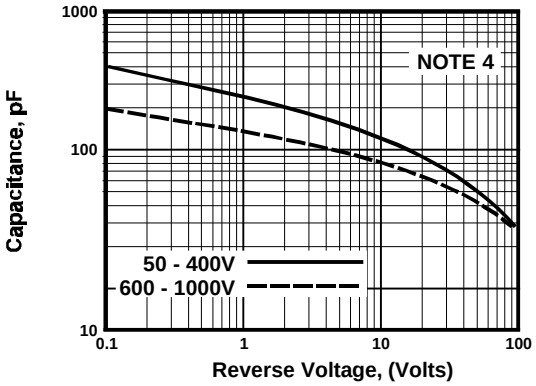

FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

NOTES

(1) Case Temperature, TC, With Bridge Mounted on 4"Sq. x 0.11" Thick (10.5cm Sq. x 0.3cm) Aluminum Plate

Ambient Temperature, TA, With Bridge Mounted on PC Board With 0.5" Sq. (12mm Sq.) Pads and Lead Length of, 0.375" (9.5mm)

(2) TJ = 150°C

(3) TJ = 25°C; Pulse Width = 300μSec; 1% Duty Cycle

(4) TJ = 25°C; f = 1 MHz; Vsig = 50mVp-p

3.01 06db

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Data Sheet No. BRHB-600-1C
ABHB-600-1C

6 AMP SILICON BRIDGE RECTIFIERS

FEATURES

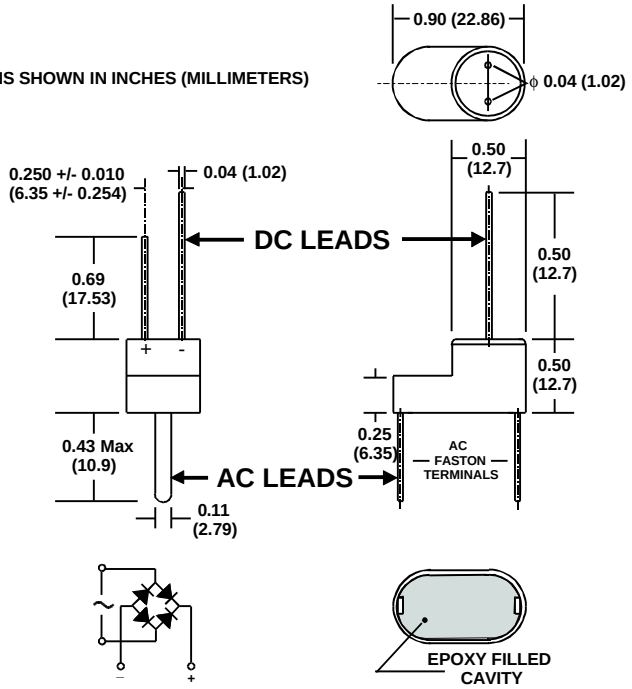
- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 250 Amps peak
- **Unique structure** - DC leads on one side, AC leads on the opposite side
- **Ideal for DC motor related applications**
- **UL RECOGNIZED - FILE #E141956**

MECHANICAL DATA

- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated copper pins/faston connectors
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on case
- Mounting Position: Any.
- Weight: 0.13 Ounces (3.6 Grams)

MECHANICAL SPECIFICATION

DIMENSIONS SHOWN IN INCHES (MILLIMETERS)



MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS										UNITS
		CONTROLLED AVALANCHE			NON-CONTROLLED AVALANCHE							
Series Number		AHBU 604	AHBU 606	AHBU 608	HBU 600	HBU 601	HBU 602	HBU 604	HBU 606	HBU 608	HBU 610	
Maximum DC Blocking Voltage	V_{RM}	400	600	800	50	100	200	400	600	800	1000	VOLTS
Working Peak Reverse Voltage	V_{RWM}											
Maximum Peak Recurrent Reverse Voltage	V_{RRM}											
RMS Reverse Voltage	$V_{R\ (RMS)}$	280	420	560	35	70	140	280	420	560	700	
Power Dissipation in $V_{(BR)}$ Region for 100 µS Square Wave	P_{RM}	400			n/a							WATTS
Continuous Power Dissipation in $V_{(BR)}$ Region @ T_{HS}=80 °C (Heat Sink Temp)	P_R	2			n/a							
Thermal Energy (Rating for Fusing)	I^2t	127										AMPS² SEC
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T_J = 150° C	I_{FSM}	250										AMPS
Average Forward Rectified Current @ T_C = 50°C @ T_A = 40°C	I_O	6 3										
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150										°C
Minimum Avalanche Voltage	$V_{(BR)\ Min}$	450	650	850	n/a							VOLTS
Maximum Avalanche Voltage	$V_{(BR)\ Max}$	900	1100	1300	n/a							
Maximum Forward Voltage (Per Diode) at 6 Amps DC	V_{FM}	0.95 (Typical < 0.90)										
Maximum Reverse Current at Rated V_{RM} @ T_A = 25°C @ T_A = 100°C	I_{RM}	5 1										µA mA
Minimum Insulation Breakdown Voltage (Circuit to Case)	V_{ISO}	2000										VOLTS
Typical Thermal Resistance (on Heat Sink) Junction to Ambient Junction to Case	$R_{\theta JA}$ $R_{\theta JC}$	16.0 5.7										°C/W

3.01 06hbu

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Data Sheet No. BRHB-600-2C
ABHB-600-2C

6 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES HBU600 - HBU610 and SERIES AHBU604 - AHBU608

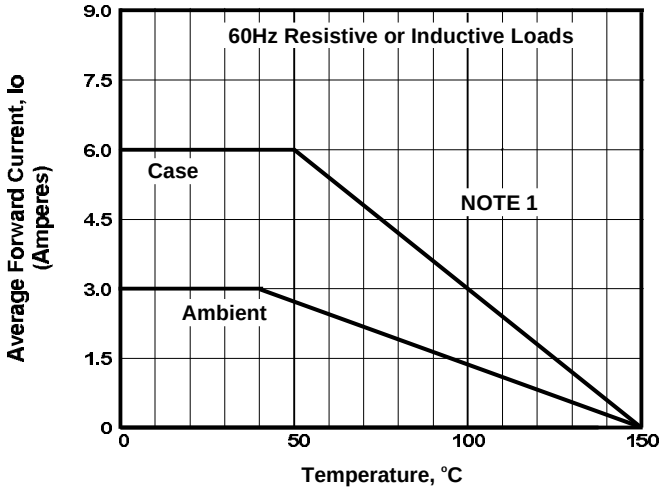

FIGURE 1. FORWARD CURRENT DERATING CURVE

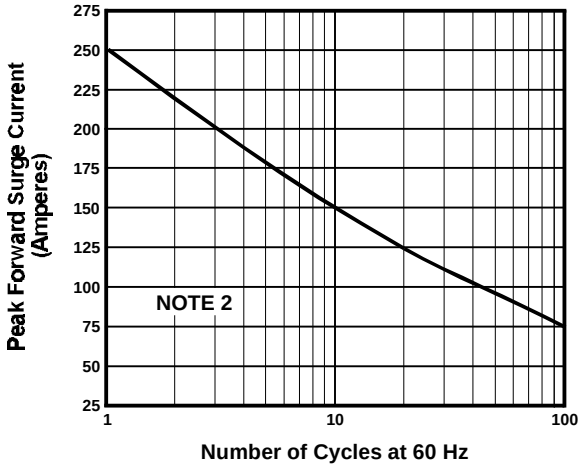

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

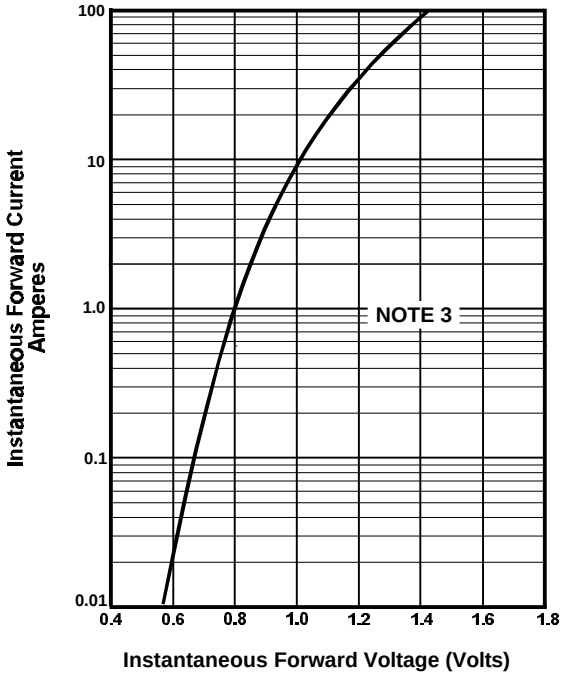

FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

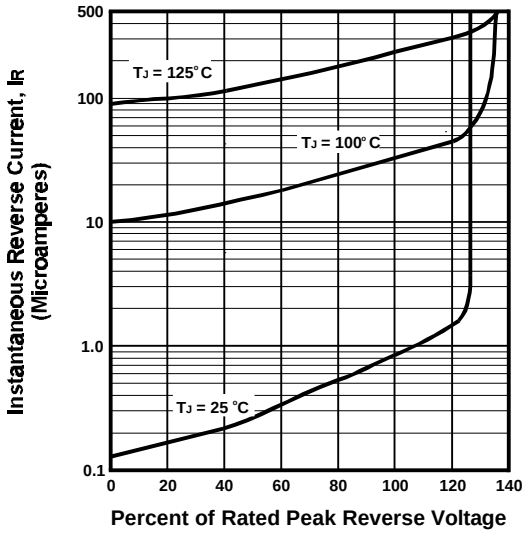

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS PER DIODE

NOTES

(1) Ambient = Ambient temperature, T_A. P.C. Board mounting with 0.375" (9.5 mm) Lead lengths
Case = Case Temperature, T_C. Mounted on aluminum plate 5.5" x 6.0" x 0.11" thick (14cm x 15cm x 0.3 cm)

(2) T_J = 150°C

(3) T_J = 25°C; Pulse Width = 300 μSec; 1% Duty Cycle

3.01 06hbu

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Data Sheet No. BSBU-800-1C

8 AMP SILICON BRIDGE RECTIFIERS

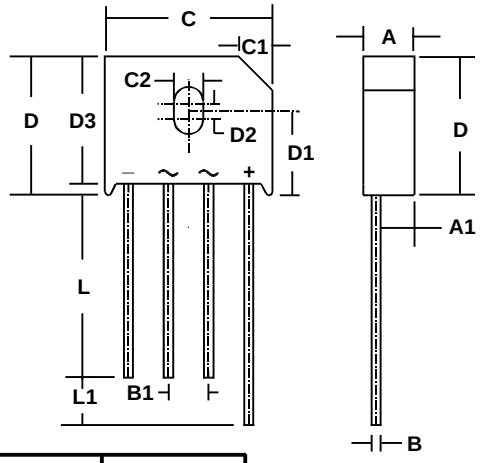
FEATURES

- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 300 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- **UL RECOGNIZED - FILE #E124962**

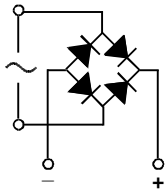
MECHANICAL DATA

- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on case
- Mounting Position: Any. Max. mounting torque = 5 in lb
- Weight: 0.3 Ounces (8 Grams)

MECHANICAL SPECIFICATION



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	6.6	7.1	0.260	0.280
A1	4.7	5.2	0.185	0.205
B	1.22	1.32	0.048	0.052
B1	4.57	5.59	0.180	0.220
C	22.7	23.24	0.895	0.915
C1	4.2	4.7	0.165	0.185
C2	3.6	4.1	0.140	0.160
D	n/a	19.3	n/a	0.760
D1	10.3	11.3	0.405	0.455
D2	1.7	2.2	0.065	0.085
D3	16.5	17.8	0.660	0.700
L	25.4	n/a	1.0	n/a
L1	4.57	6.8	0.180	0.260



SERIES SBU8A - SBU8M

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, 60Hz, resistive or inductive load. For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		SBU 8A	SBU 8B	SBU 8D	SBU 8G	SBU 8J	SBU 8K	SBU 8M	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current T_C = 100° C (Notes 1, 3)	I_O	8							AMPS
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T_J = 150° C	I_{FSM}	300							
Maximum Forward Voltage (Per Diode) at 8 Amps DC	V_{FM}	0.95 (Typ. 0.90)							VOLTS
Maximum Average DC Reverse Current @ T_A = 25° C At Rated DC Blocking Voltage @ T_A = 125° C	I_{RM}	5 (Typical < 0.5μA) 0.5							μA mA
Typical Thermal Resistance Junction to Ambient (Note 2) Junction to Case (Note 1)	$R_{\theta JA}$ $R_{\theta JC}$	16 3							°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							°C

3.01 08sbu

NOTES: (1) Bridge mounted on 3.2" sq. x 0.12" thick (8.2cm sq. x 0.3cm) aluminum plate
(2) Bridge mounted on PC Board with 0.5" sq. (12mm sq.) copper pads and bridge lead length of 0.375" (9.5mm)
(3) Bolt bridge on heat sink with #6 screw, using silicon thermal compound between bridge and mounting surface for maximum heat transfer.

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8 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES SBU8A - SBU8M

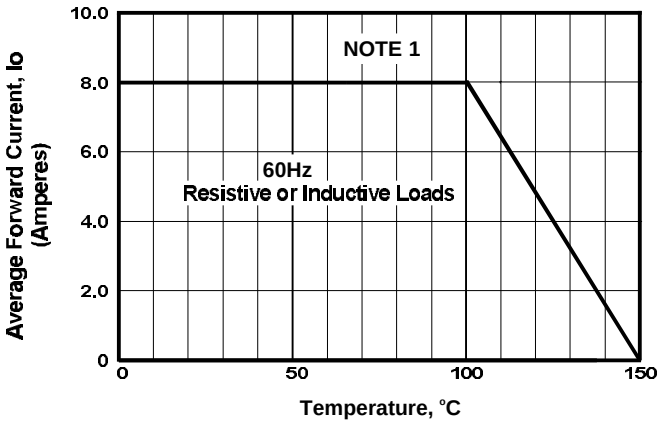

FIGURE 1. FORWARD CURRENT DERATING CURVE

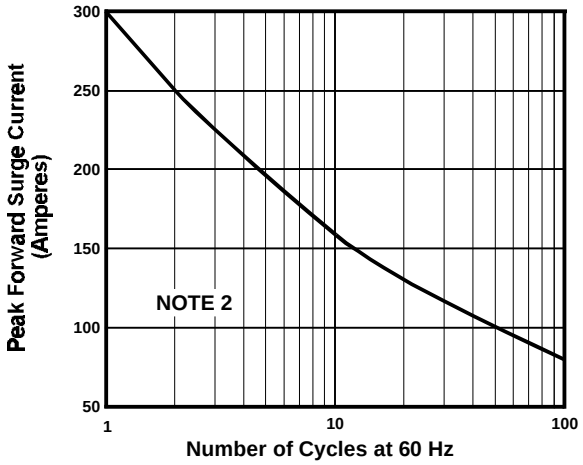

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

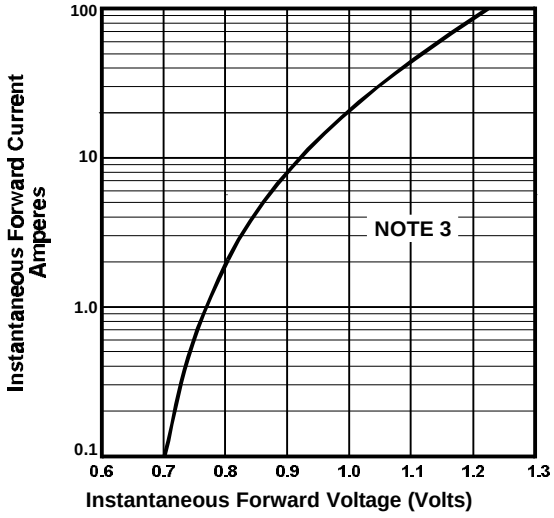

FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

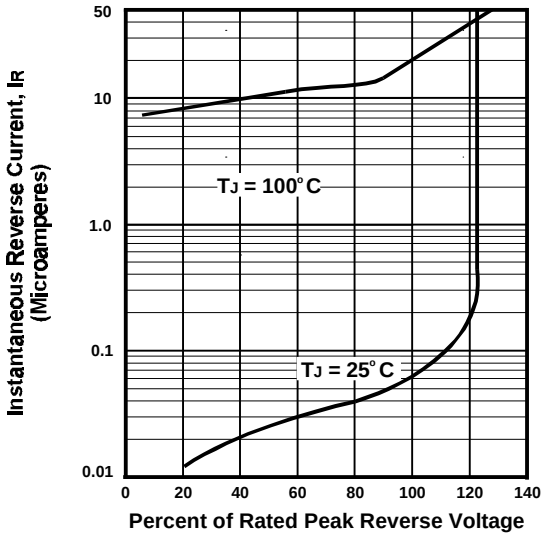

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

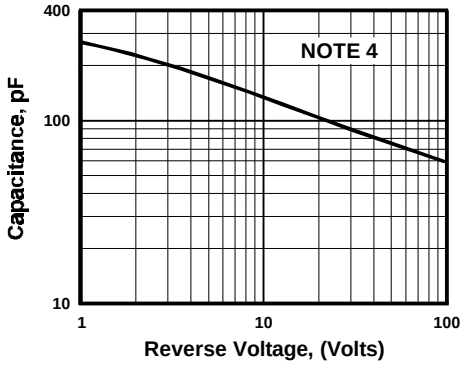

FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

NOTES

(1) Case Temperature, T_C, With Bridge Mounted on 3.2" Sq. x 0.12" Thick (8.2cm Sq. x 0.3cm) Aluminum Plate

(2) T_J = 150°C

(3) T_J = 25°C; Pulse Width = 300μSec; 1% Duty Cycle

(4) T_J = 25°C; f = 1 MHz; Vsig = 50mVp-p

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
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Data Sheet No. BRDB-800-1C
ABDB-800-1C

8 AMP SILICON BRIDGE RECTIFIERS

FEATURES

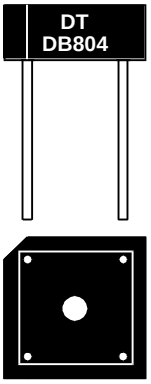
- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 300 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- **UL RECOGNIZED - FILE #E124962**

MECHANICAL DATA

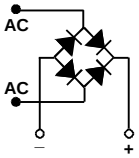
- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated copper pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on side of case; positive lead at beleveled corner
- Mounting Position: Any. Through hole provided for #6 screw
- Weight: 0.18 Ounces (5.4 Grams)

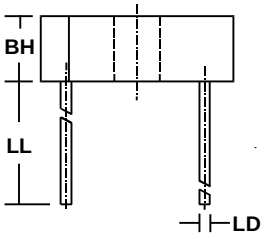
MECHANICAL SPECIFICATION

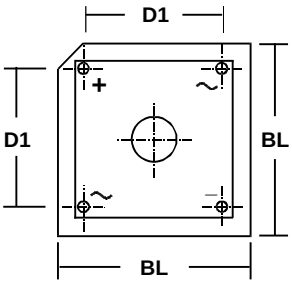
ACTUAL SIZE



SERIES DB800-DB810 and ADB804-ADB808







SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	18.5	19.6	0.73	0.77
BH	6.4	7.6	0.25	0.3
D1	12.2	13.2	0.48	0.52
LL	22.2	n/a	0.875	n/a
LD	1.2	1.3	0.048	0.052

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratingsat25°Cambienttemperature unlessotherwisespecified.
Single phase, half wave,60Hz, resistive or inductive load.
Forcapacitive loads, derate currentby20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS										UNITS
		CONTROLLED AVALANCHE			NON-CONTROLLED AVALANCHE							
Series Number		ADB 804	ADB 806	ADB 808	DB 800	DB 801	DB 802	DB 804	DB 806	DB 808	DB 810	
Maximum DC Blocking Voltage	V_{RM}	400	600	800	50	100	200	400	600	800	1000	VOLTS
Working Peak Reverse Voltage	V_{RWM}											
Maximum Peak Recurrent Reverse Voltage	V_{RRM}											
RMS Reverse Voltage	$V_{R\ (RMS)}$	280	420	560	35	70	140	280	420	560	700	
Power Dissipation in $V_{(BR)}$ Region for 100 µS Square Wave	P_{RM}	400			n/a							WATTS
Continuous Power Dissipation in $V_{(BR)}$ Region @ T_{HS}=80°C (Heat Sink Temp)	P_R	2			n/a							
Thermal Energy (Rating for Fusing)	I^2t	64										$AMPS^2$ SEC
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T_J = 150° C	I_{FSM}	300										AMPS
Average Forward Rectified Current @ T_C = 50°C (Note 1) @ T_A = 50°C (Note 2)	I_O	10 8										
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150										°C
Minimum Avalanche Voltage	$V_{(BR)\ Min}$	450	650	850	n/a							VOLTS
Maximum Avalanche Voltage	$V_{(BR)\ Max}$	900	1100	1300	n/a							
Maximum Forward Voltage (Per Diode) at 4 Amps DC	V_{FM}	0.95 (Typ. 0.90)										
Maximum Reverse Current at Rated V_{RM} @ T_A = 25°C @ T_A = 100°C	I_{RM}	5 1										µA mA
Minimum Insulation Breakdown Voltage (Circuit to Case)	V_{ISO}	2000										VOLTS
Typical Thermal Resistance Junction to Ambient (Note 2) Junction to Case (Note 1)	$R_{\theta JA}$ $R_{\theta JC}$	12 5										°C/W

3.01 08db

NOTES: (1) Bridge mounted on 4.9" x 4.3" x 0.11" thick (12.4cm x 10.8cm x 0.3cm) aluminum plate
(2) Bridge mounted on PC Board with 0.5" sq. (12mm sq.) copper pads and bridge lead length of 0.375" (9.5mm)
(3) Bolt bridge on heat sink, using silicon thermal compound between bridge and mounting surface, for maximum heat transfer.

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8 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES DB800 - DB810 and SERIES ADB804 - ADB808

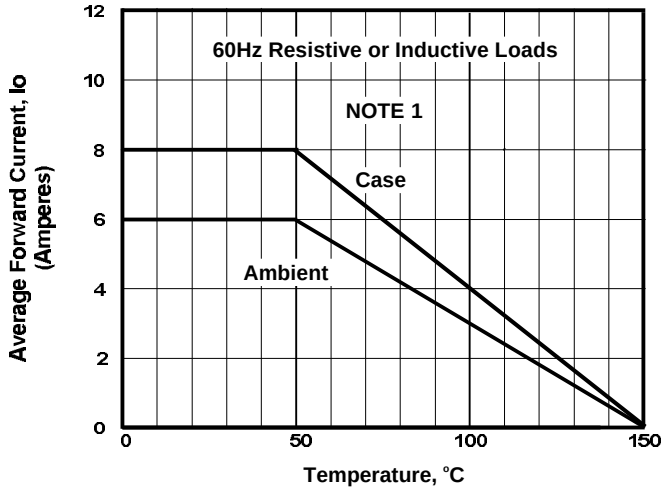

FIGURE 1. FORWARD CURRENT DERATING CURVE

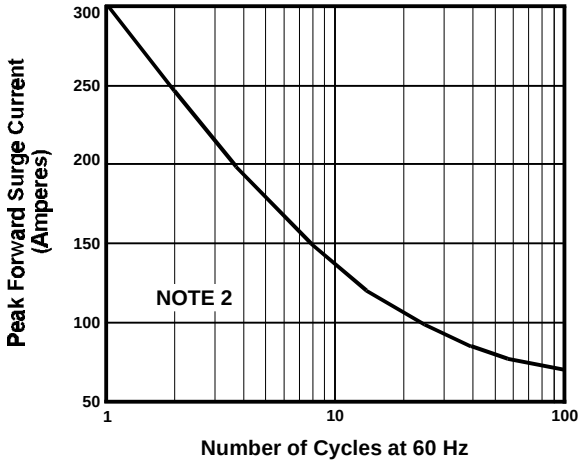

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

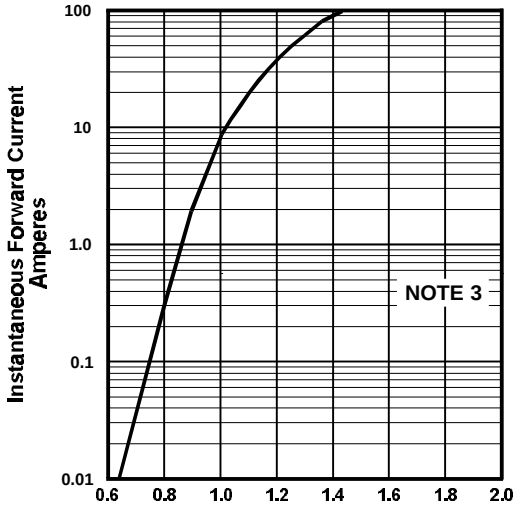

FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

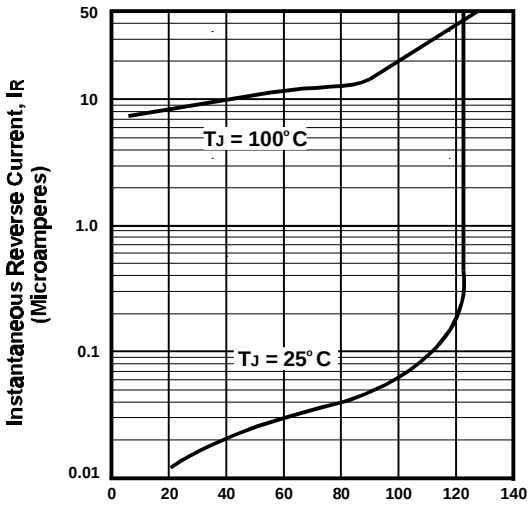

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

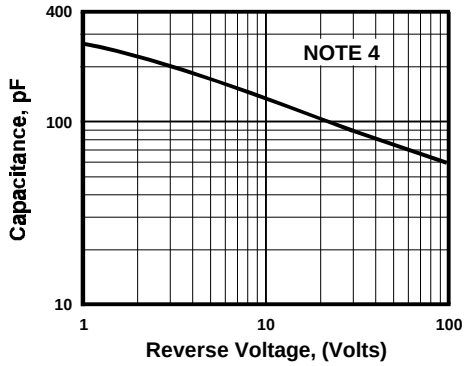

FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

NOTES

(1) Case Temperature, T_C, With Bridge Mounted on 4.9" x 4.3" x 0.11" Thick (12.4cm x 10.8cm x 0.3cm) Aluminum Plate

Ambient Temperature, T_A, With Bridge Mounted on PC Board With 0.5" Sq. (12mm Sq.) Copper Pads And Bridge Lead Length of 0.375" (9.5mm)

(2) T_J = 150°C

(3) T_J = 25°C; Pulse Width = 300μSec; 1% Duty Cycle

(4) T_J = 25°C; f = 1 MHz; Vsig = 50mVp-p

3.01 08db

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Data Sheet No. BRDB-1000-1C
ABDB-1000-1C

10 AMP SILICON BRIDGE RECTIFIERS

FEATURES

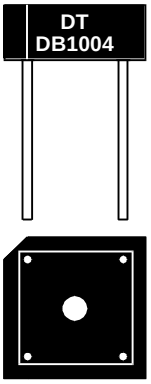
- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 300 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- **UL RECOGNIZED - FILE #E124962**

MECHANICAL DATA

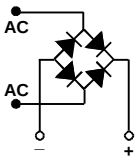
- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated copper pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on side of case; positive lead at beleveled corner
- Mounting Position: Any. Through hole provided for #6 screw
- Weight: 0.18 Ounces (5.4 Grams)

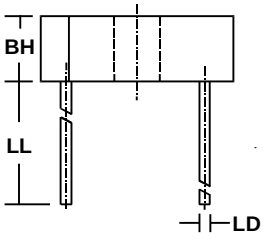
MECHANICAL SPECIFICATION

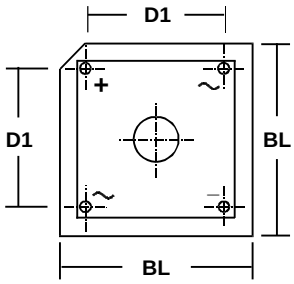
ACTUAL SIZE



SERIES DB1000-DB1010 and ADB1004-ADB1008







SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	18.5	19.6	0.73	0.77
BH	6.4	7.6	0.25	0.3
D1	12.2	13.2	0.48	0.52
LL	22.2	n/a	0.875	n/a
LD	1.2	1.3	0.048	0.052

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratingsat25°Cambienttemperature unlessotherwisespecified.
Single phase, half wave,60Hz, resistive or inductive load.
Forcapacitive loads, derate currentby20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS										UNITS
		CONTROLLED AVALANCHE			NON-CONTROLLED AVALANCHE							
Series Number		ADB 1004	ADB 1006	ADB 1008	DB 1000	DB 1001	DB 1002	DB 1004	DB 1006	DB 1008	DB 1010	
Maximum DC Blocking Voltage	V_{RM}	400	600	800	50	100	200	400	600	800	1000	VOLTS
Working Peak Reverse Voltage	V_{RWM}											
Maximum Peak Recurrent Reverse Voltage	V_{RRM}											
RMS Reverse Voltage	$V_{R\ (RMS)}$	280	420	560	35	70	140	280	420	560	700	
Power Dissipation in $V_{(BR)}$ Region for 100 µS Square Wave	P_{RM}	500			n/a							WATTS
Continuous Power Dissipation in $V_{(BR)}$ Region @ T_{HS}=80°C (Heat Sink Temp)	P_R	2			n/a							
Thermal Energy (Rating for Fusing)	I^2t	64										AMPS² SEC
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). TJ = 150° C	I_{FSM}	300										AMPS
Average Forward Rectified Current @ T_C = 50°C (Notes 1, 3) @ T_A = 50°C (Note 2)	I_O	10 8										
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150										°C
Minimum Avalanche Voltage	$V_{(BR)\ Min}$	450	650	850	n/a							VOLTS
Maximum Avalanche Voltage	$V_{(BR)\ Max}$	900	1100	1300	n/a							
Maximum Forward Voltage (Per Diode) at 5 Amps DC	V_{FM}	0.95 (Typ. 0.90)										
Maximum Reverse Current at Rated V_{RM} @ T_A = 25°C @ T_A = 100°C	I_{RM}	5 (Typical < 0.5µA) 0.5										µA mA
Minimum Insulation Breakdown Voltage (Circuit to Case)	V_{ISO}	2000										VOLTS
Typical Thermal Resistance Junction to Ambient (Note 2) Junction to Case (Note 1)	$R_{\theta JA}$ $R_{\theta JC}$	12 5										°C/W

3.01 10db

NOTES: (1) Bridge mounted on 5.1" x 4.3" x 0.11" thick (12.9cm x 10.8cm x 0.3cm) aluminum plate
(2) Bridge mounted on PC Board with 0.5" sq. (12mm sq.) copper pads and bridge lead length of 0.375" (9.5mm)
(3) Bolt bridge on heat sink with #6 screw, using silicon thermal compound between bridge and mounting surface for maximum heat transfer.

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Data Sheet No. BRDB-1000-2C
ABDB-1000-2C

10 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES DB1000 - DB1010 and SERIES ADB1004 - ADB1008

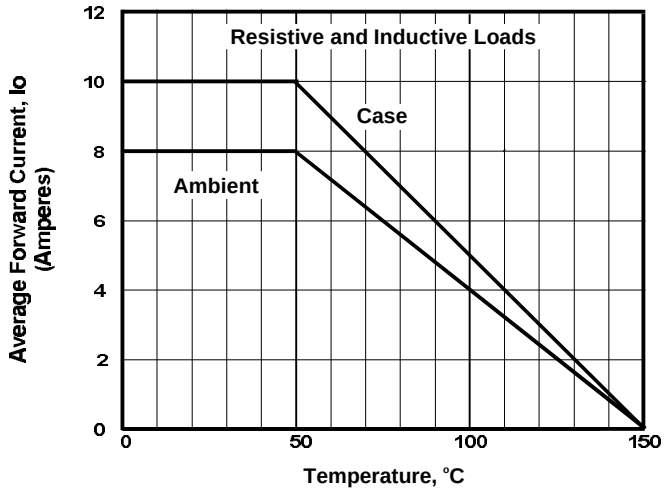

FIGURE 1. FORWARD CURRENT DERATING CURVE

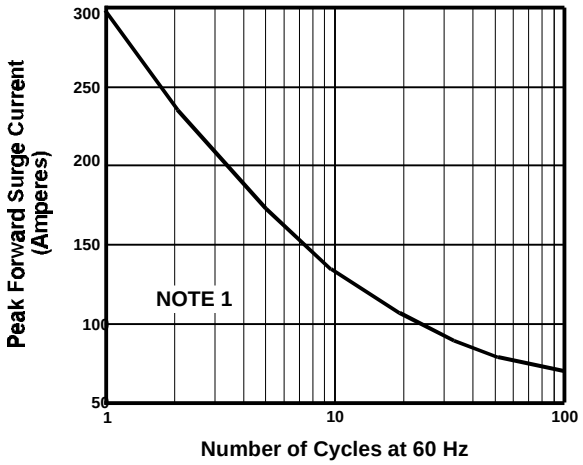

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

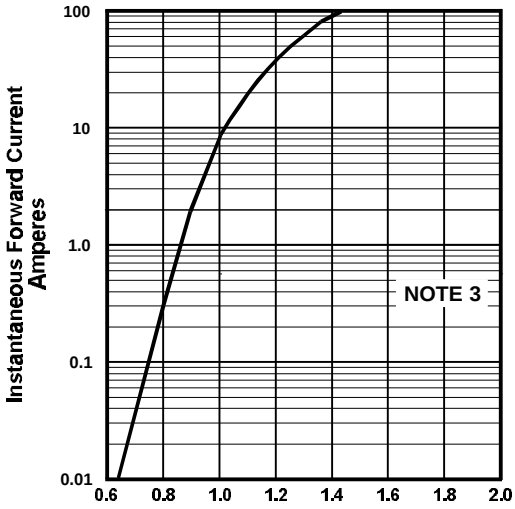

FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

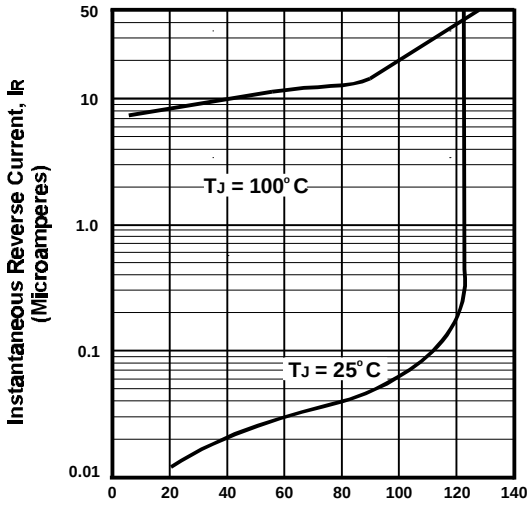

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

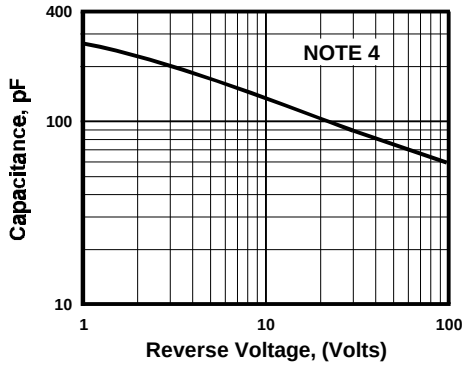

FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

NOTES

(1) Case Temperature, T_C, With Bridge Mounted on 5.1" x 4.3" x 0.11" Thick (12.9cm x 10.8cm x 0.3cm) Aluminum Plate

Ambient Temperature, T_A, With Bridge Mounted on PC Board With 0.5" Sq. (12mm Sq.) Copper Pads And Bridge Lead Length of 0.375" (9.5mm)

(2) T_J = 150°C

(3) T_J = 25°C; Pulse Width = 300μSec; 1% Duty Cycle

(4) T_J = 25°C; f = 1 MHz; Vsig = 50mVp-p

3.01 10db

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
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Data Sheet No. BRDB-1500-1C
ADBD-1500-1C

15 AMP SILICON BRIDGE RECTIFIERS

FEATURES

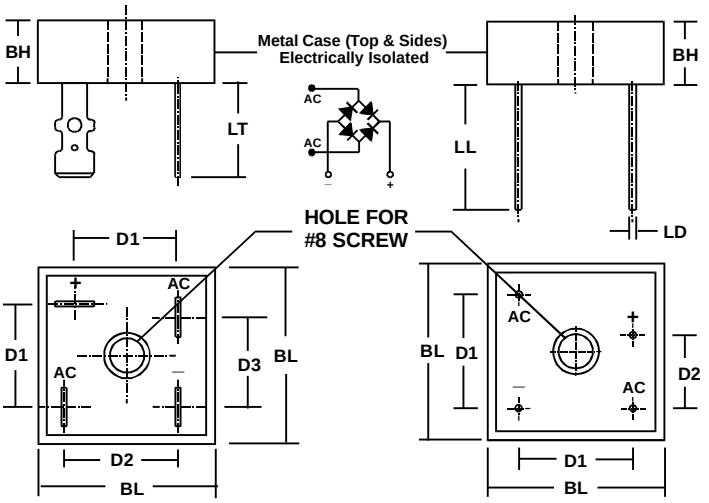
- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 300 Amps peak
- High efficiency
- Electrically isolated metal case for maximum heat dissipation
- **UL RECOGNIZED - FILE #E141956**

MECHANICAL DATA

- Case: Metal (Potting epoxy carries U/L flammability Rating 94V-0)
- Terminals: Round silver plated copper pins or fast-on terminals
- Soldering: Per MIL-STD 202 Method 208 guaranteed (Note 1)
- Polarity: Marked on side of case
- Mounting Position: Any. Through hole for #8 screw.
  Max. mounting torque = 20 in-lb.
- Weight: Fast-on Terminals - 1.1 Ounces (31.6 Grams)
  Wire Leads - 0.95 Ounce (28.5 Grams)

MECHANICAL SPECIFICATION

SERIES: DB1500 - DB1510 and ADB1504 - ADB1508



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	11.0	11.2	0.43	0.44
D1	15.7	16.7	0.62	0.66
D2	17.5	18.5	0.69	0.73
D3	13.5	14.5	0.53	0.57
LT	n/a	14.2	n/a	0.56

Suffix "T" indicates FAST-ON TERMINALS

SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	11.0	11.2	0.43	0.44
D1	17.5	18.5	0.69	0.73
D2	10.9	11.9	0.43	0.47
LL	20.6	n/a	0.81	n/a
LD	1.0	1.1	0.039	0.042

Suffix "W" indicates WIRE LEADS

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS										UNITS
		CONTROLLED AVALANCHE			NON-CONTROLLED AVALANCHE							
Series Number		ADB 1504	ADB 1506	ADB 1508	DB 1500	DB 1501	DB 1502	DB 1504	DB 1506	DB 1508	DB 1510	
Maximum DC Blocking Voltage	V_{RM}	400	600	800	50	100	200	400	600	800	1000	VOLTS
Working Peak Reverse Voltage	V_{RWM}											
Maximum Peak Recurrent Reverse Voltage	V_{RRM}											
RMS Reverse Voltage	$V_{R\ (RMS)}$	280	420	560	35	70	140	280	420	560	700	
Rating for Fusing (Non Repetitive; 1mS < t < 8.3mS)	I^2t	375										AMPS² SEC
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T_J = 150° C.	I_{FSM}	300										AMPS
Average Forward Rectified Current @ T_C = 50°C.	I_O	15										
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150										°C
Mimimum Avalanche Voltage	$V_{(BR)\ Min}$	450	650	850	n/a							VOLTS
Maximum Avalanche Voltage	$V_{(BR)\ Max}$	900	1100	1300	n/a							
Maximum Forward Voltage (Per Diode) at 7.5 Amps DC	V_{FM}	1.03										
Maximum Reverse Current at Rated V_{RM} @ T_A = 25°C @T_A = 125°C	I_{RM}	1 10										µA
Minimum Insulation Breakdown Voltage (Circuit to Case)	V_{ISO}	2000										VOLTS
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.8										°C/W

3.0115dbm

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15 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES DB1500 - DB1510 and SERIES ADB1504 - ADB1508

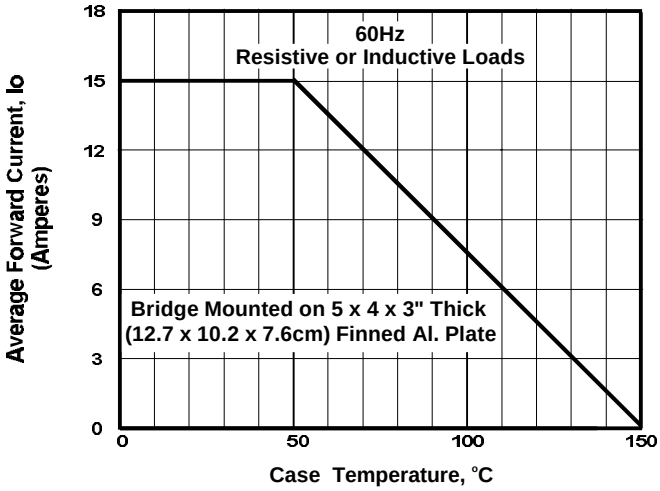


FIGURE 1. FORWARD CURRENT DERATING CURVE

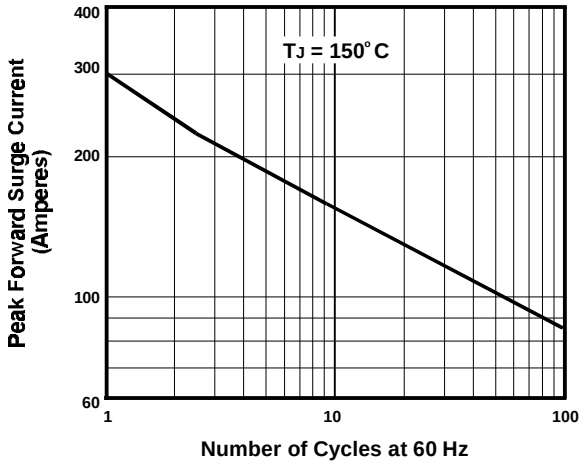


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

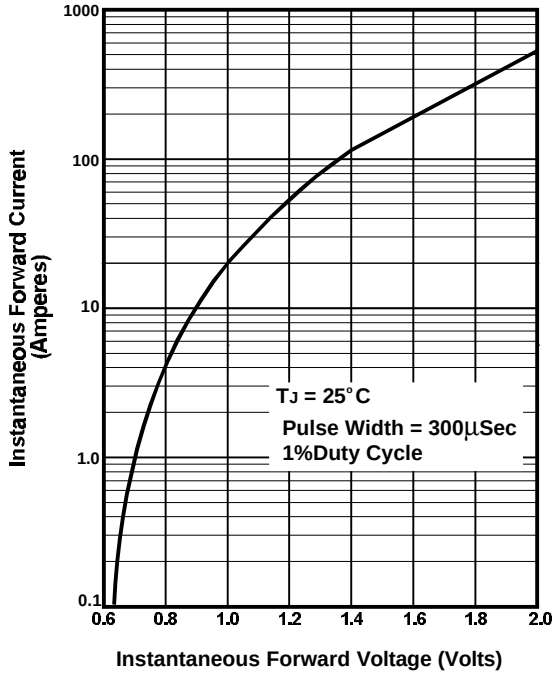


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

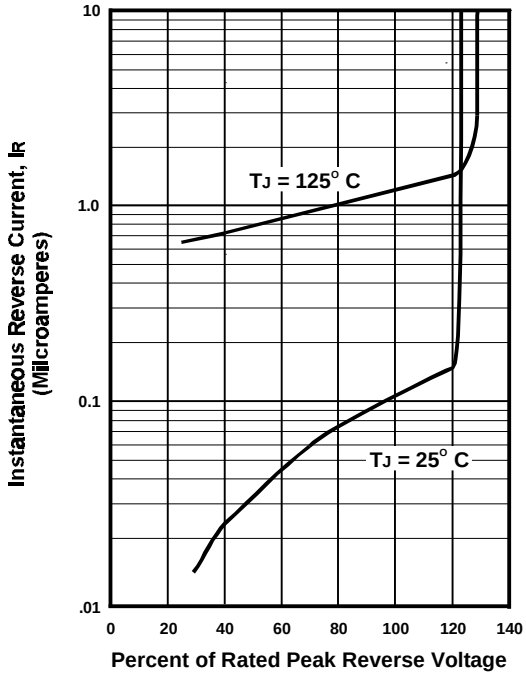


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

4.97bbrdb15p

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BRDB-1500P-1C
ADBD-1500P-1C

15 AMP SILICON BRIDGE RECTIFIERS

FEATURES

- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 300 Amps peak
- High efficiency
- Heat sink integrally mounted in the molded bridge encapsulation
- **UL RECOGNIZED - FILE #E141956**

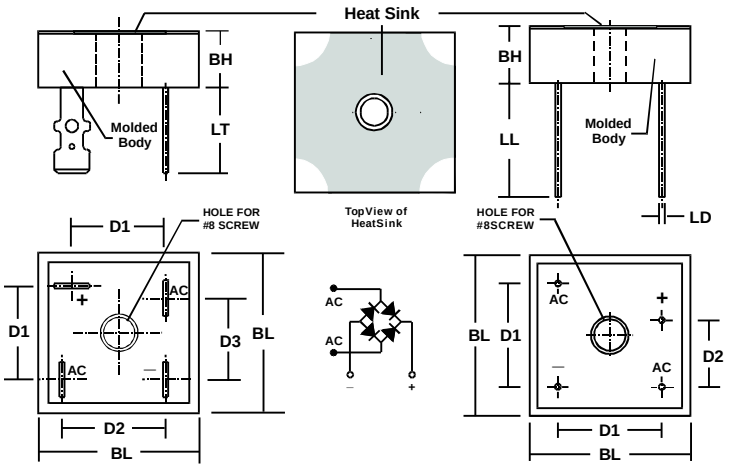
MECHANICAL DATA

- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated copper pins or fast-on terminals
- Soldering: Per MIL-STD 202 Method 208 guaranteed (Note 1)
- Polarity: Marked on side of case
- Mounting Position: Any. Through hole for #8 screw.
  Max. mounting torque = 20 in-lb.
- Weight: Fast-on Terminals - 0.7 Ounces (20.0 Grams)
  Wire Leads - 0.55 Ounce (16.0 Grams)

MECHANICAL SPECIFICATION

SERIES: DB1500P - DB1510P and ADB1504P - ADB1508P

Suffix "P" indicates molded PLASTIC with integrally mounted Heat Sink



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	9.6	9.8	0.38	0.39
D1	15.7	16.7	0.62	0.66
D2	17.5	18.5	0.69	0.73
D3	13.5	14.5	0.53	0.57
LT	n/a	15.2	n/a	0.6

Suffix "T" indicates FAST-ON TERMINALS

SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	9.6	9.8	0.38	0.39
D1	17.5	18.5	0.69	0.73
D2	10.9	11.9	0.43	0.47
LL	20.6	n/a	0.81	n/a
LD	1.0	1.1	0.039	0.042

Suffix "W" indicates WIRE LEADS

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS										UNITS
		CONTROLLED AVALANCHE			NON-CONTROLLED AVALANCHE							
Series Number		ADB 1504P	ADB 1506P	ADB 1508P	DB 1500P	DB 1501P	DB 1502P	DB 1504P	DB 1506P	DB 1508P	DB 1510P	
Maximum DC Blocking Voltage	V_{RM}	400	600	800	50	100	200	400	600	800	1000	VOLTS
Working Peak Reverse Voltage	V_{RWM}											
Maximum Peak Recurrent Reverse Voltage	V_{RRM}											
RMS Reverse Voltage	$V_{R\ (RMS)}$	280	420	560	35	70	140	280	420	560	700	
Rating for Fusing (Non Repetitive; 1mS < t < 8.3mS)	I^2t	375										$AMPS^2$ SEC
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T_J = 150° C	I_{FSM}	300										AMPS
Average Forward Rectified Current @ T_C = 50°C	I_O	15										
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150										°C
Mimimum Avalanche Voltage	$V_{(BR)\ Min}$	450	650	850	n/a							VOLTS
Maximum Avalanche Voltage	$V_{(BR)\ Max}$	900	1100	1300	n/a							
Maximum Forward Voltage (Per Diode) at 7.5 Amps DC	V_{FM}	1.03										
Maximum Reverse Current at Rated V_{RM} @ T_A = 25°C @T_A = 125°C	I_{RM}	1 10										µA
Minimum Insulation Breakdown Voltage (Circuit to Case)	V_{ISO}	2500										VOLTS
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.4										°C/W

3.0115dbp

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BRDB-1500P-2B
ABDB-1500P-2B

15 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES DB1500P - DB1510P and SERIES ADB1504P - ADB1508P

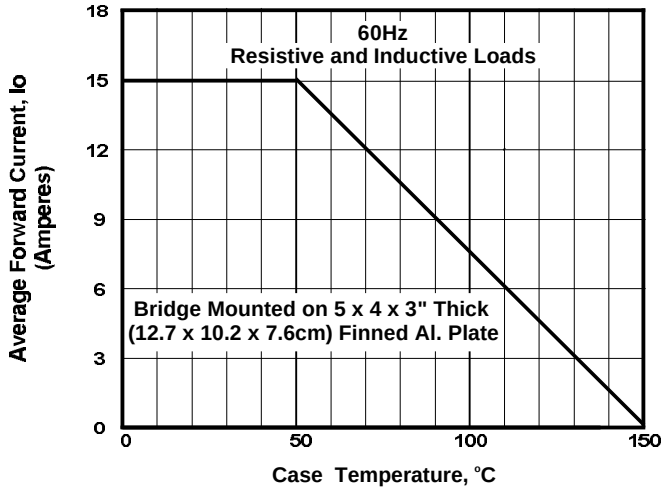


FIGURE 1. FORWARD CURRENT DERATING CURVE

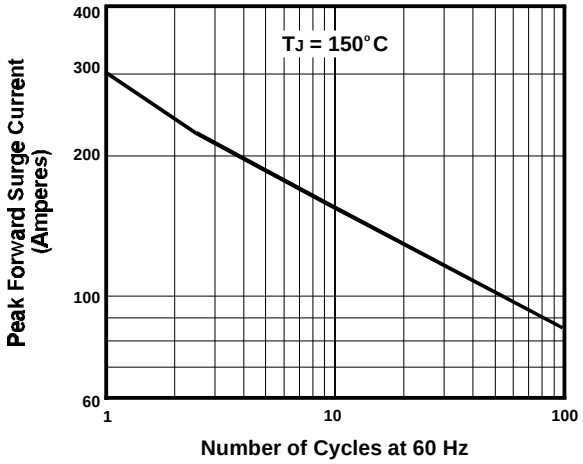


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

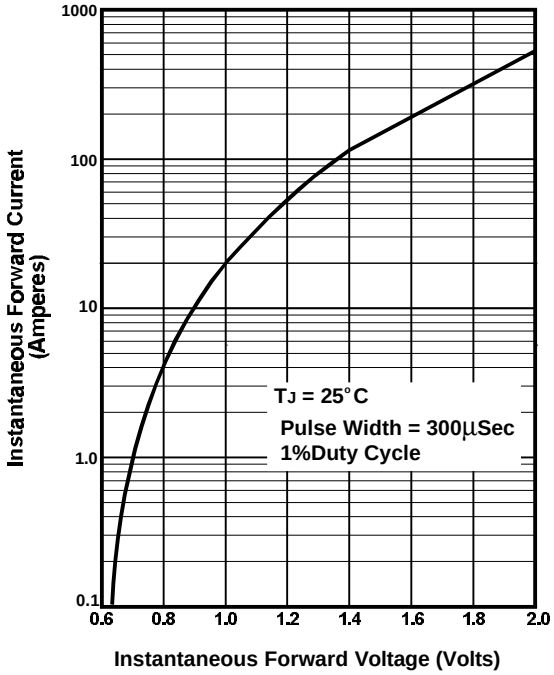


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

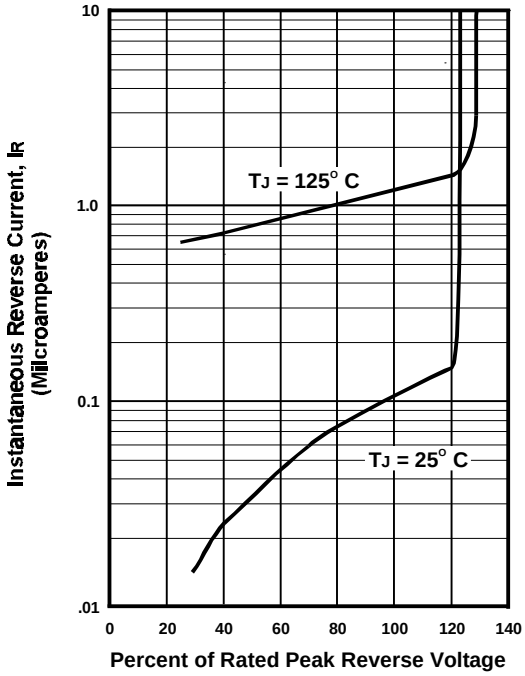


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

3.01 15dbp

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BRDB-2500-1C
ADBD-2500-1C

25 AMP SILICON BRIDGE RECTIFIERS

FEATURES

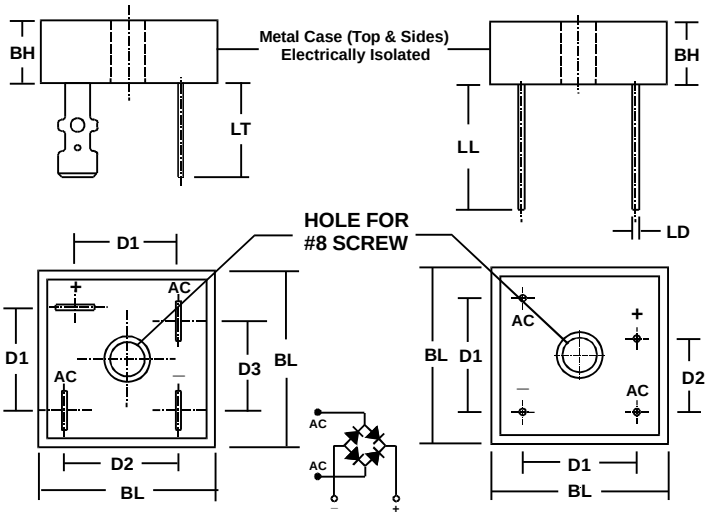
- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 300 Amps peak
- High efficiency
- Electrically isolated metal case for maximum heat dissipation
- **UL RECOGNIZED - FILE #E141956**

MECHANICAL DATA

- Case: Metal (Potting epoxy carries U/L flammability Rating 94V-0)
- Terminals: Round silver plated copper pins or fast-on terminals
- Soldering: Per MIL-STD 202 Method 208 guaranteed (Note 1)
- Polarity: Marked on side of case
- Mounting Position: Any. Through hole for #8 screw.
  Max. mounting torque = 20 in-lb.
- Weight: Fast-on Terminals - 1.1 Ounces (31.6 Grams)
  Wire Leads - 0.95 Ounce (28.5 Grams)

MECHANICAL SPECIFICATION

SERIES: DB2500 - DB2510 and ADB2504 - ADB2508



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	11.0	11.2	0.43	0.44
D1	15.7	16.7	0.62	0.66
D2	17.5	18.5	0.69	0.73
D3	13.5	14.5	0.53	0.57
LT	n/a	14.2	n/a	0.56

Suffix "T" indicates FAST-ON TERMINALS

SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	11.0	11.2	0.43	0.44
D1	17.5	18.5	0.69	0.73
D2	10.9	11.9	0.43	0.47
LL	20.6	n/a	0.81	n/a
LD	1.0	1.1	0.039	0.042

Suffix "W" indicates WIRE LEADS

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS										UNITS
		CONTROLLED AVALANCHE			NON-CONTROLLED AVALANCHE							
Series Number		ADB 2504	ADB 2506	ADB 2508	DB 2500	DB 2501	DB 2502	DB 2504	DB 2506	DB 2508	DB 2510	
Maximum DC Blocking Voltage	V_{RM}	400	600	800	50	100	200	400	600	800	1000	VOLTS
Working Peak Reverse Voltage	V_{RWM}											
Maximum Peak Recurrent Reverse Voltage	V_{RRM}											
RMS Reverse Voltage	$V_{R\ (RMS)}$	280	420	560	35	70	140	280	420	560	700	
Rating for Fusing (Non Repetitive; 1mS < t < 8.3mS)	I^2t	375										$AMPS^2$ SEC
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T_J = 150° C	I_{FSM}	300										AMPS
Average Forward Rectified Current @ Tc = 50°C	I_O	25										
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150										°C
Mimimum Avalanche Voltage	$V_{(BR)\ Min}$	450	650	850	n/a							VOLTS
Maximum Avalanche Voltage	$V_{(BR)\ Max}$	900	1100	1300	n/a							
Maximum Forward Voltage (Per Diode) at 12.5 Amps DC	V_{FM}	1.03										
Maximum Reverse Current at Rated V_{RM} @ T_A = 25°C @T_A = 125°C	I_{RM}	1 10										µA
Minimum Insulation Breakdown Voltage (Circuit to Case)	V_{ISO}	2000										VOLTS
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.6										°C/W

3.0125dbm

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BRDB-2500-2B
ABDB-2500-2B

25 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES DB2500 - DB2510 and SERIES ADB2504 - ADB2508

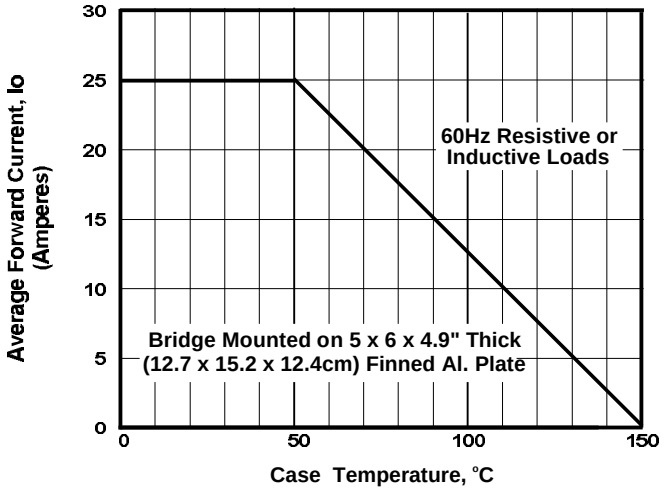


FIGURE 1. FORWARD CURRENT DERATING CURVE

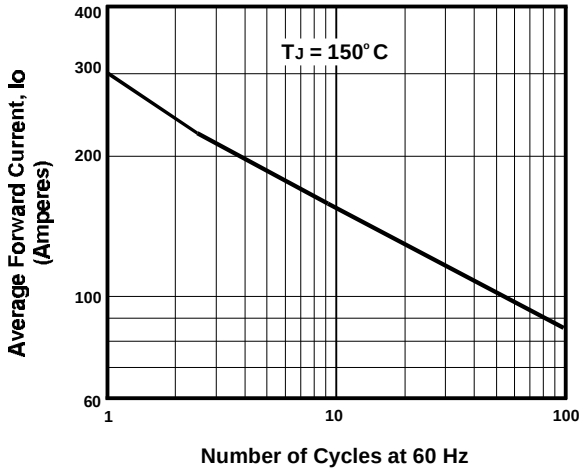


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

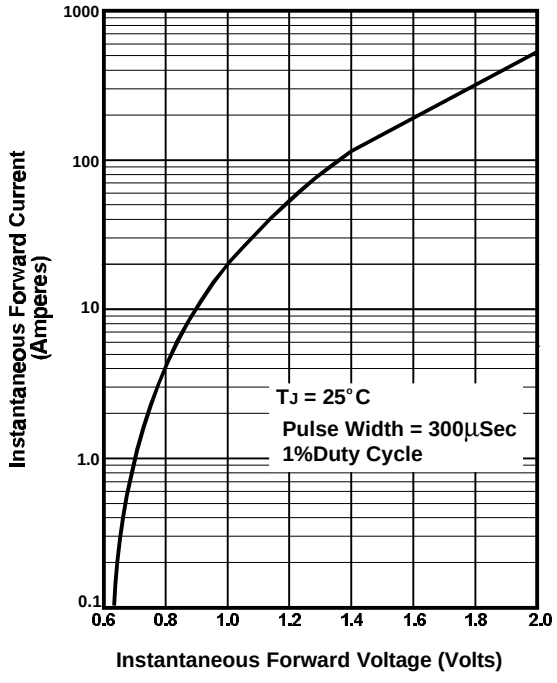


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

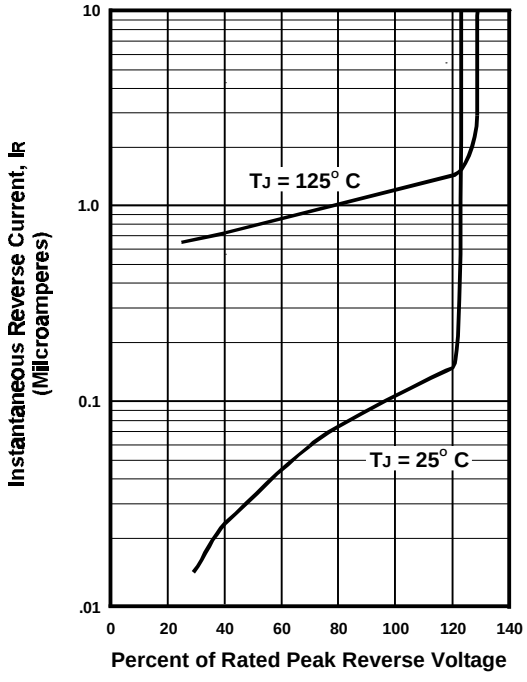


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

3.01 25dbm

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BRDB-2500P-1C
ADBD-2500P-1C

25 AMP SILICON BRIDGE RECTIFIERS

FEATURES

- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 300 Amps peak
- High efficiency
- Heat sink integrally mounted in the molded bridge encapsulation
- **UL RECOGNIZED - FILE #E141956**

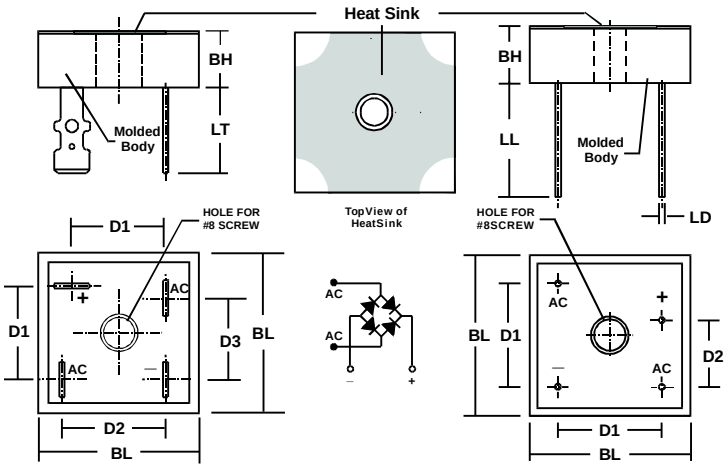
MECHANICAL DATA

- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated copper pins or fast-on terminals
- Soldering: Per MIL-STD 202 Method 208 guaranteed (Note 1)
- Polarity: Marked on side of case
- Mounting Position: Any. Through hole for #8 screw.
  Max. mounting torque = 20 in-lb.
- Weight: Fast-on Terminals - 0.7 Ounces (20.0 Grams)
  Wire Leads - 0.55 Ounce (16.0 Grams)

MECHANICAL SPECIFICATION

SERIES: DB2500P - DB2510P and ADB2504P - ADB2508P

Suffix "P" indicates molded PLASTIC with integrally mounted Heat Sink



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	9.6	9.8	0.38	0.39
D1	15.7	16.7	0.62	0.66
D2	17.5	18.5	0.69	0.73
D3	13.5	14.5	0.53	0.57
LT	n/a	15.2	n/a	0.6

Suffix "T" indicates FAST-ON TERMINALS

SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	9.6	9.8	0.38	0.39
D1	17.5	18.5	0.69	0.73
D2	10.9	11.9	0.43	0.47
LL	20.6	n/a	0.81	n/a
LD	1.0	1.1	0.039	0.042

Suffix "W" indicates WIRE LEADS

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS										UNITS
		CONTROLLED AVALANCHE			NON-CONTROLLED AVALANCHE							
Series Number		ADB 2504P	ADB 2506P	ADB 2508P	DB 2500P	DB 2501P	DB 2502P	DB 2504P	DB 2506P	DB 2508P	DB 2510P	
Maximum DC Blocking Voltage	V_{RM}	400	600	800	50	100	200	400	600	800	1000	VOLTS
Working Peak Reverse Voltage	V_{RWM}											
Maximum Peak Recurrent Reverse Voltage	V_{RRM}											
RMS Reverse Voltage	$V_{R\ (RMS)}$	280	420	560	35	70	140	280	420	560	700	
Rating for Fusing (Non Repetitive; 1mS < t < 8.3mS)	I^2t	373										$AMPS^2$ SEC
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T_J = 150° C	I_{FSM}	300										AMPS
Average Forward Rectified Current @ T_C = 50°C	I_O	25										
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150										°C
Mimimum Avalanche Voltage	$V_{(BR)\ Min}$	450	650	850	n/a							VOLTS
Maximum Avalanche Voltage	$V_{(BR)\ Max}$	900	1100	1300	n/a							
Maximum Forward Voltage (Per Diode) at 12.5 Amps DC	V_{FM}	1.03										
Maximum Reverse Current at Rated V_{RM} @ T_A = 25°C @T_A = 125°C	I_{RM}	1 10										µA
Minimum Insulation Breakdown Voltage (Circuit to Case)	V_{ISO}	2500										VOLTS
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.2										°C/W

3.0125dbp

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BRDB-2500P-2C
ABDB-2500P-2C

25 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES DB2500P - DB2510P and SERIES ADB2504P - ADB2508P

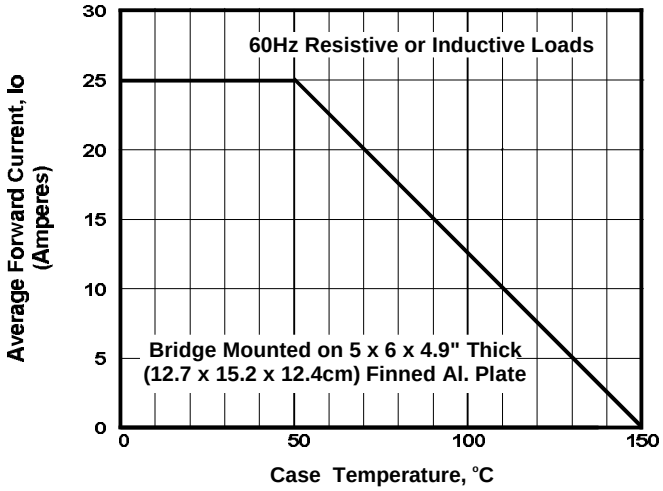


FIGURE 1. FORWARD CURRENT DERATING CURVE

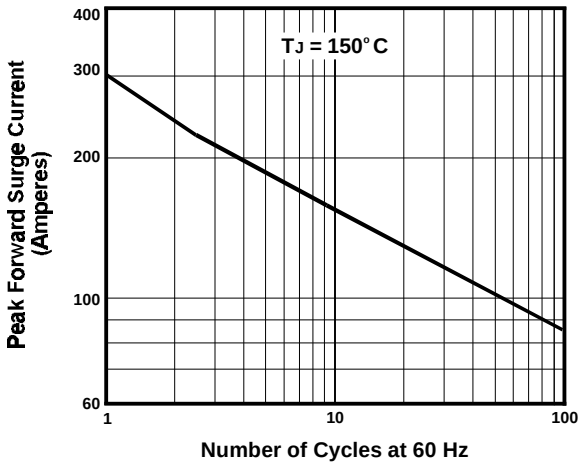


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

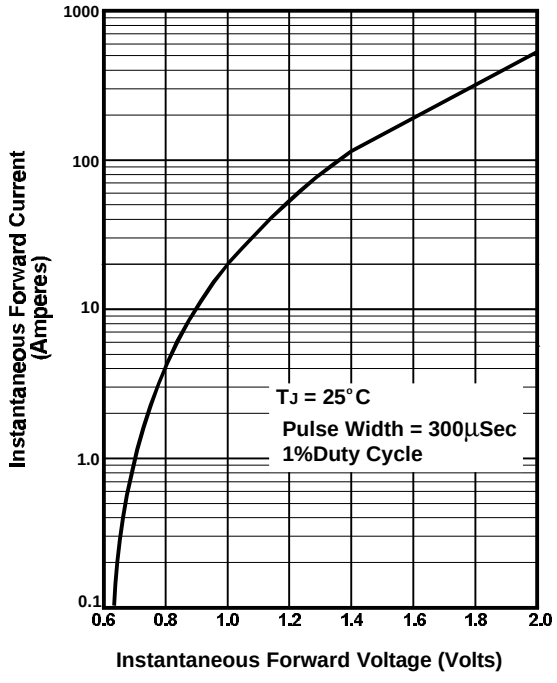


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

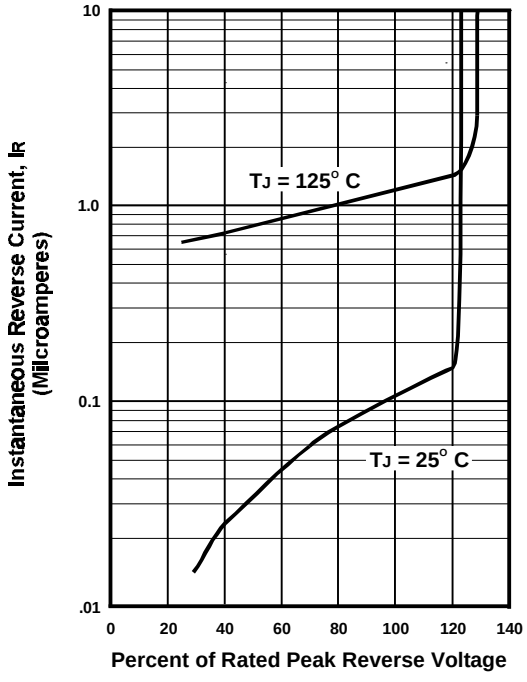


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BRDB-3500-1C
ADBD-3500-1C

35 AMP SILICON BRIDGE RECTIFIERS

FEATURES

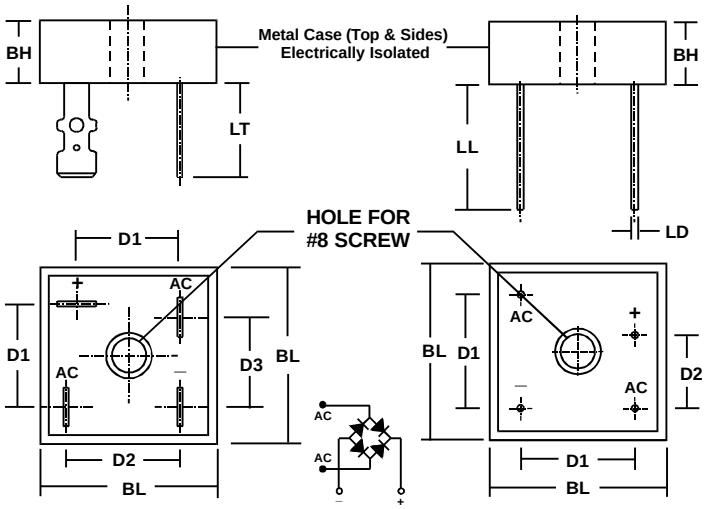
- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 400 Amps peak
- High efficiency
- Electrically isolated metal case for maximum heat dissipation
- **UL RECOGNIZED - FILE #E141956**

MECHANICAL DATA

- Case: Metal (Potting epoxy carries U/L flammability Rating 94V-0)
- Terminals: Round silver plated copper pins or fast-on terminals
- Soldering: Per MIL-STD 202 Method 208 guaranteed (Note 1)
- Polarity: Marked on side of case
- Mounting Position: Any. Through hole for #8 screw.
  Max. mounting torque = 20 in-lb.
- Weight: Fast-on Terminals - 1.1 Ounces (31.6 Grams)
  Wire Leads - 0.95 Ounce (28.5 Grams)

MECHANICAL SPECIFICATION

SERIES: DB3500 - DB3510 and ADB3504 - ADB3508



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	11.0	11.2	0.43	0.44
D1	15.7	16.7	0.62	0.66
D2	17.5	18.5	0.69	0.73
D3	13.5	14.5	0.53	0.57
LT	n/a	14.2	n/a	0.56

Suffix "T" indicates FAST-ON TERMINALS

SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	11.0	11.2	0.43	0.44
D1	17.5	18.5	0.69	0.73
D2	10.9	11.9	0.43	0.47
LL	20.6	n/a	0.81	n/a
LD	1.0	1.1	0.039	0.042

Suffix "W" indicates WIRE LEADS

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS										UNITS
		CONTROLLED AVALANCHE			NON-CONTROLLED AVALANCHE							
Series Number		ADB 3504	ADB 3506	ADB 3508	DB 3500	DB 3501	DB 3502	DB 3504	DB 3506	DB 3508	DB 3510	
Maximum DC Blocking Voltage	V_{RM}	400	600	800	50	100	200	400	600	800	1000	VOLTS
Working Peak Reverse Voltage	V_{RWM}											
Maximum Peak Recurrent Reverse Voltage	V_{RRM}											
RMS Reverse Voltage	$V_{R\ (RMS)}$	280	420	560	35	70	140	280	420	560	700	
Rating for Fusing (Non Repetitive; 1mS < t < 8.3mS)	I^2t	664										$AMPS^2$ SEC
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T_J = 150° C	I_{FSM}	400										AMPS
Average Forward Rectified Current @ T_C = 50°C	I_O	35										
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150										°C
Mimimum Avalanche Voltage	$V_{(BR)\ Min}$	450	650	850	n/a							VOLTS
Maximum Avalanche Voltage	$V_{(BR)\ Max}$	900	1100	1300	n/a							
Maximum Forward Voltage (Per Diode) at 17.5 Amps DC	V_{FM}	1.03										
Maximum Reverse Current at Rated V_{RM} @ T_A = 25°C @T_A = 125°C	I_{RM}	1 10										µA
Minimum Insulation Breakdown Voltage (Circuit to Case)	V_{ISO}	2000										VOLTS
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.6										°C/W

3.0135dbm

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BRDB-3500-2C
ABDB-3500-2C

35 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES DB3500 - DB3510 and SERIES ADB3504 - ADB3508

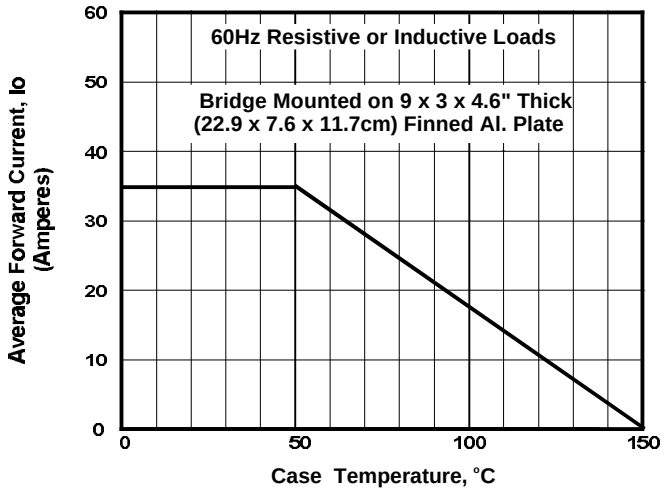


FIGURE 1. FORWARD CURRENT DERATING CURVE

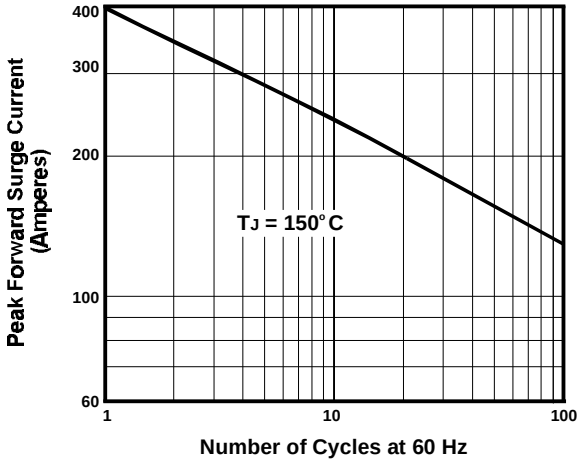


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

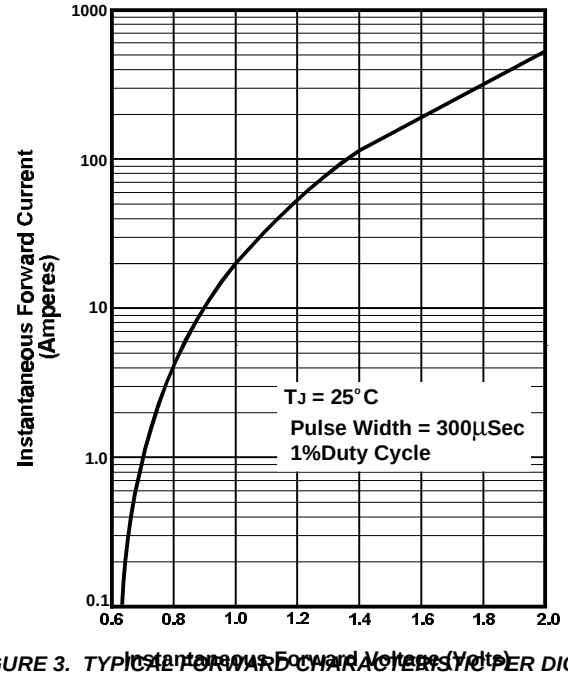


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

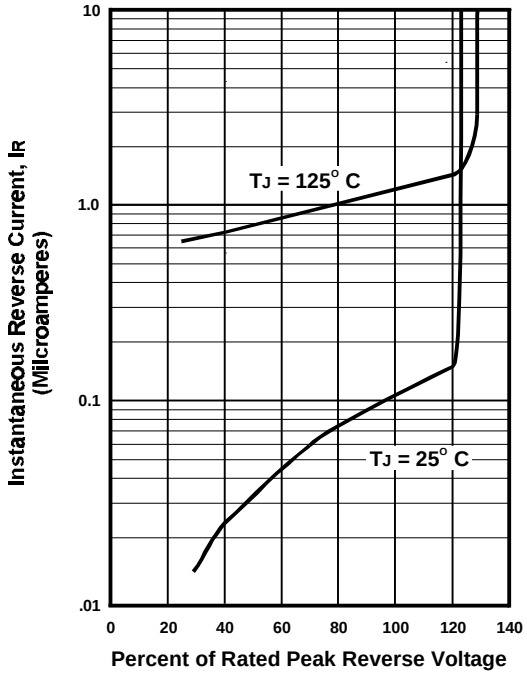


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BRDB-3500P-1C
ADBD-3500P-1C

35 AMP SILICON BRIDGE RECTIFIERS

FEATURES

- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 400 Amps peak
- High efficiency
- Heat sink integrally mounted in the molded bridge encapsulation
- **UL RECOGNIZED - FILE #E141956**

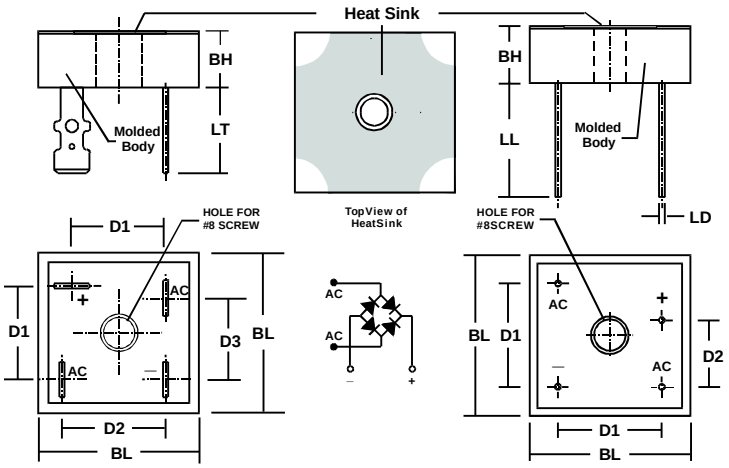
MECHANICAL DATA

- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated copper pins or fast-on terminals
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on side of case
- Mounting Position: Any. Through hole for #8 screw.
  Max. mounting torque = 20 in-lb.
- Weight: Fast-on Terminals - 0.7 Ounces (20.0 Grams)
  Wire Leads - 0.55 Ounces (16.0 Grams)

MECHANICAL SPECIFICATION

SERIES: DB3500P - DB3510P and ADB3504P - ADB3508P

Suffix "P" indicates molded PLASTIC with integrally mounted Heat Sink



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	9.6	9.8	0.38	0.39
D1	15.7	16.7	0.62	0.66
D2	17.5	18.5	0.69	0.73
D3	13.5	14.5	0.53	0.57
LT	n/a	15.2	n/a	0.6

Suffix "T" indicates FAST-ON TERMINALS

SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	9.6	9.8	0.38	0.39
D1	17.5	18.5	0.69	0.73
D2	10.9	11.9	0.43	0.47
LL	20.6	n/a	0.81	n/a
LD	1.0	1.1	0.039	0.042

Suffix "W" indicates WIRE LEADS

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS										UNITS
		CONTROLLED AVALANCHE			NON-CONTROLLED AVALANCHE							
Series Number		ADB 3504P	ADB 3506P	ADB 3508P	DB 3500P	DB 3501P	DB 3502P	DB 3504P	DB 3506P	DB 3508P	DB 3510P	
Maximum DC Blocking Voltage	V_{RM}	400	600	800	50	100	200	400	600	800	1000	VOLTS
Working Peak Reverse Voltage	V_{RWM}											
Maximum Peak Recurrent Reverse Voltage	V_{RRM}											
RMS Reverse Voltage	$V_{R\ (RMS)}$	280	420	560	35	70	140	280	420	560	700	
Rating for Fusing (Non Repetitive; 1mS < t < 8.3mS)	I^2t	664										$AMPS^2$ SEC
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T_J = 150° C	I_{FSM}	400										AMPS
Average Forward Rectified Current @ T_C = 50°C	I_O	35										
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150										°C
Mimimum Avalanche Voltage	$V_{(BR)\ Min}$	450	650	850	n/a							VOLTS
Maximum Avalanche Voltage	$V_{(BR)\ Max}$	900	1100	1300	n/a							
Maximum Forward Voltage (Per Diode) at 17.5 Amps DC	V_{FM}	1.03										
Maximum Reverse Current at Rated V_{RM} @ T_A = 25°C @T_A = 125°C	I_{RM}	1 10										µA
Minimum Insulation Breakdown Voltage (Circuit to Case)	V_{ISO}	2500										VOLTS
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.2										°C/W

3.0135dbp

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BRDB-3500P-2C
ABDB-3500P-2C

35 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES DB3500P - DB3510P and SERIES ADB3504P - ADB3508P

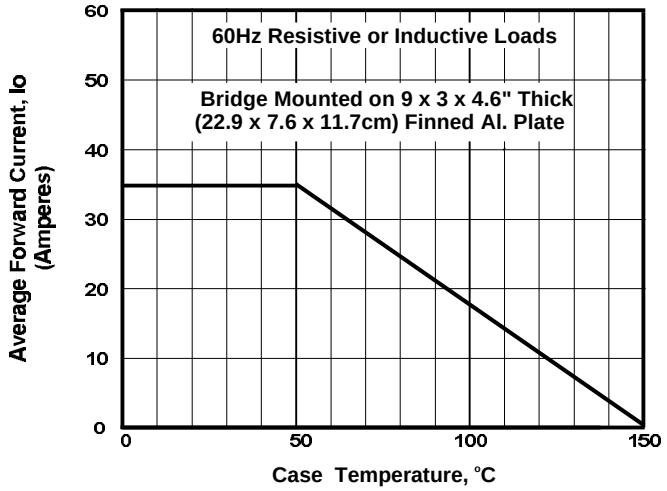


FIGURE 1. FORWARD CURRENT DERATING CURVE

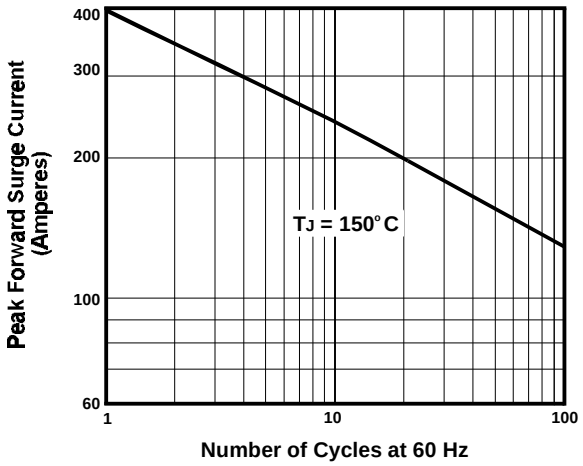


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

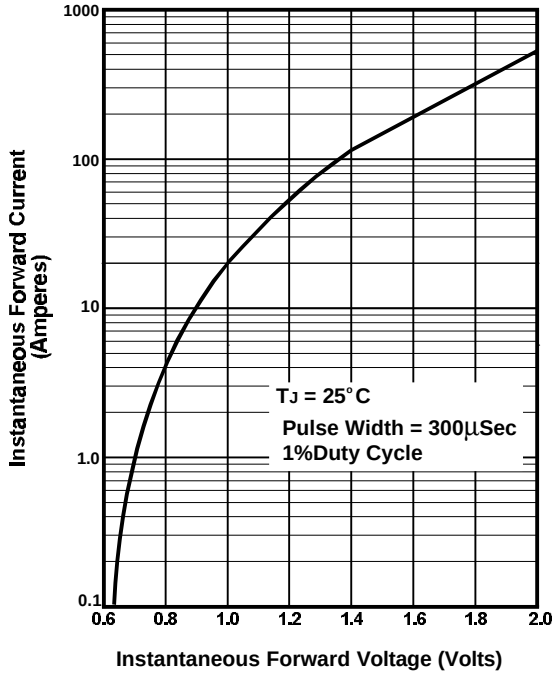


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

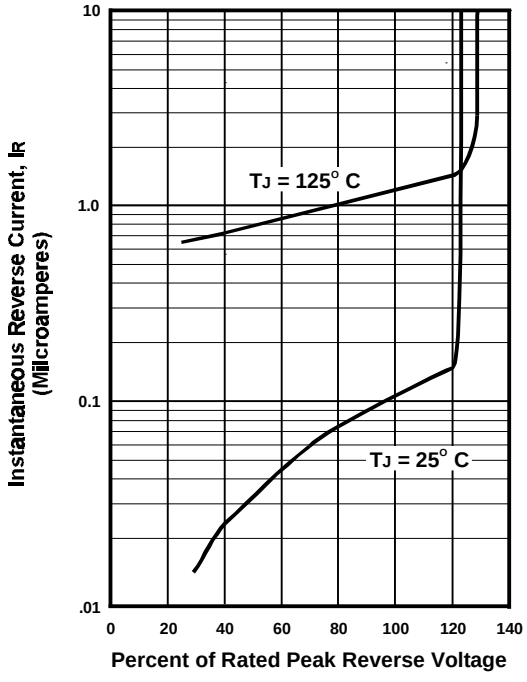


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BSDB-4000-1B

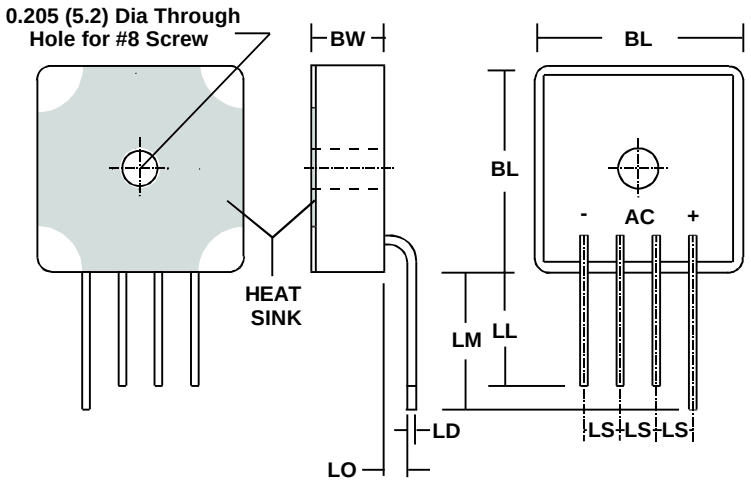
40 AMP SILICON BRIDGE RECTIFIERS

FEATURES

- **PRV Ratings from 50 to 1000 Volts**
- **Surge overload rating to 500 Amps peak**
- **Integrally molded heatsink provides very low thermal resistance for maximum heat dissipation**
- **Space saving in-line design ideal for printed circuit board applications**
- **UL RECOGNIZED - FILE #E124962**

MECHANICAL SPECIFICATION

SDB PACKAGE SHOWN ACTUAL SIZE



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BW	n/a	10.3	n/a	0.405
LD	1.27 Typ		0.050 Typ	
LL	15.9	n/a	0.625	n/a
LM	19.0	n/a	0.750	n/a
LO	3.175 Nom		0.125 Nom	
LS	5.08 Typ		0.200 Typ	

MECHANICAL DATA

- **Case: Molded plastic, U/L Flammability Rating 94V-0**
- **Terminals: Round silver plated pins**
- **Soldering: Per MIL-STD 202 Method 208 guaranteed**
- **Polarity: Marked on case**
- **Mounting Position: Any. Bolt down on heatsink**
  Maximum mounting torque = 20 in. lb.
- **Weight: 0.6 Ounces (17 Grams)**

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		SDB 4000	SDB 4001	SDB 4002	SDB 4004	SDB 4006	SDB 4008	SDB 4010	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_C = 55 °C	I_O	40							AMPS
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T_J = 175° C	I_{FSM}	500							
Forward Voltage (Per Diode) at 20 Amps DC Max. / Typ.	V_{FM}	0.96 / 0.93					1.00 / 0.97		VOLTS
Maximum Average DC Reverse Current @ T_A = 25° C / At Rated DC Blocking Voltage @ T_A = 125° C	I_{RM}	2 / 20							µA
Minimum Insulation Breakdown Voltage (Circuit to Case)	V_{ISO}	2500							VOLTS
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.1							°C/W
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +175							°C

3.01 40sdb

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
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Tel.: (310) 767-1052 Fax: (310) 767-7958

40 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SDB4000-4010 SERIES

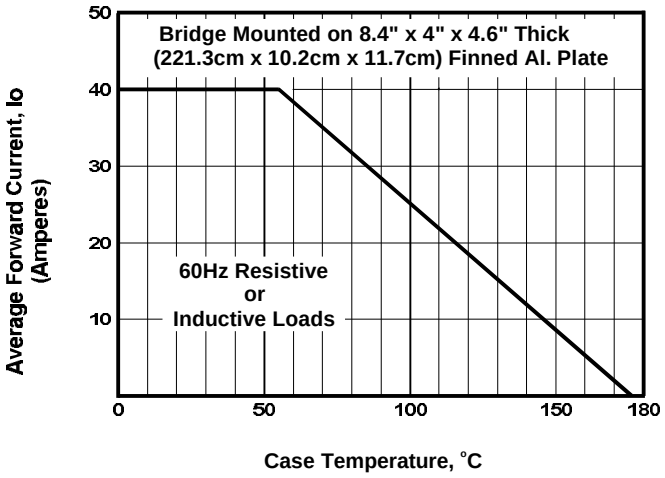


FIGURE 1. FORWARD CURRENT DERATING CURVE

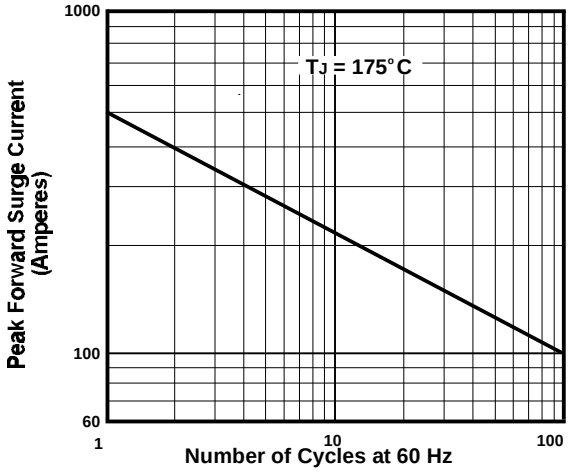


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

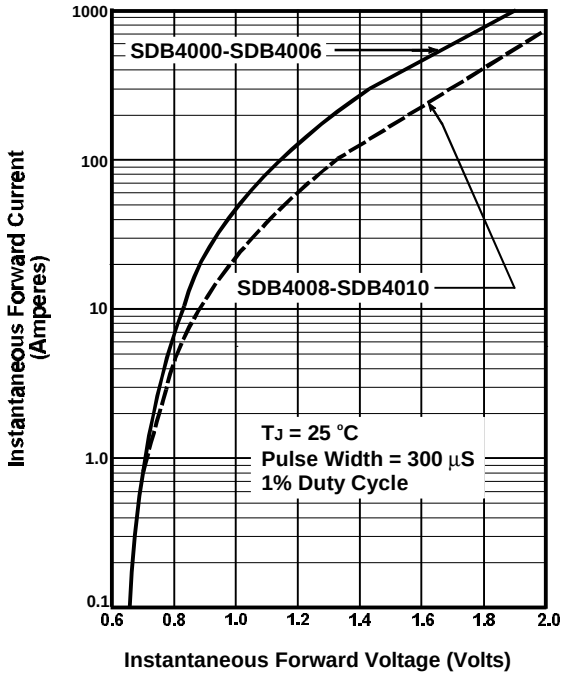


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

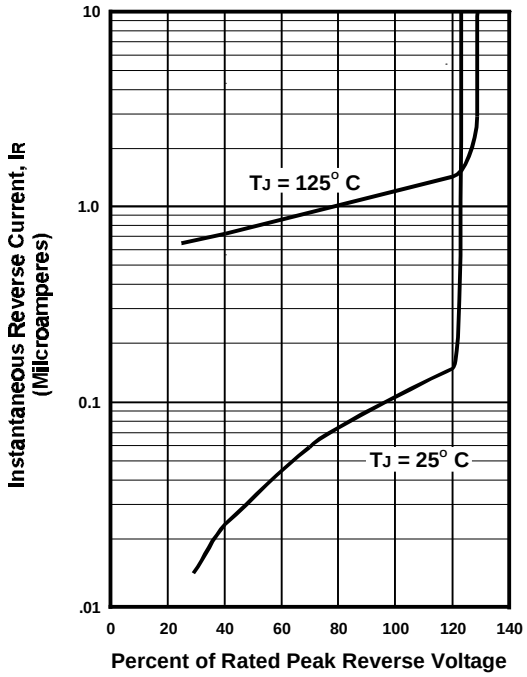


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BSDB-5000-1B

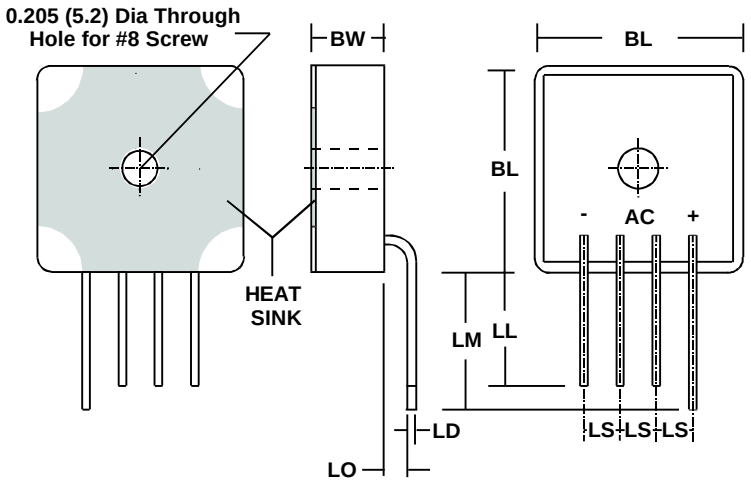
50 AMP SILICON BRIDGE RECTIFIERS

FEATURES

- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 500 Amps peak
- Integrally molded heatsink provides very low thermal resistance for maximum heat dissipation
- Space saving in-line design ideal for printed circuit board applications
- **UL RECOGNIZED - FILE #E124962**

MECHANICAL SPECIFICATION

SDB PACKAGE SHOWN ACTUAL SIZE



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BW	n/a	10.3	n/a	0.405
LD	1.27 Typ		0.050 Typ	
LL	15.9	n/a	0.625	n/a
LM	19.0	n/a	0.750	n/a
LO	3.175 Nom		0.125 Nom	
LS	5.08 Typ		0.200 Typ	

MECHANICAL DATA

- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on case
- Mounting Position: Any. Bolt down on heatsink
  Maximum mounting torque = 20 in. lb.
- Weight: 0.6 Ounces (17 Grams)

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		SDB 5000	SDB 5001	SDB 5002	SDB 5004	SDB 5006	SDB 5008	SDB 5010	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_C = 55°C	I_O	50							AMPS
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T_J = 175° C	I_{FSM}	600							
Forward Voltage (Per Diode) at 20 Amps DC Max. / Typ.	V_{FM}	0.96 / 0.93					1.00 / 0.97		VOLTS
Maximum Average DC Reverse Current @ T_A = 25°C / At Rated DC Blocking Voltage @ T_A = 125°C	I_{RM}	2 / 20							µA
MinimumInsulation Breakdown Voltage (Circuit to Case)	V_{ISO}	2500							VOLTS
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.10							°C/W
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +175							°C

3.0150sdb

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

50 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES SDB5000 - SDB5010

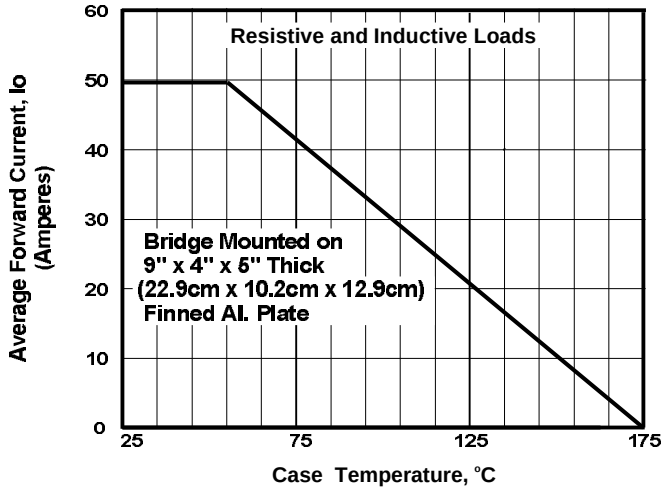


FIGURE 1. FORWARD CURRENT DERATING CURVE

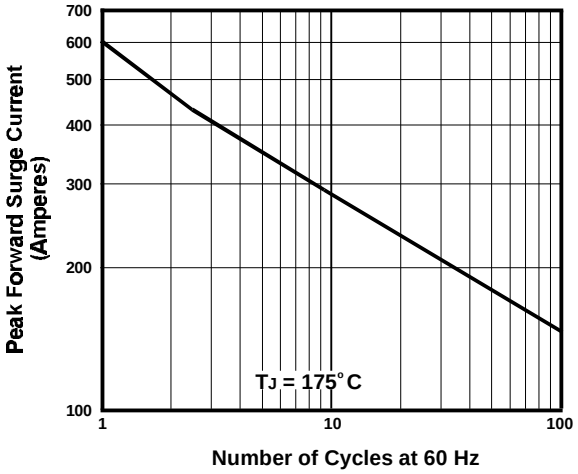


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

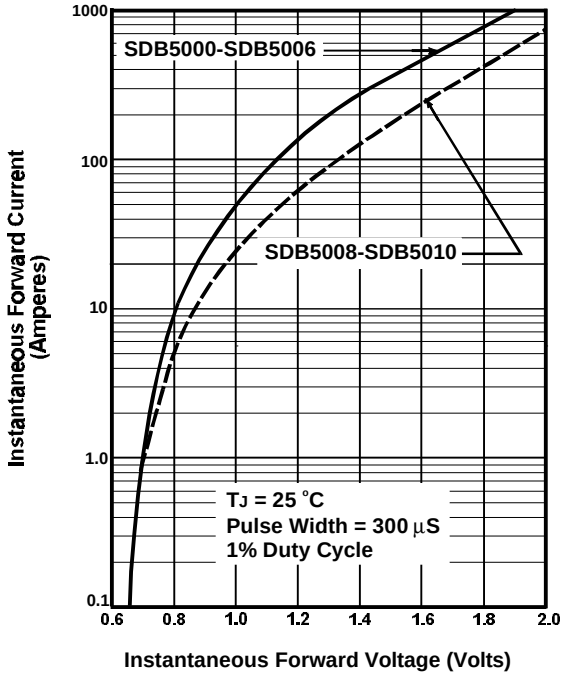


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

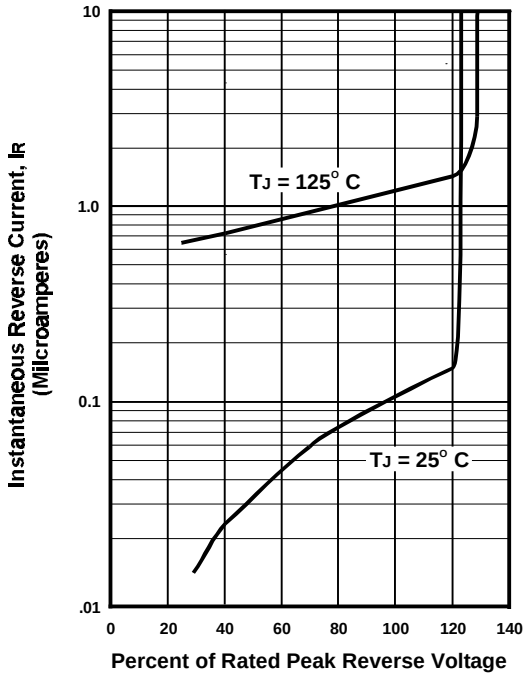


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BRDB-5000P-1B
ADBD-5000P-1B

50 AMP SILICON BRIDGE RECTIFIERS

FEATURES

- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 600 Amps peak
- High efficiency
- Heat sink integrally mounted in the molded bridge encapsulation
- **UL RECOGNIZED - FILE #E141956**

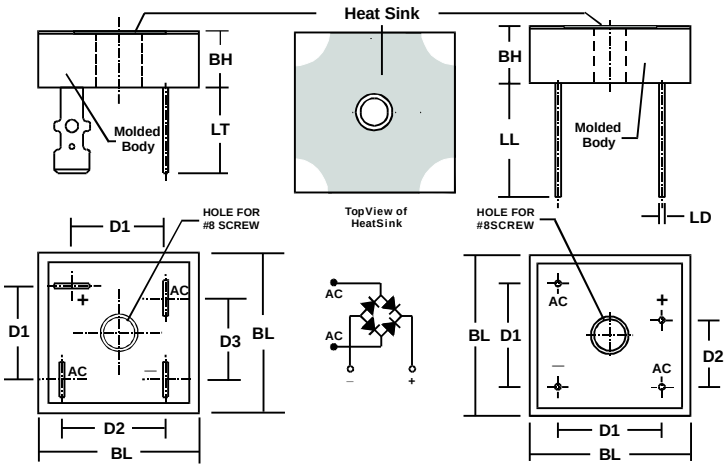
MECHANICAL DATA

- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated copper pins or fast-on terminals
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on side of case
- Mounting Position: Any. Through hole for #8 screw.
  Max. mounting torque = 20 in-lb.
- Weight: Fast-on Terminals - 0.7 Ounces (20.0 Grams)
  Wire Leads - 0.55 Ounce (16.0 Grams)

MECHANICAL SPECIFICATION

SERIES: DB5000P - DB5010P and ADB5004P - ADB5008P

Suffix "P" indicates molded PLASTIC with integrally mounted Heat Sink



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	9.6	9.8	0.38	0.39
D1	15.7	16.7	0.62	0.66
D2	17.5	18.5	0.69	0.73
D3	13.5	14.5	0.53	0.57
LT	n/a	15.2	n/a	0.6

Suffix "T" indicates FAST-ON TERMINALS

SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	9.6	9.8	0.38	0.39
D1	17.5	18.5	0.69	0.73
D2	10.9	11.9	0.43	0.47
LL	20.6	n/a	0.81	n/a
LD	1.0	1.1	0.039	0.042

Suffix "W" indicates WIRE LEADS

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS										UNITS
		CONTROLLED AVALANCHE			NON-CONTROLLED AVALANCHE							
Series Number		ADB 5004P	ADB 5006P	ADB 5008P	DB 5000P	DB 5001P	DB 5002P	DB 5004P	DB 5006P	DB 5008P	DB 5010P	
Maximum DC Blocking Voltage	V_{RM}	400	600	800	50	100	200	400	600	800	1000	VOLTS
Working Peak Reverse Voltage	V_{RWM}											
Maximum Peak Recurrent Reverse Voltage	V_{RRM}											
RMS Reverse Voltage	$V_{R\ (RMS)}$	280	420	560	35	70	140	280	420	560	700	
Rating for Fusing (Non-repetitive; 1mS < t < 8.3mS	I^2t	1000										$AMPS^2$ SEC
Peak Forward Surge Current. Single 60Hz Half-Sine Wave Superimposed on Rated Load (JEDEC Method). T_J = 175° C	I_{FSM}	600										AMPS
Average Forward Rectified Current @ T_C = 55°C	I_O	50										
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +175										°C
Mimimum Avalanche Voltage	$V_{(BR)\ Min}$	450	650	850	n/a							VOLTS
Maximum Avalanche Voltage	$V_{(BR)\ Max}$	900	1100	1300	n/a							
Forward Voltage Drop (Per Diode) at 20 Amps DC Max. / Typ.	V_{FM}	0.96 / 0.93		1.00 / 0.97	0.96 / 0.93					1.00 / 0.97		
Maximum Reverse Current at Rated V_{RM} @ T_A = 25°C / @T_A = 125°C	I_{RM}	2 / 20										µA
Minimum Insulation Breakdown Voltage (Circuit to Case)	V_{ISO}	2500										VOLTS
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.10										°C/W

3.01 50bdp

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
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Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BRDB-5000P-2A
ABDB-5000P-2A

50 AMP SILICON BRIDGE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES DB5000P - DB5010P and SERIES ADB5004P - ADB5008P

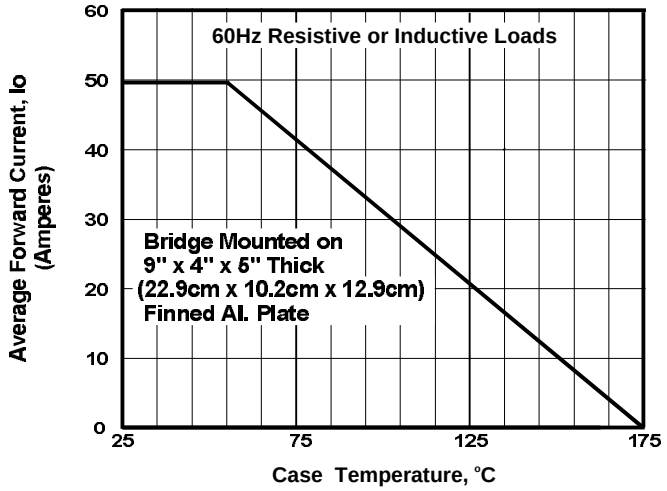


FIGURE 1. FORWARD CURRENT DERATING CURVE

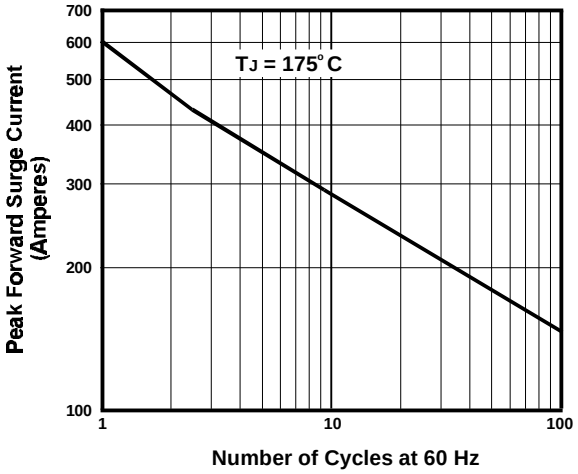


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

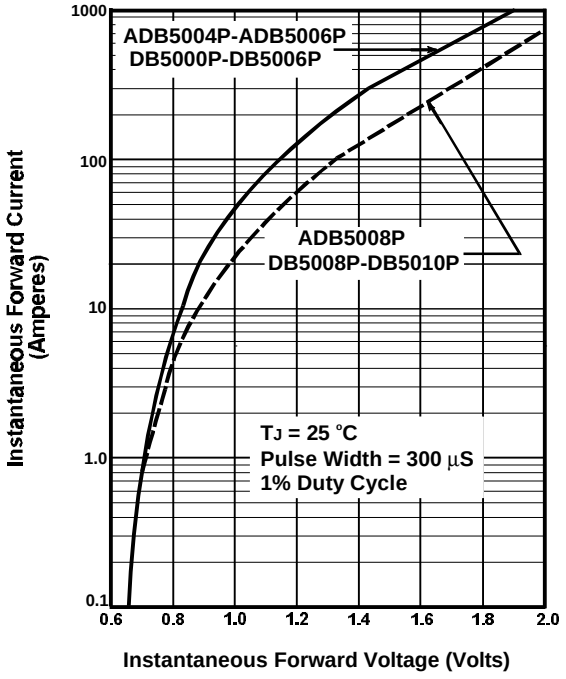


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

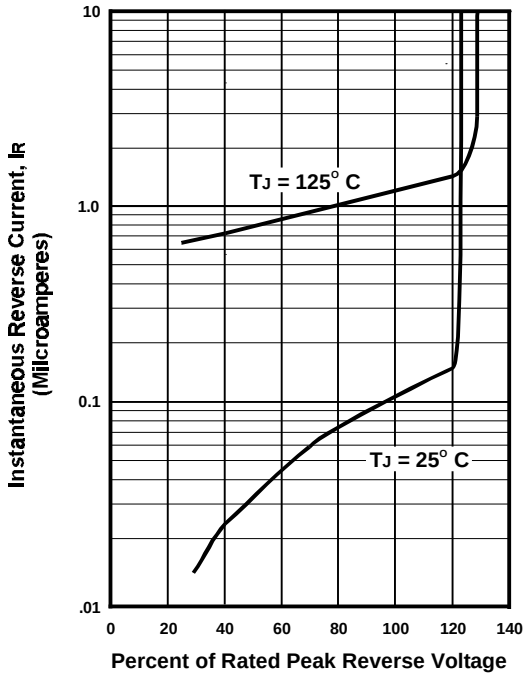


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

9.98bbrdb50p

SECTION F

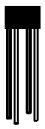
RESERVED

SECTION G

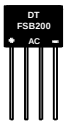
FAST RECOVERY
FULL WAVE
BRIDGE RECTIFIERS

DUAL IN-LINE PACKAGE
1 AMPERE
50 to 1000 VOLTS

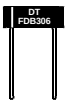
CYLINDRICAL PACKAGE
1.5 AMPERES
50 to 1000 VOLTS



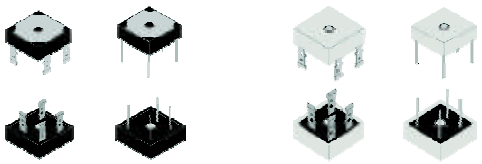
VERTICAL, SIDE LOOKING, PACKAGE
2 AMPERES
50 to 1000 VOLTS



RECTANGULAR HORIZONTAL PACKAGE
3 to 6 AMPERES
50 to 1000 VOLTS



RECTANGULAR HORIZONTAL PACKAGES
25 to 35 AMPERES
50 to 1000 VOLTS



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18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. FRDI-100-1B

1 AMP FAST RECOVERY BRIDGE RECTIFIERS

FEATURES

- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 50 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- Fast switching for high efficiency
- **UL RECOGNIZED - FILE #E124962**

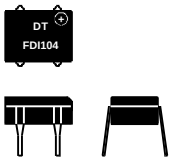
MECHANICAL DATA

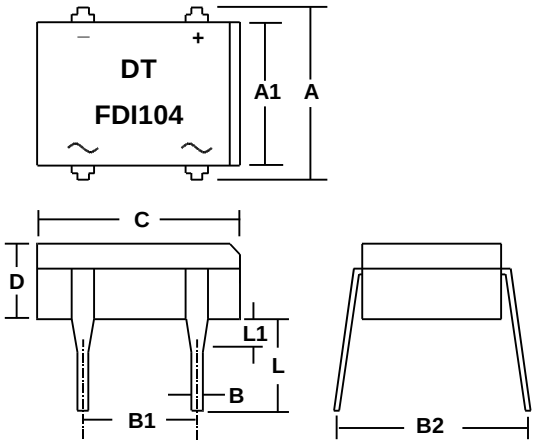
- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Rectangular pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on case
- Mounting Position: Any
- Weight: 0.05 Ounces (1.3 Grams)

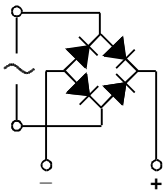
MECHANICAL SPECIFICATION

ACTUAL SIZE OF THE FDI PACKAGE

SERIES FDI100 - FDI110







Sym	Minimum		Maximum	
	in	mm	in	mm
A	0.290	7.4	0.310	8.9
A1	0.245	6.2	0.255	6.5
B	0.016	0.41	0.020	0.51
B1	0.195	5.0	0.205	5.2
B2	0.300	7.6	0.350	8.9
C	0.355	9.3	0.365	9.3
D	0.125	3.2	0.135	3.4
L	0.155	3.9	0.165	4.3
L1	0.060*	1.5*		

*** This dimension is "Typical".**

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		FDI 100	FDI 101	FDI 102	FDI 104	FDI 106	FDI 108	FDI 110	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 40 °C	I_O	1							AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	50							
Maximum Forward Voltage at 1 Amp DC	V_{FM}	1.3							VOLTS
Maximum Average DC Reverse Current @ T_A = 25 °C At Rated DC Blocking Voltage @ T_A = 100 °C	I_{RM}	10 1							µA mA
Maximum Reverse Recovery Time (Note 1) @ T_J = 25 °C	T_{RR}	200			300		500		nS
Maximum Thermal Resistance, Junction to Ambient (Note 2)	$R_{\theta JA}$	40							°C/W
Junction Operating and StorageTemperature Range	T_J, T_{STG}	-55 to +150							°C

NOTES: (1)T_J=25°C, I_F=0.5A, I_R=1A, I_{RR}=0.25A
(2)Thermal resistance from junction to ambient with bridge mounted on PC Board with 0.5" sq. (13mm sq.) copper pads

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1.5 AMP FAST RECOVERY BRIDGE RECTIFIERS

FEATURES

- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 45 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- Fast switching for high efficiency
- **UL RECOGNIZED - FILE #E141956**

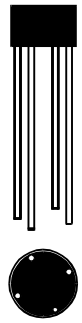
MECHANICAL DATA

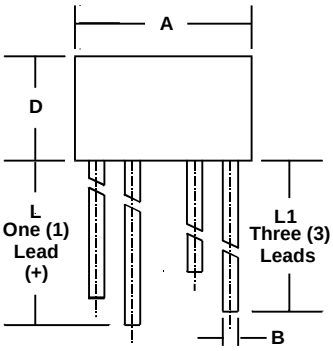
- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on case
- Mounting Position: Any
- Weight: 0.05 Ounces (1.3 Grams)

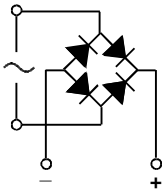
MECHANICAL SPECIFICATION

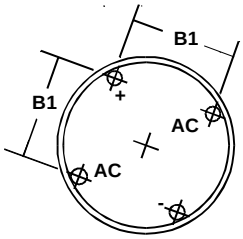
ACTUAL SIZE OF WB PACKAGE

SERIES FWB150 - FWB1510









SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.6	8.89	0.340	0.350
B	0.76	0.81	0.030	0.032
B1	4.6	5.6	0.180	0.220
D	5.1	5.6	0.200	0.220
L	30.5	n/a	1.20	n/a
L1	25.4	n/a	1.0	n/a

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		FWB 150	FWB 151	FWB 152	FWB 154	FWB 156	FWB 158	FWB 1510	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_C = 55 °C	I_O	1.5							AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	45							
Maximum Forward Voltage (Per Diode) at 1 Amp DC	V_{FM}	1.3							VOLTS
Maximum Average DC Reverse Current at Rated DC Blocking Voltage (Per Bridge Element) @ T_A = 25 °C @ T_A = 100 °C	I_{RM}	10 1							µA mA
Maximum Reverse Recovery Time (Note 1)	T_{RR}	200			300		500		nS
Thermal Energy (Rating for Fusing, t < 8.3 mS)	I^2t	6.6							$AMPS^2$ SEC
Typical Thermal Resistance, Junction to Ambient (Note 2)	$R_{\theta JA}$	40							°C/W
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							°C

NOTES: (1) T_J=25°C, I_F=0.5A, I_R=1A, I_{RR}=0.25A
(2) Mounted on PC Board with 0.2" sq. (5.5mm sq.) copper pads and lead length of 0.375" (9.5mm)

3.011-5wb

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
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Data Sheet No. BFSB-200-1B

2 AMP FAST RECOVERY BRIDGE RECTIFIERS

FEATURES

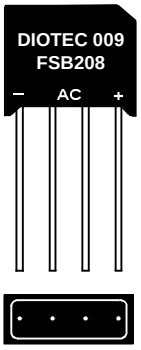
- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 50 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- Fast switching for high efficiency
- **UL RECOGNIZED - FILE #E124962**

MECHANICAL DATA

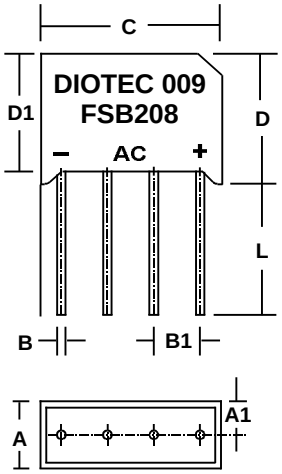
- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Rectangular pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on case
- Mounting Position: Any
- Weight: 0.1 Ounces (2.8 Grams)

MECHANICAL SPECIFICATION

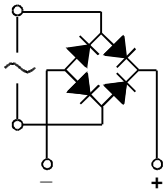
ACTUAL SIZE OF SB2 PACKAGE



SERIES FSB200 - FSB210



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.99	7.01	0.236	0.276
A1	2.99	3.51	0.118	0.138
B	0.71	0.89	0.028	0.035
B1	3.55	4.00	0.140	0.160
C	16.0	18.0	0.63	0.71
D	14.0	15.0	0.55	0.59
D1	13.2	13.7	0.52	0.54
L	12.7	n/a	0.50	n/a



MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		FSB 200	FSB 201	FSB 202	FSB 204	FSB 206	FSB 208	FSB 210	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 55 °C	I_O	2							AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	50							
Maximum Forward Voltage at 1 Amp DC	V_{FM}	1							VOLTS
Maximum Average DC Reverse Current @ T_A = 25 °C At Rated DC Blocking Voltage @ T_A = 125 °C	I_{RM}	10 500							µA
Maximum Reverse Recovery Time (Note 1) @ T_J = 25 °C	T_{RR}	200			300		500		nS
Maximum Thermal Resistance, Junction to Ambient (Note 2)	$R_{\theta JA}$	30							°C/W
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							°C

NOTES: (1) T_J = 25°C, I_F = 0.5A, I_R = 1A, I_{RR} = 0.25A
(2) Bridge mounted on PC Board with 0.47" sq. (12mm sq.) copper pads

3.0102fsb

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3 AMP FAST RECOVERY BRIDGE RECTIFIERS

FEATURES

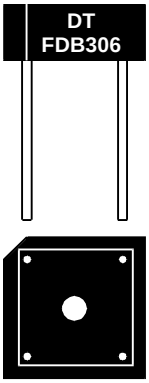
- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 50 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- Fast switching for high efficiency
- **UL RECOGNIZED - FILE #E124962**

MECHANICAL DATA

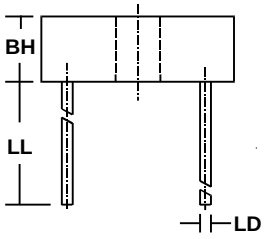
- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated copper pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on side of case; positive lead at beveled corner
- Mounting Position: Any. Through hole provided for #6 screw
- Weight: 0.11 Ounces (3.36 Grams)

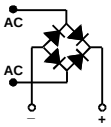
MECHANICAL SPECIFICATION

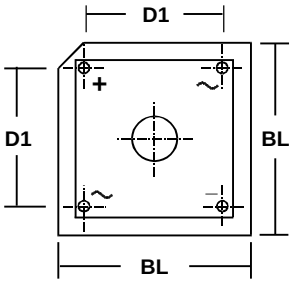
ACTUAL SIZE OF FDB PACKAGE



SERIES FDB300 - FDB310







SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	14.7	15.7	0.58	0.62
BH	4.8	5.3	0.19	0.21
D1	10.3	11.3	0.405	0.445
LL	19.0	n/a	0.75	n/a
LD	0.7	0.9	0.028	0.035

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		FDB 300	FDB 301	FDB 302	FDB 304	FDB 306	FDB 308	FDB 310	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_C = 50 °C	I_O	2							AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	50							
Maximum Forward Voltage (Per Diode) at 1.5 Amps DC	V_{FM}	1.3							VOLTS
Maximum Average DC Reverse Current at Rated DC Blocking Voltage @ T_A = 25 °C @ T_A = 100 °C	I_{RM}	10 1							µA mA
Maximum Reverse Recovery Time (Note 1)	T_{RR}	200			300		500		nS
Thermal Energy (Rating for Fusing, t < 8.3 mS)	I^2t	10							$AMPS^2$ SEC
Maximum Thermal Resistance, Junction to Case (Note 2)	$R_{\theta JC}$	2.5							°C/W
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							°C

NOTES: (1) T_J=25°C, I_F=0.5A, I_R=1A, I_{RR}=0.25A
(2) Bridge mounted on 4.0" sq. x 0.11" thick (10.5cm sq. x 0.3cm) aluminum plate

DIOTEC ELECTRONICS CORP.
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Data Sheet No. FRDB-600-1B

6 AMP FAST RECOVERY BRIDGE RECTIFIERS

FEATURES

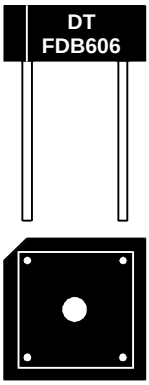
- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 90 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- Fast switching for high efficiency
- **UL RECOGNIZED - FILE #E124962**

MECHANICAL DATA

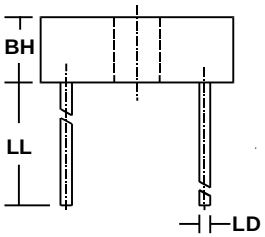
- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated copper pins
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on side of case; positive lead at bevelled corner
- Mounting Position: Any. Through hole provided for #6 screw
- Weight: 0.11 Ounces (3.36 Grams)

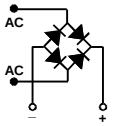
MECHANICAL SPECIFICATION

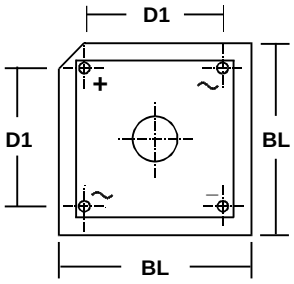
ACTUAL SIZE OF FDB PACKAGE



SERIES FDB600 - FDB610







SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	14.7	15.7	0.58	0.62
BH	5.8	6.9	0.23	0.27
D1	10.3	11.3	0.405	0.445
LL	19.0	n/a	0.75	n/a
LD	1.0	1.1	0.039	0.042

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		FDB 600	FDB 601	FDB 602	FDB 604	FDB 606	FDB 608	FDB 610	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_C = 50 °C	I_O	6							AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	90							
Maximum Forward Voltage (Per bridge Element) at 3 Amps DC	V_{FM}	1.3							VOLTS
Maximum Average DC Reverse Current At Rated @ T_A = 25 °C DC Blocking Voltage (Per Bridge Element-Note 2) @ T_A = 100 °C	I_{RM}	10 1							µA mA
Maximum Reverse Recovery Time (Note 1)	T_{RR}	200			300		500		nS
Thermal Energy (Rating for Fusing, t < 8.3 mS)	I^2t	60							$AMPS^2$ SEC
Typical Thermal Resistance, Junction to Case (Note 2)	$R_{\theta JC}$	8							°C/W
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							°C

NOTES: (1) T_J=25°C, I_F=0.5A, I_R=1A, I_{RR}=0.25A
(2) Bridge mounted on 4.0" sq. x 0.11" thick (10.5cm sq. x 0.3cm) aluminum plate

DIOTEC ELECTRONICS CORP.
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Data Sheet No. FRDB-2500-1B

25 AMP FAST RECOVERY BRIDGE RECTIFIERS

FEATURES

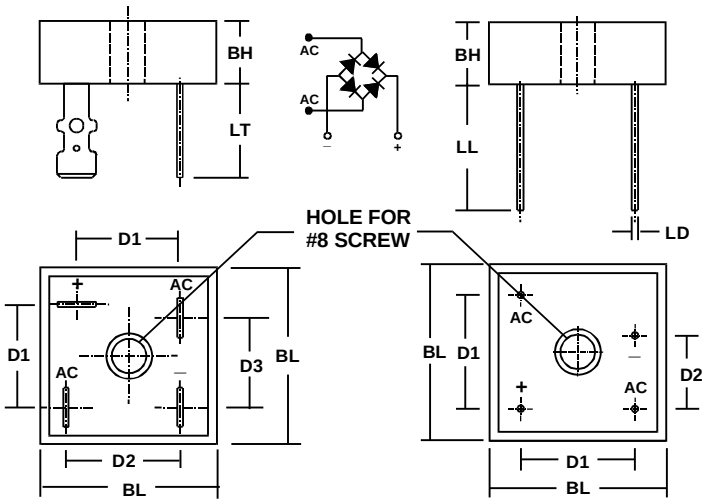
- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 300 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- Fast switching for high efficiency
- **UL RECOGNIZED - FILE #E141956**

MECHANICAL DATA

- Case: Metal (Potting epoxy carries U/L Flammability Rating 94V-0)
- Terminals: Round silver plated copper pins or fast-on terminals
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on side of case
- Mounting Position: Any. Through hole for #8 screw.
  Max. mounting torque = 20 in-lb.
- Weight: Fast-on Terminals - 1.1 Ounces (31.6 Grams)
  Wire Leads - 0.95 Ounces (28.5 Grams)

MECHANICAL SPECIFICATION

SERIES FDB2500 - FDB2510



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	11.0	11.2	0.43	0.44
D1	15.7	16.7	0.62	0.66
D2	17.5	18.5	0.69	0.73
D3	13.5	14.5	0.53	0.57
LT	n/a	14.2	n/a	0.56

Suffix "T" indicates FAST-ON TERMINALS

SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	11.0	11.2	0.43	0.44
D1	17.5	18.5	0.69	0.73
D2	10.9	11.9	0.43	0.47
LL	20.6	n/a	0.81	n/a
LD	1.0	1.1	0.039	0.042

Suffix "W" indicates WIRE LEADS

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		FDB 2500	FDB 2501	FDB 2502	FDB 2504	FDB 2506	FDB 2508	FDB 2510	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_C = 55 °C	I_O	25							AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	300							
Maximum Forward Voltage (Per Bridge Elemnt) at 12.5 Amps DC	V_{FM}	1.3							VOLTS
Maximum Average DC Reverse Current at Rated DC Blocking Voltage (Per Bridge Element-Note 2) @ T_A = 25 °C @ T_A = 100 °C	I_{RM}	10 1							µA mA
Maximum Reverse Recovery Time (Note 1)	T_{RR}	200			300		500		nS
Thermal Energy (Rating for Fusing, t < 8.3 mS)	I^2t	373							$AMPS^2$ SEC
Typical Thermal Resistance, Junction to Case (Note 2)	$R_{\theta JC}$	1.6							°C/W
Junction Operating and StorageTemperature Range	T_J, T_{STG}	-55 to +150							°C

NOTES: (1) T_J=25°C, I_F=0.5A, I_R=1A, I_{RR}=0.25A
(2) Bridge mounted on an 5" x 6" x 4.9" thick (12.7cm x 15.2cm x 12.4cm) finned aluminum plate

3.0125fdbm

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25 AMP FAST RECOVERY BRIDGE RECTIFIERS

FEATURES

- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 300 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- Fast switching for high efficiency
- **UL RECOGNIZED - FILE #E141956**

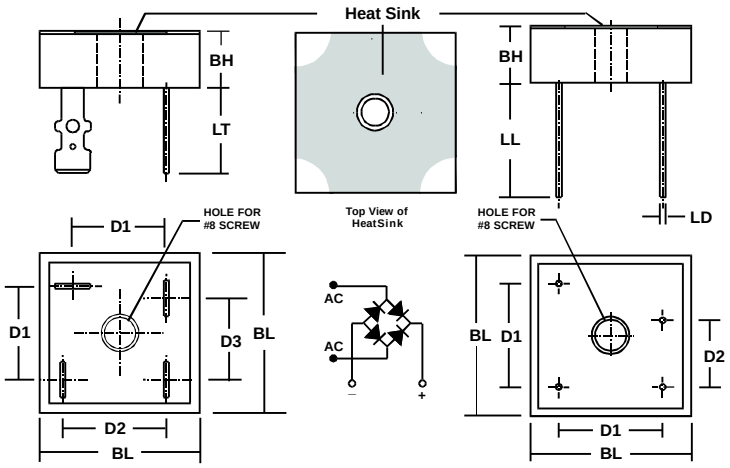
MECHANICAL DATA

- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated copper pins or fast-on terminals
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on side of case
- Mounting Position: Any. Through hole for #8 screw.
  Max. mounting torque = 20 in-lb.
- Weight: Fast-on Terminals - 0.7 Ounces (20.0 Grams)
  Wire Leads - 0.55 Ounces (16.0 Grams)

MECHANICAL SPECIFICATION

SERIES FDB2500P - FDB2510P

Suffix "P" indicates molded PLASTIC with intergrally mounted Heat Sink



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	9.6	9.8	0.38	0.39
D1	15.7	16.7	0.62	0.66
D2	17.5	18.5	0.69	0.73
D3	13.5	14.5	0.53	0.57
LT	n/a	15.2	n/a	0.6

Suffix "T" indicates FAST-ON TERMINALS

SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	9.6	9.8	0.38	0.39
D1	17.5	18.5	0.69	0.73
D2	10.9	11.9	0.43	0.47
LL	20.6	n/a	0.81	n/a
LD	1.0	1.1	0.039	0.042

Suffix "W" indicates WIRE LEADS

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		FDB 2500P	FDB 2501P	FDB 2502P	FDB 2504P	FDB 2506P	FDB 2508P	FDB 2510P	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_C = 55 °C	I_O	25							AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	300							
Maximum Forward Voltage (Per Bridge Element) at 12.5 Amps DC	V_{FM}	1.3							VOLTS
Maximum Average DC Reverse Current at Rated DC Blocking Voltage (Per bridge Element-Note 2) @ T_A = 25 °C / @ T_A = 100 °C	I_{RM}	10 1							µA mA
Maximum Reverse Recovery Time (Note 1)	T_{RR}	200			300		500		nS
Thermal Energy (Rating for Fusing, t < 8.3 mS)	I^2t	373							$AMPS^2$ SEC
Typical Thermal Resistance, Junction to Case (Note 2)	$R_{\theta JC}$	1.2							°C/W
Junction Operating and Storge Temperature Range	T_J, T_{STG}	-55 to +150							°C

3.0125dbp

NOTES: (1) T_J=25°C, I_F=0.5A, I_R=1A, I_{RR}=0.25A
(2) Bridge mounted on an 5" x 6" x 4.9" thick (12.7cm x 15.2cm x 12.4cm) finned aluminum plate

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Data Sheet No. FRDB-3500-1B

35 AMP FAST RECOVERY BRIDGE RECTIFIERS

FEATURES

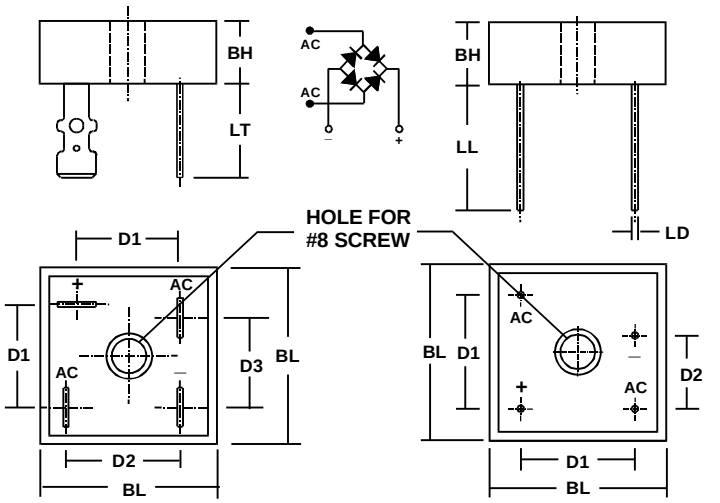
- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 400 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- Fast switching for high efficiency
- **UL RECOGNIZED - FILE #E124962**

MECHANICAL DATA

- Case: Metal (Potting epoxy carries U/L Flammability Rating 94V-0)
- Terminals: Round silver plated copper pins or fast-on terminals
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on side of case
- Mounting Position: Any. Through hole for #8 screw.
  Max. mounting torque = 20 in-lb.
- Weight: Fast-on Terminals - 1.1 Ounces (31.6 Grams)
  Wire Leads - 0.95 Ounces (28.5 Grams)

MECHANICAL SPECIFICATION

SERIES FDB3500 - FDB3510



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	11.0	11.2	0.43	0.44
D1	15.7	16.7	0.62	0.66
D2	17.5	18.5	0.69	0.73
D3	13.5	14.5	0.53	0.57
LT	n/a	14.2	n/a	0.56

Suffix "T" indicates FAST-ON TERMINALS

SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	11.0	11.2	0.43	0.44
D1	17.5	18.5	0.69	0.73
D2	10.9	11.9	0.43	0.47
LL	20.6	n/a	0.81	n/a
LD	1.0	1.1	0.039	0.042

Suffix "W" indicates WIRE LEADS

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		FDB 3500	FDB 3501	FDB 3502	FDB 3504	FDB 3506	FDB 3508	FDB 3510	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_C = 55 °C	I_O	35							AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	400							
Maximum Forward Voltage (Per Bridge Element) at 17.5 Amps DC	V_{FM}	1.3							VOLTS
Maximum Average DC Reverse Current at Rated DC Blocking Voltage (Per Bridge Element-Note 2) @ T_A = 25 °C / @ T_A = 100 °C	I_{RM}	10 1							µA mA
Maximum Reverse Recovery Time (Note 1)	T_{RR}	200			300		500		nS
Thermal Energy (Rating for Fusing, t < 8.3 mS)	I^2t	664							$AMPS^2$ SEC
Typical Thermal Resistance, Junction to Case (Note 2)	$R_{\theta JC}$	1.6							°C/W
Junction Operating and Staorage Temperature Range	T_J, T_{STG}	-55 to +150							°C

NOTES: (1) T_J=25°C, I_F=0.5A, I_R=1A, I_{RR}=0.25A
(2) Bridge mounted on an 9" x 3" x 4.6" thick (22.9cm x 7.6cm x 11.7cm) finned aluminum plate

3.0135fdbm

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35 AMP FAST RECOVERY BRIDGE RECTIFIERS

FEATURES

- PRV Ratings from 50 to 1000 Volts
- Surge overload rating to 400 Amps peak
- Reliable low cost molded plastic construction
- Ideal for printed circuit board applications
- Fast switching for high efficiency
- **UL RECOGNIZED - FILE #E141956**

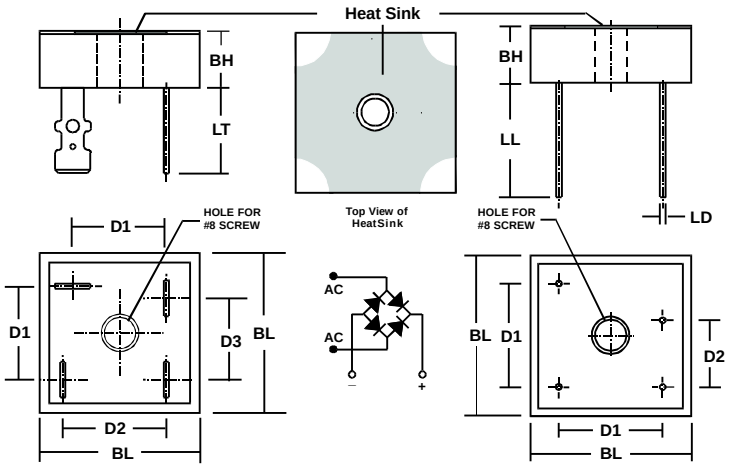
MECHANICAL DATA

- Case: Molded plastic, U/L Flammability Rating 94V-0
- Terminals: Round silver plated copper pins or fast-on terminals
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on side of case
- Mounting Position: Any. Through hole for #8 screw.
  Max. mounting torque = 20 in-lb.
- Weight: Fast-on Terminals - 0.7 Ounces (20.0 Grams)
  Wire Leads - 0.55 Ounces (16.0 Grams)

MECHANICAL SPECIFICATION

SERIES FDB3500P - FDB3510P

Suffix "P" indicates molded PLASTIC with intergrally mounted Heat Sink



SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	9.6	9.8	0.38	0.39
D1	15.7	16.7	0.62	0.66
D2	17.5	18.5	0.69	0.73
D3	13.5	14.5	0.53	0.57
LT	n/a	15.2	n/a	0.6

Suffix "T" indicates FAST-ON TERMINALS

SYM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
BL	28.4	28.7	1.12	1.13
BH	9.6	9.8	0.38	0.39
D1	17.5	18.5	0.69	0.73
D2	10.9	11.9	0.43	0.47
LL	20.6	n/a	0.81	n/a
LD	1.0	1.1	0.039	0.042

Suffix "W" indicates WIRE LEADS

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		FDB 3500P	FDB 3501P	FDB 3502P	FDB 3504P	FDB 3506P	FDB 3508P	FDB 3510P	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_C = 55 °C	I_O	35							AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	400							
Maximum Forward Voltage, Per Diode, at 17.5 Amps DC	V_{FM}	1.3							VOLTS
Maximum Average DC Reverse Current at Rated DC Blocking Voltage Per Diode (Note 2) @ T_A = 25 °C / @ T_A = 100 °C	I_{RM}	10 / 1							µA / mA
Maximum Reverse Recovery Time (Note 1)	T_{RR}	200			300		500		nS
Thermal Energy (Rating for Fusing, t < 8.3 mS)	I^2t	664							$AMPS^2$ SEC
Typical Thermal Resistance, Junction to Case (Note 2)	$R_{\theta JC}$	1.2							°C/W
Operating and Storge Temperature Range	T_J, T_{STG}	-55 to +150							°C

3.0135fdbp

NOTES: (1) T_J=25°C, I_F=0.5A, I_R=1A, I_{RR}=0.25A
(2) Bridge mounted on an 9" x 3" x 4.6" thick (22.9cm x 7.6cm x 11.7cm) finned aluminum plate

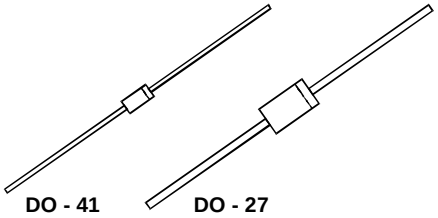
SECTION H

GENERAL PURPOSE AND FAST RECOVERY DIODES

GENERAL PURPOSE DIODES

1-6 AMPERES

50 to 1000 VOLTS

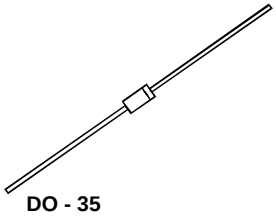


DO - 41 **DO - 27**

ULTRA FAST SWITCHING DIODES

0.150 AMPERES

75 VOLTS

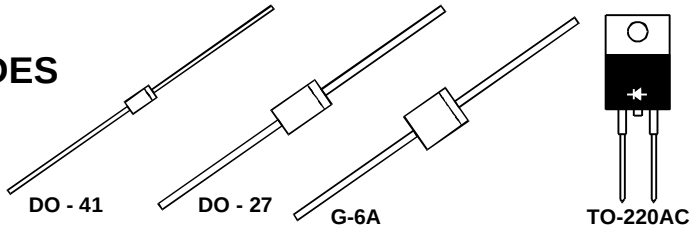


DO - 35

FAST RECOVERY SILICON DIODES

1-8 AMPERES

50 to 1000 VOLTS



DO - 41 **DO - 27** **G-6A** **TO-220AC**

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Data Sheet No. GPDP-101-1B

1 AMP GENERAL PURPOSE SILICON DIODES

FEATURES

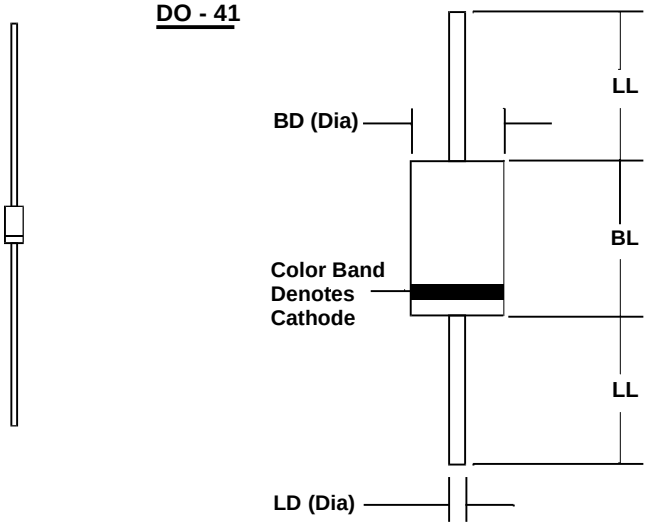
- **Low cost**
- **Low leakage**
- **Low forward voltage drop**
- **High current capacity**
- **Easily cleaned with freon, alcohol, chlorothene and similar solvents**

MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-41 PACKAGE

SERIES 1N4001 - 1N4007

DO - 41



Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.160	4.1	0.205	5.2
BD	0.103	2.6	0.107	2.7
LL	1.00	25.4		
LD	0.028	0.71	0.034	0.86

MECHANICAL DATA

- **Case: JEDEC DO-41, molded plastic (U/L Flammability Rating 94V-0)**
- **Terminals: Plated axial leads**
- **Soldering: Per MIL-STD 202 Method 208 guaranteed**
- **Polarity: Color band denotes cathode**
- **Mounting Position: Any**
- **Weight: 0.012 Ounces (0.34 Grams)**

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 75 °C (Lead length = 0.375 in. (9.5 mm))	I_O	1							AMPS
Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load)	I_{FSM}	50							
Maximum Forward Voltage at 1 Amp DC	V_{FM}	1							VOLTS
Maximum Full Cycle Reverse Current @ T_L = 75 °C (Note 1)	$I_{RM(AV)}$	30							µA
Maximum Average DC Reverse Current @ T_A = 25°C At Rated DC Blocking Voltage @ T_A = 100°C	I_{RM}	5 50							
Typical Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	30							°C/W
Typical Junction Capacitance (Note 2)	C_J	26							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175							°C

4.97fgpdp101

NOTES: (1) Lead length = 0.375 in. (9.5 mm)
(2) Measured at 1MHz & applied reverse voltage of 4 volts

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1 AMP GENERAL PURPOSE SILICON DIODES

RATING & CHARACTERISTIC CURVES FOR SERIES 1N4001 - 1N4007

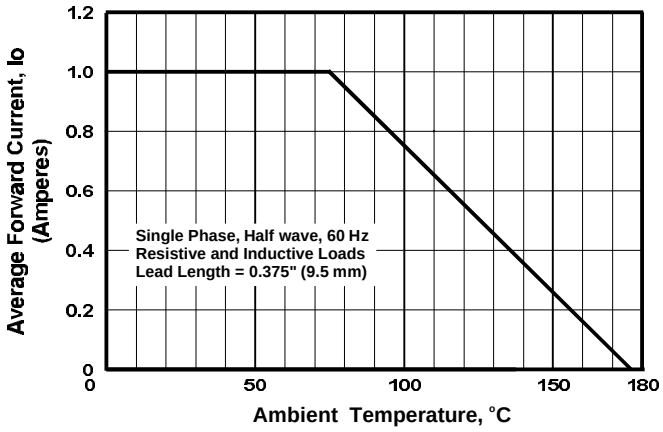


FIGURE 1. FORWARD CURRENT DERATING CURVE

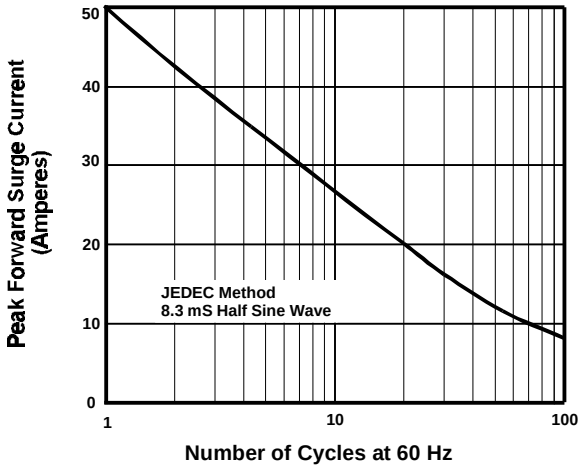


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

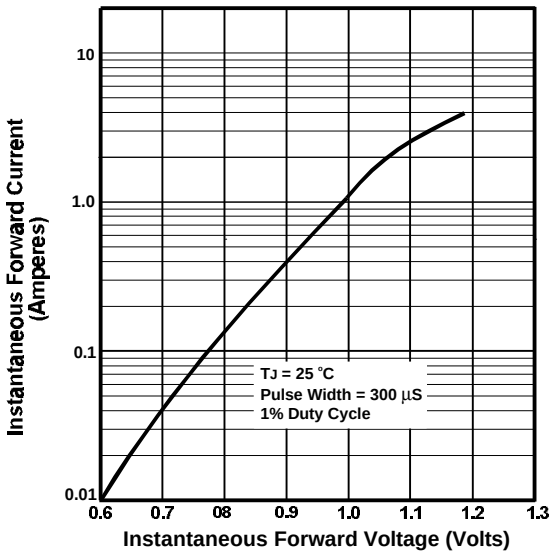


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

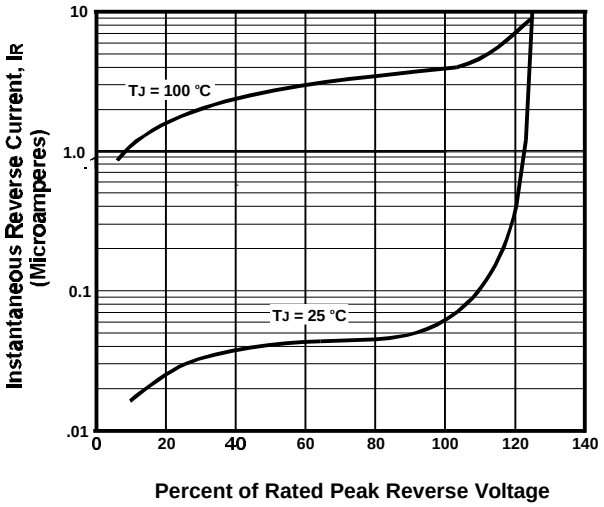


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

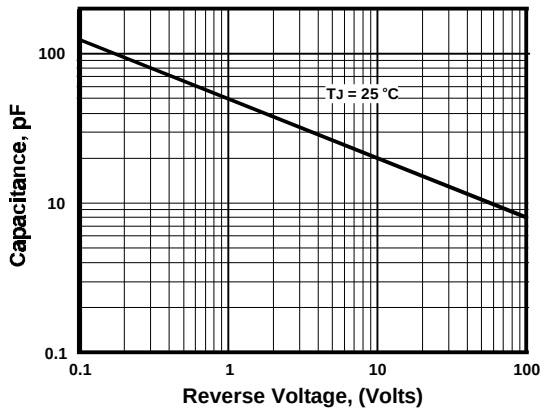


FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

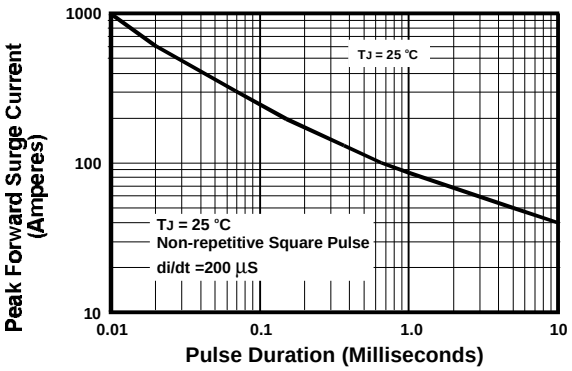


FIGURE 6. PEAK FORWARD SURGE CURRENT

4.97bgpdp101

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. GPPD-100-1B

1 AMP SOFT GLASS PASSIVATED SILICON DIODES

FEATURES

- Proprietary "Soft Glass® " P/N junction passivation
- Void-free chip soldering
- Extremely low leakage at high temperatures
- Ideal for continuous high temperature applications
- High surge current capability
- Low forward voltage drop
- 1A at T_A = 75 °C with no thermal runaway

MECHANICAL DATA

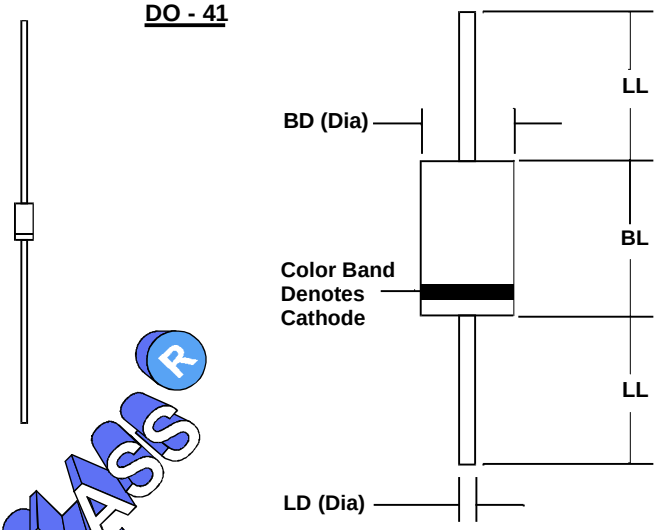
- Case: JEDEC DO-41, molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.012 Ounces (0.34 Grams)

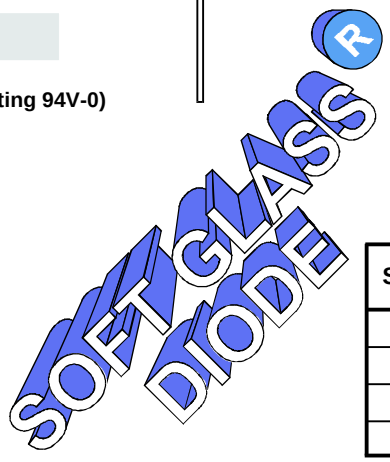
MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-41 PACKAGE

SERIES 1N4001G - 1N4007G

DO - 41





Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.160	4.1	0.205	5.2
BD	0.103	2.6	0.107	2.7
LL	1.00	25.4		
LD	0.028	0.71	0.034	0.86

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		1N 4001G	1N 4002G	1N 4003G	1N 4004G	1N 4005G	1N 4006G	1N 4007G	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 75 °C (Lead length = 0.375 in. (9.5 mm))	I_O	1							AMPS
Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load)	I_{FSM}	50							
Maximum Forward Voltage at 1 Amp DC	V_{FM}	1							VOLTS
Maximum Full Cycle Reverse Current @ T_L = 75 °C (Note 1)	$I_{RM(AV)}$	10							µA
Maximum Average DC Reverse Current @ T_A = 25°C At Rated DC Blocking Voltage @ T_A = 100°C	I_{RM}	1 20							
Typical Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	30							°C/W
Typical Junction Capacitance (Note 2)	C_J	10							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175							°C

4.97fgppd100

NOTES: (1) Lead length = 0.375 in. (9.5 mm)
(2) Measured at 1MHz & applied reverse voltage of 4 volts

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

1 AMP SOFT GLASS PASSIVATED SILICON DIODES

RATING & CHARACTERISTIC CURVES FOR SERIES 1N4001G - 1N4007G

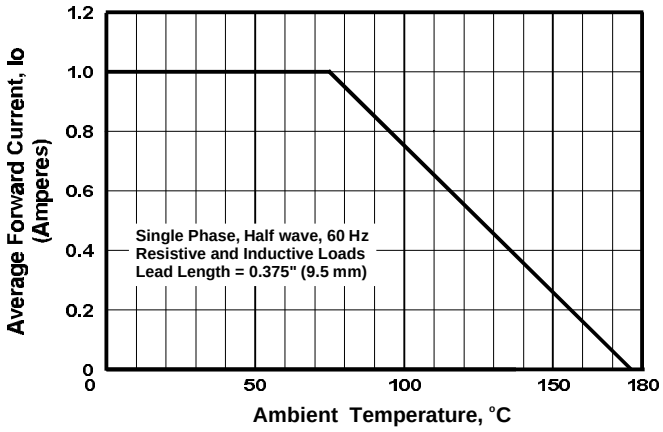


FIGURE 1. FORWARD CURRENT DERATING CURVE

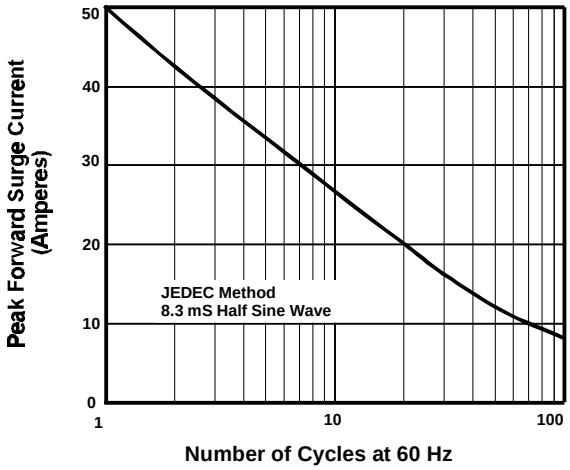


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

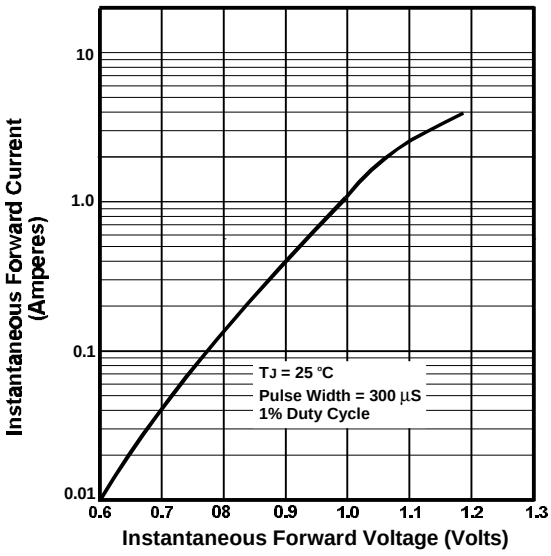


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

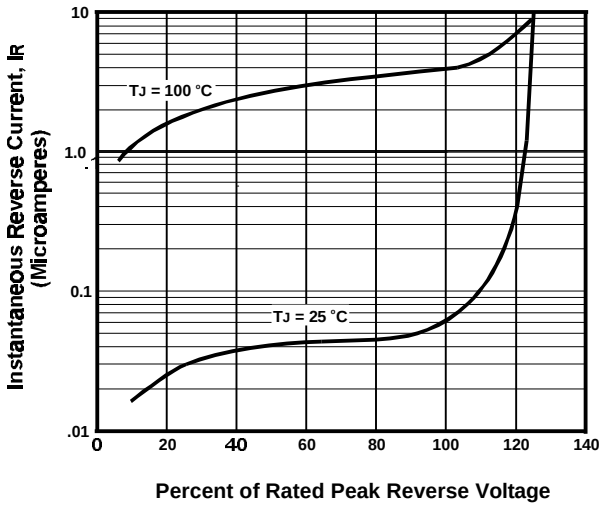


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

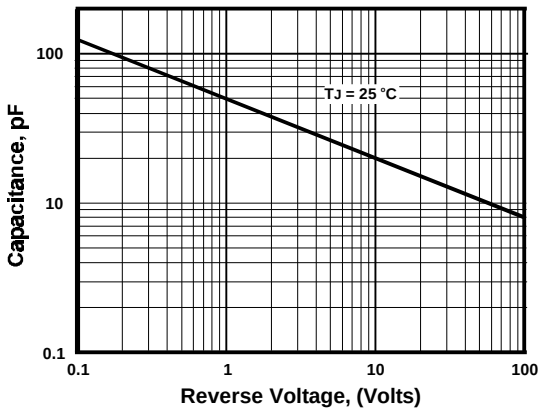


FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

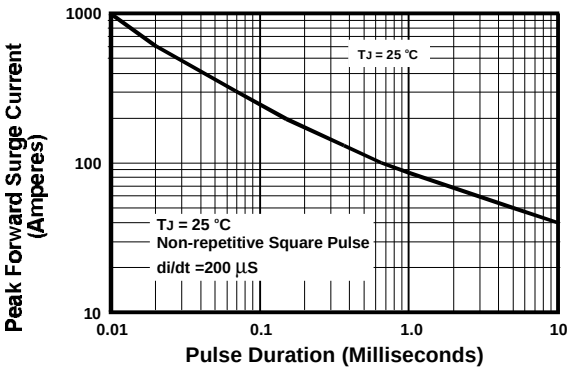


FIGURE 6. PEAK FORWARD SURGE CURRENT

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. GPDG-101-1B

1 AMP HIGH RELIABILITY SILICON DIODES

FEATURES

- **Proprietary "Soft Glass® " P/N junction passivation**
- **Void-free chip soldering**
- **Extremely low leakage at high temperatures**
- **Ideal for continuous high temperature applications**
- **High surge current capability**
- **Low forward voltage drop**
- **1A at T_A = 75 °C with no thermal runaway**

MECHANICAL DATA

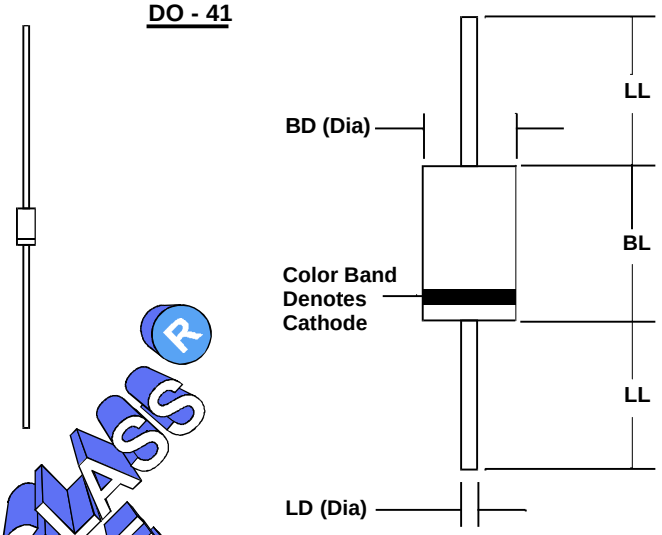
- **Case: JEDEC DO-41, molded silica glass (U/L Flammability Rating 94V-0)**
- **Terminals: Plated axial leads**
- **Soldering: Per MIL-STD 202 Method 208 guaranteed**
- **Polarity: Color band denotes cathode**
- **Mounting Position: Any**
- **Weight: 0.012 Ounces (0.34 Grams)**

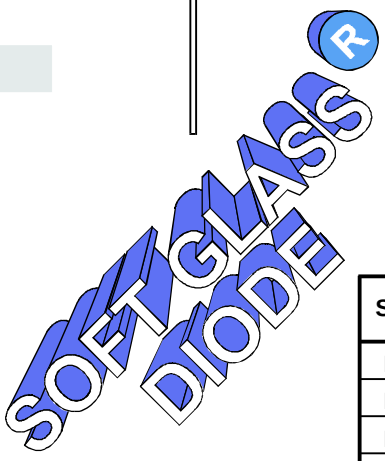
MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-41 PACKAGE

SERIES GP100 - GP110

DO - 41





Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.160	4.1	0.205	5.2
BD	0.103	2.6	0.107	2.7
LL	1.00	25.4		
LD	0.028	0.71	0.034	0.86

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		GP100	GP101	GP102	GP104	GP106	GP108	GP110	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 75 °C, Lead length = 0.375 in. (9.5 mm)	I_O	1							AMPS
Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load)	I_{FSM}	50							
Maximum Forward Voltage at 1 Amp DC	V_{FM}	1							VOLTS
Maximum Full Cycle Reverse Current @ T_L = 75 °C (Note 1)	$I_{RM(AV)}$	5							µA
Maximum Average DC Reverse Current @ T_A = 25°C At Rated DC Blocking Voltage @ T_A = 125°C	I_{RM}	0.5 30.0							
Typical Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	30							°C/W
Typical Junction Capacitance (Note 2)	C_J	10							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175							°C

4.97fgpdg101

NOTES: (1) Lead length = 0.375 in. (9.5 mm)
(2) Measured at 1MHz & applied reverse voltage of 4 volts

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

1 AMP HIGH RELIABILITY SILICON DIODES

RATING & CHARACTERISTIC CURVES FOR SERIES GP100 - GP110

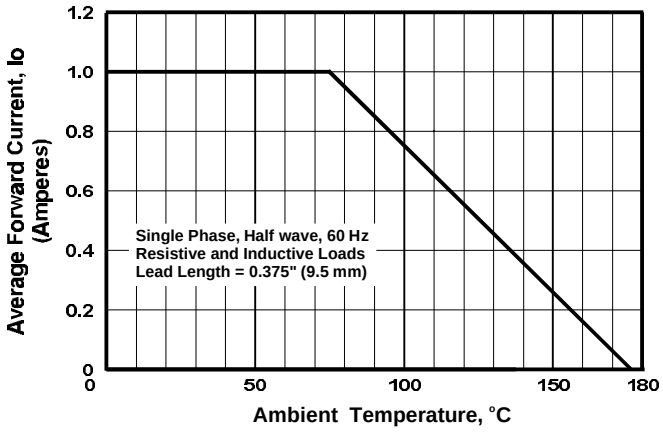


FIGURE 1. FORWARD CURRENT DERATING CURVE

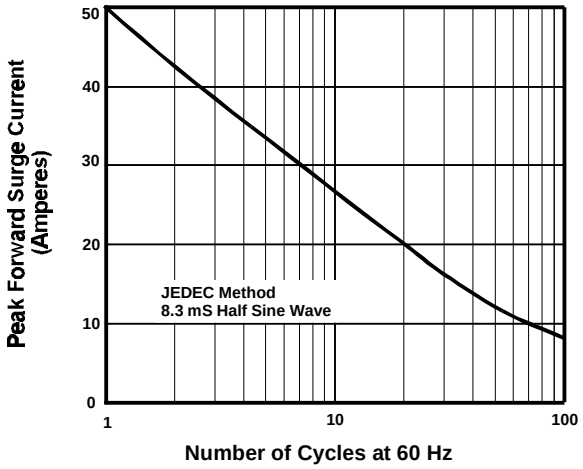


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

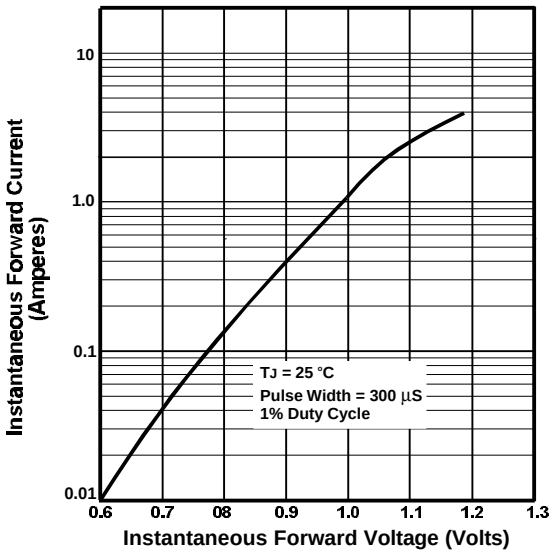


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

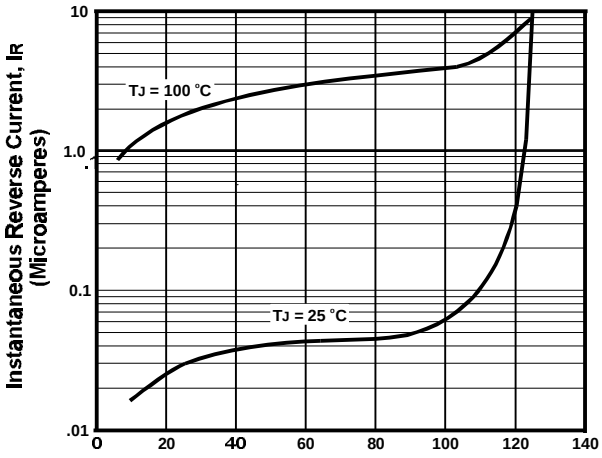


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

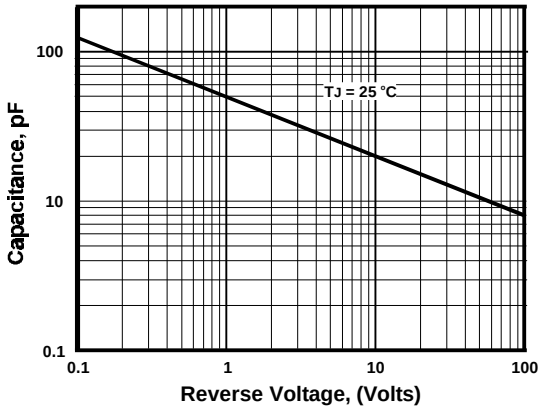


FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

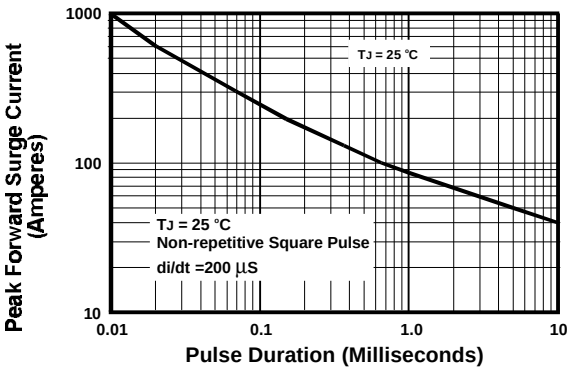


FIGURE 6. PEAK FORWARD SURGE CURRENT

4.97bgpdg101

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. GPDP-151-1B

1.5 AMP GENERAL PURPOSE SILICON DIODES

FEATURES

- **Low cost**
- **Low leakage**
- **Low forward voltage drop**
- **High current capacity**
- **Easily cleaned with freon, alcohol, chlorothene and similar solvents**

MECHANICAL DATA

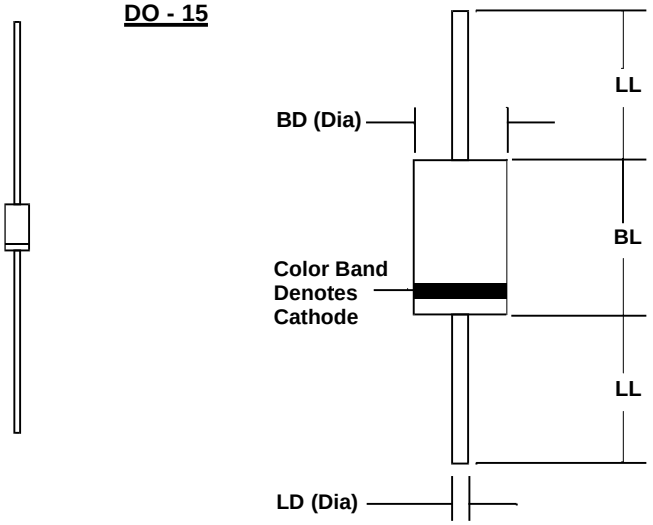
- **Case: JEDEC DO-15 molded plastic (U/L Flammability Rating 94V-0)**
- **Terminals: Plated axial leads**
- **Soldering: Per MIL-STD 202 Method 208 guaranteed**
- **Polarity: Color band denotes cathode**
- **Mounting Position: Any**
- **Weight: 0.01 Ounces (0.4 Grams)**

MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-15 PACKAGE

SERIES 1N5391 - 1N5399

DO - 15



Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.240	6.01	0.255	6.48
BD	0.130	3.3	0.140	3.6
LL	1.00	25.4		
LD	0.028	0.71	0.034	0.86

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		1N5391	1N5392	1N5393	1N5395	1N5397	1N5398	1N5399	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 75 °C, Lead length = 0.375 in. (9.5 mm)	I_O	1.5							AMPS
Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load)	I_{FSM}	60							
Maximum Forward Voltage at 1.5 Amps DC	V_{FM}	1							VOLTS
Maximum Full Cycle Reverse Current @ T_L = 75 °C (Note 1)	$I_{RM(AV)}$	30							µA
Maximum Average DC Reverse Current @ T_A = 25°C At Rated DC Blocking Voltage @ T_A = 100°C	I_{RM}	5 50							
Typical Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	50							°C/W
Typical Junction Capacitance (Note 2)	C_J	30							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175							°C

4.97fgpdp151

NOTES: (1) Lead length = 0.375 in. (9.5 mm)
(2) Measured at 1MHz & applied reverse voltage of 4 volts

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

1.5 AMP GENERAL PURPOSE SILICON DIODES

RATING & CHARACTERISTIC CURVES FOR SERIES 1N5391 - 1N5399

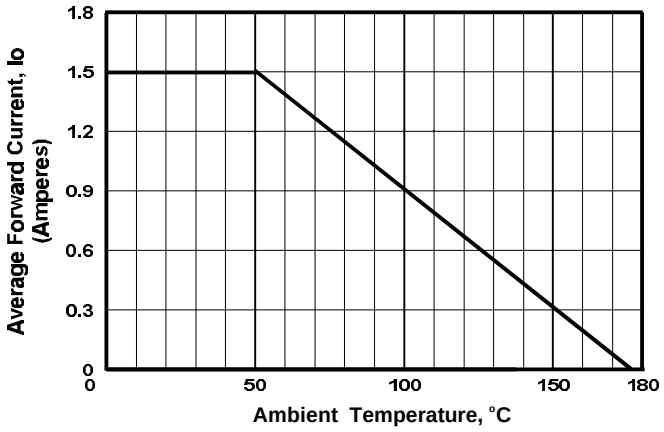


FIGURE 1. FORWARD CURRENT DERATING CURVE

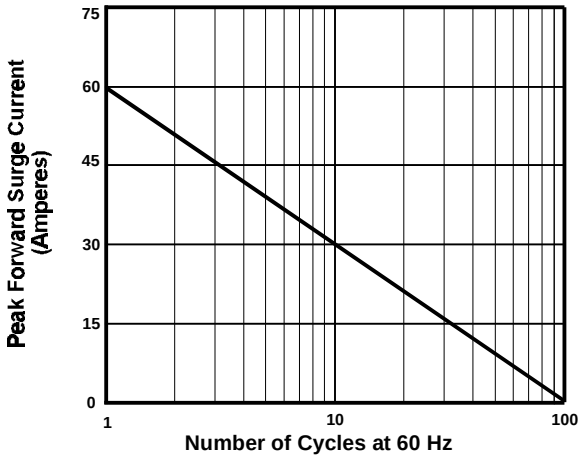


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

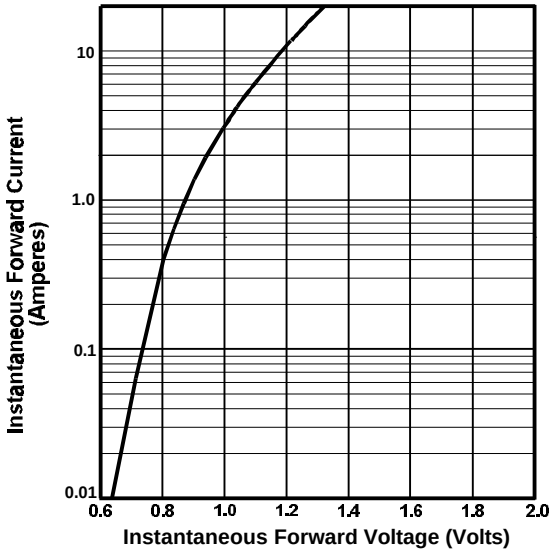


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

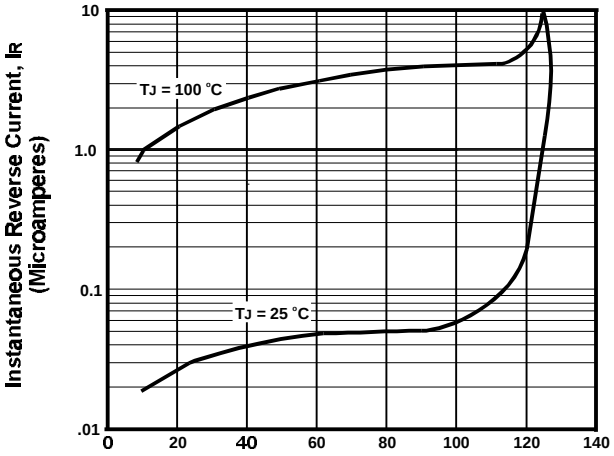


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

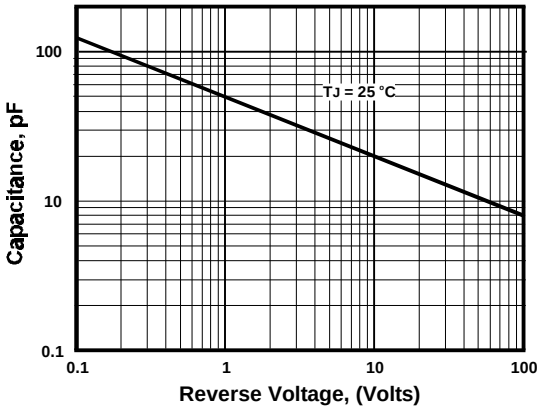


FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

4.97bgpdp151

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. GPPD-200-1B

2 AMP SOFT GLASS PASSIVATED DIODES

FEATURES

- Proprietary "Soft Glass® " P/N junction passivation
- Void-free chip soldering
- Extremely low leakage at high temperatures
- Ideal for continuous high temperature applications
- High surge current capability
- Low forward voltage drop
- 2A at T_A = 75 °C with no thermal runaway

MECHANICAL DATA

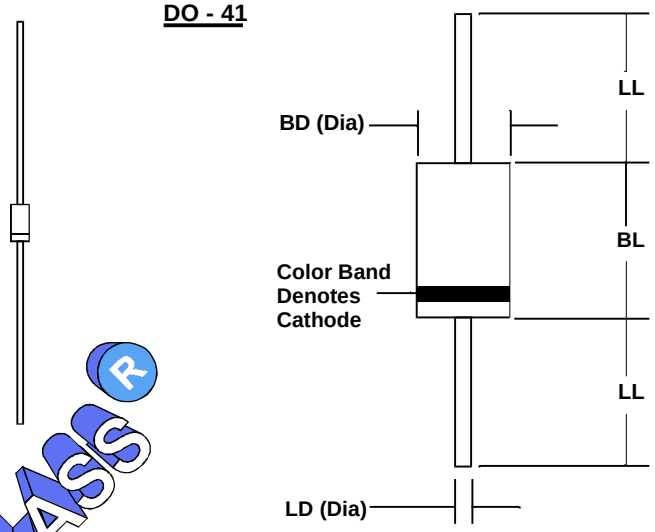
- Case: JEDEC DO-41 molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.01 Ounces (0.4 Grams)

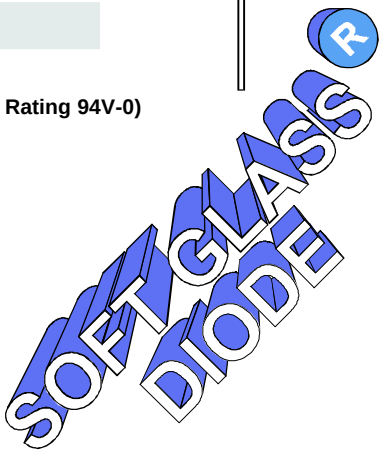
MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-41 PACKAGE

SERIES GP200 - GP210

DO - 41





Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.160	4.1	0.205	5.2
BD	0.103	2.6	0.107	2.7
LL	1.00	25.4		
LD	0.028	0.71	0.034	0.86

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		GP200	GP201	GP202	GP204	GP206	GP208	GP210	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 75 °C, Lead length = 0.375 in. (9.5 mm)	I_O	2							AMPS
Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load)	I_{FSM}	70							
Maximum Forward Voltage at 2 Amps DC	V_{FM}	1.1							VOLTS
Maximum Reverse Recovery Time (I_F=0.5A, I_R=1A, I_{RR}=0.25A)	T_{RR}	30							µA
Maximum Average DC Reverse Current @ T_A = 25°C At Rated DC Blocking Voltage @ T_A = 100°C	I_{RM}	5 50							
Typical Junction Capacitance (Note 1)	C_J	40							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175							°C

4.97 fgppd200

NOTES: (1) Measured at 1MHz & applied reverse voltage of 4 volts
(2) 300 nS available - consult factory

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

2 AMP SOFT GLASS PASSIVATED SILICON DIODES

RATING & CHARACTERISTIC CURVES FOR SERIES GP200 - GP210

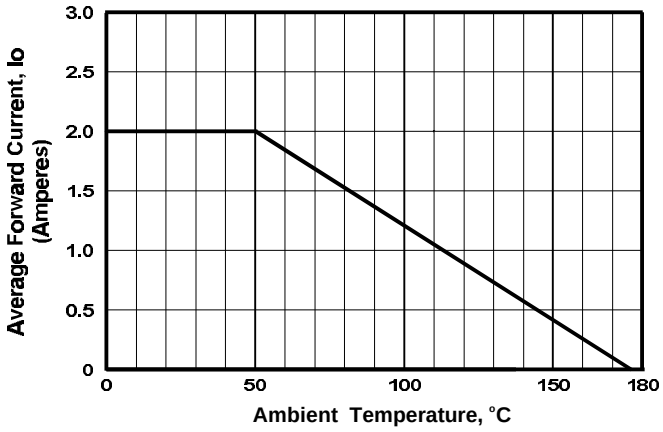


FIGURE 1. FORWARD CURRENT DERATING CURVE

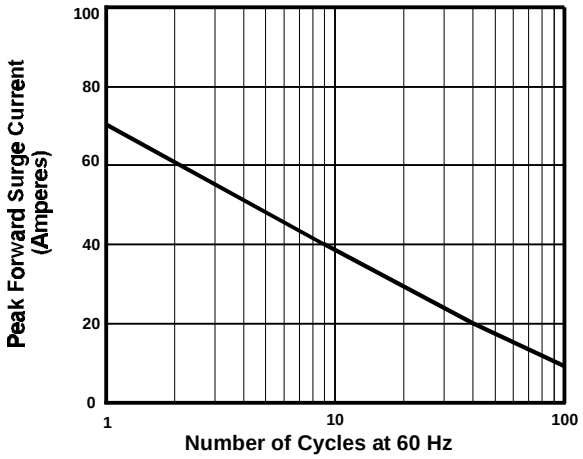


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

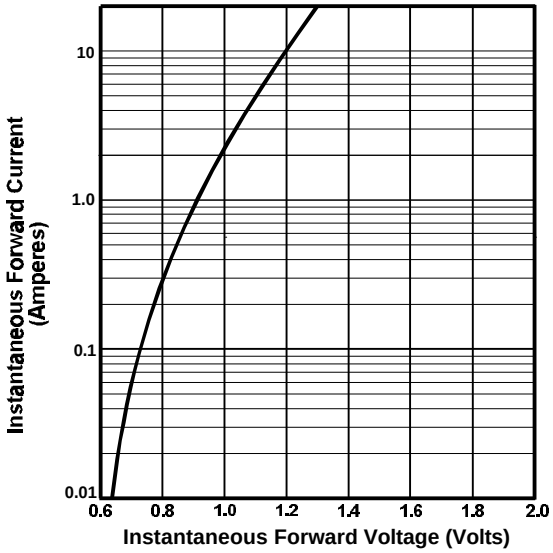
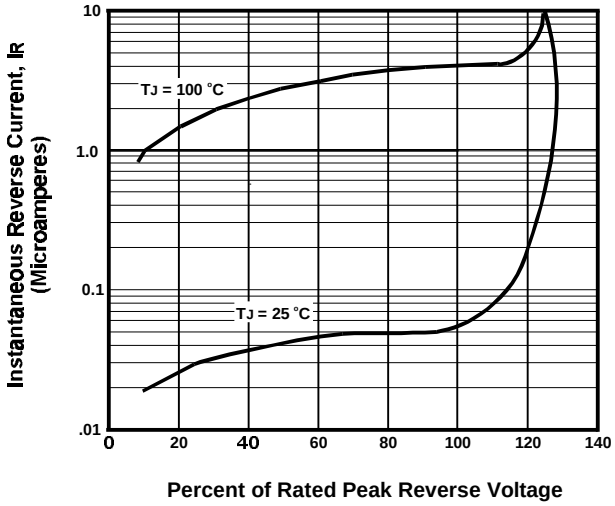


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE



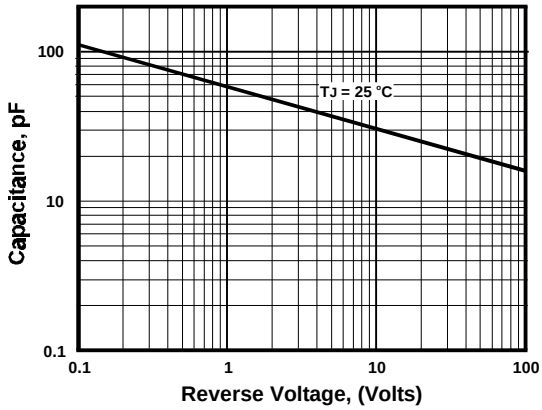


FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. GPDP-301-1B

3 AMP GENERAL PURPOSE SILICON DIODES

FEATURES

- **Low cost**
- **Low leakage**
- **Low forward voltage drop**
- **High current capacity**
- **Easily cleaned with freon, alcohol, chlorothene and similar solvents**

MECHANICAL DATA

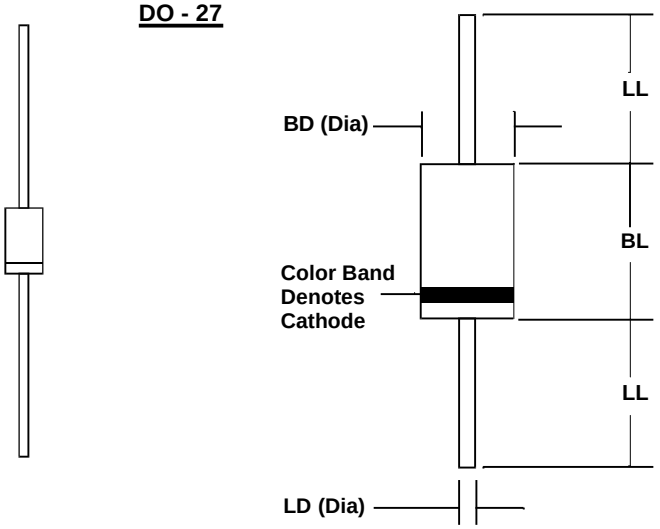
- **Case: JEDEC DO-27 molded plastic (U/L Flammability Rating 94V-0)**
- **Terminals: Plated axial leads**
- **Soldering: Per MIL-STD 202 Method 208 guaranteed**
- **Polarity: Color band denotes cathode**
- **Mounting Position: Any**
- **Weight: 0.02 Ounces (0.7 Grams)**

MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-27 PACKAGE

SERIES 1N5400 - IN5408

DO - 27



Sym	Minimum		Maximum	
	In	mm	In	mm
BL			0.365	9.28
BD			0.205	5.2
LL	1.00	25.4		
LD	0.048	1.2	0.052	1.3

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		1N5400	1N5401	1N5402	1N5404	1N5406	1N5407	1N5408	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 75 °C Lead length = 0.375 in. (9.5 mm)	I_O	3							AMPS
Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load)	I_{FSM}	200							
Maximum Forward Voltage at 3 Amps DC	V_{FM}	1							VOLTS
Maximum Full Cycle Reverse Current @ T_L = 75 °C (Note 1)	$I_{RM(AV)}$	30							µA
Maximum Average DC Reverse Current @ T_A = 25°C At Rated DC Blocking Voltage @ T_A = 100°C	I_{RM}	5 50							
Typical Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	18							°C/W
Typical Junction Capacitance (Note 2)	C_J	70							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175							°C

4.97fgpdp301

NOTES: (1) Lead length = 0.375 in. (9.5 mm)
(2) Measured at 1MHz & applied reverse voltage of 4 volts

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
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3 AMP GENERAL PURPOSE SILICON DIODES

RATING & CHARACTERISTIC CURVES FOR SERIES 1N5400 - 1N5408

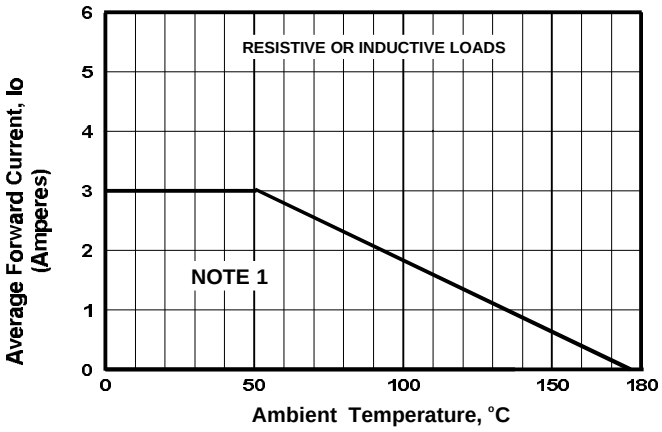


FIGURE 1. FORWARD CURRENT DERATING CURVE

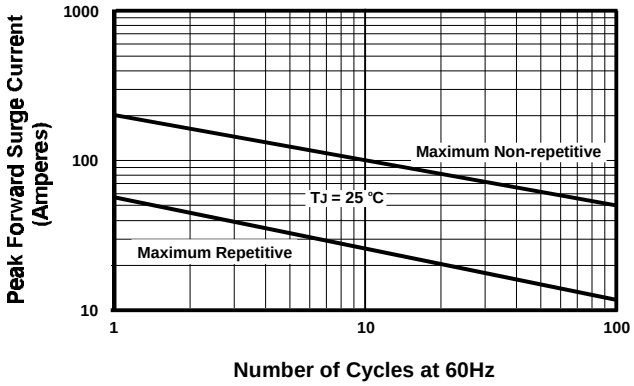


FIGURE 2. FORWARD SURGE CURRENT

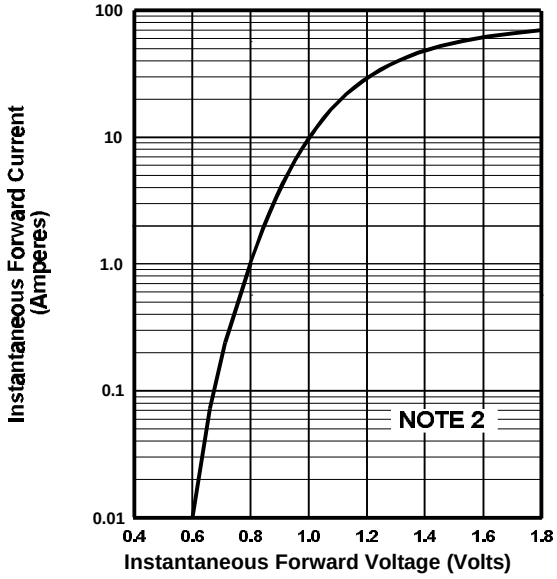


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

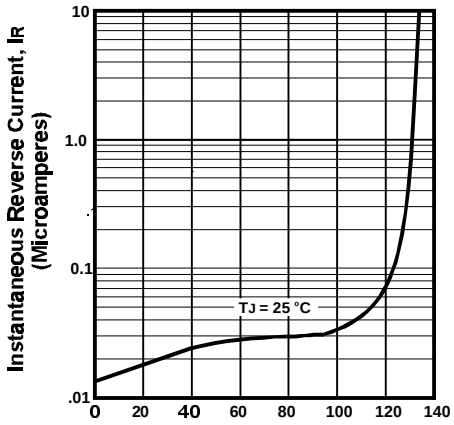


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

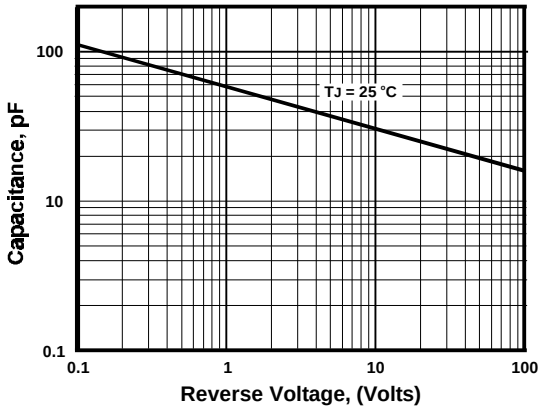


FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) Single Phase, Half Wave, 60 Hz; Lead Length = 0.375" (9.5mm)

(2) TJ = 25 °C, Pulse Width = 300 μSec, 1.0% Duty Cycle

4.97bgpdp301

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. GPPD-300-1B

3 AMP SOFT GLASS PASSIVATED SILICON DIODES

FEATURES

- Proprietary "Soft Glass® " P/N junction passivation
- Void-free chip soldering
- Extremely low leakage at high temperatures
- Ideal for continuous high temperature applications
- High surge current capability
- Low forward voltage drop
- 3A at T_A = 75 °C with no thermal runaway

MECHANICAL DATA

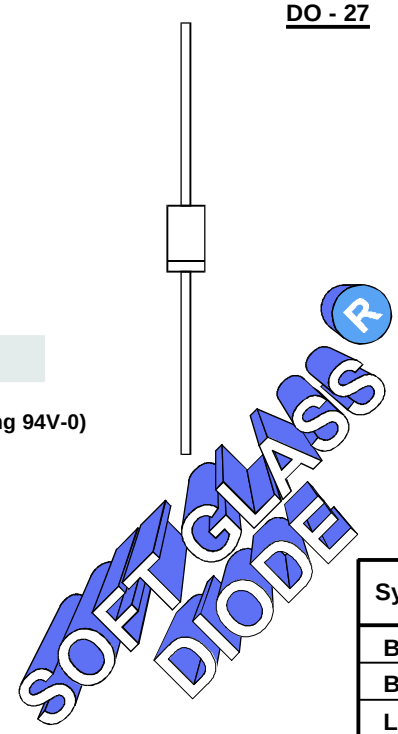
- Case: JEDEC DO-27 molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.02 Ounces (0.7 Grams)

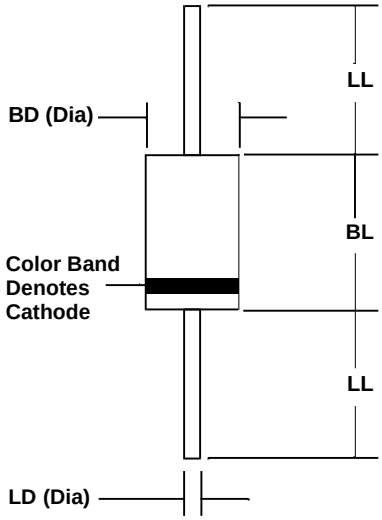
MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-27 PACKAGE

SERIES 1N5400G - IN5408G

DO - 27





Sym	Minimum		Maximum	
	In	mm	In	mm
BL			0.365	9.28
BD			0.205	5.2
LL	1.00	25.4		
LD	0.048	1.2	0.052	1.3

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		1N 5400G	1N 5401G	1N 5402G	1N 5404G	1N 5406G	1N 5407G	1N 5408G	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 75 °C (Lead length = 0.375 in. (9.5 mm))	I_O	3							AMPS
Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load)	I_{FSM}	200							
Maximum Forward Voltage at 3 Amps DC	V_{FM}	1							VOLTS
Maximum Full Cycle Reverse Current @ T_L = 75 °C (Note 1)	$I_{RM(AV)}$	20							µA
Maximum Average DC Reverse Current @ T_A = 25°C At Rated DC Blocking Voltage @ T_A = 100°C	I_{RM}	2 50							
Typical Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	18							°C/W
Typical Junction Capacitance (Note 2)	C_J	70							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175							°C

4.97fgppd300

NOTES: (1) Lead length = 0.375 in. (9.5 mm)
(2) Measured at 1MHz & applied reverse voltage of 4 volts

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3 AMP SOFT GLASS PASSIVATED SILICON DIODES

RATING & CHARACTERISTIC CURVES FOR SERIES 1N5400G - 1N5408G

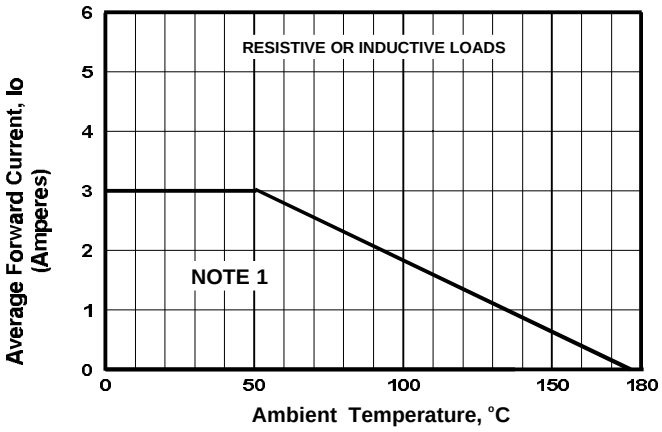


FIGURE 1. FORWARD CURRENT DERATING CURVE

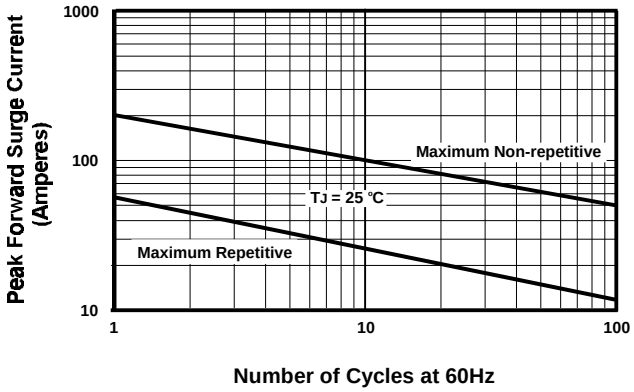


FIGURE 2. FORWARD SURGE CURRENT

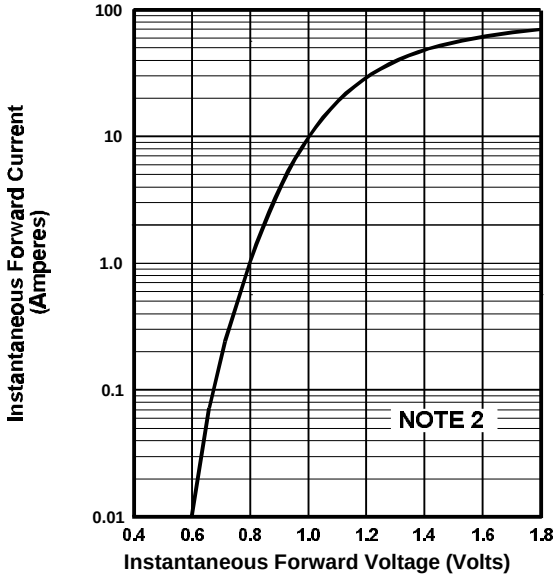


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

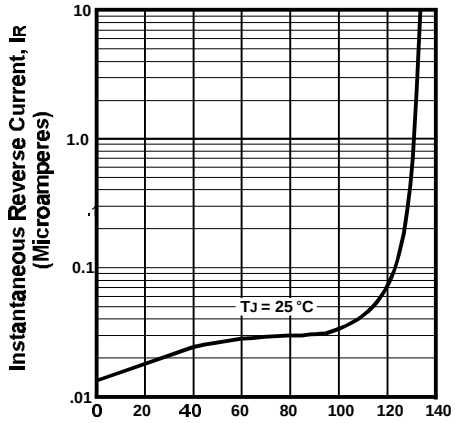


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

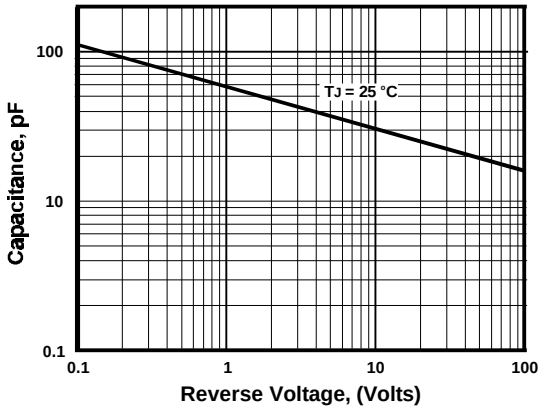


FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) Single Phase, Half Wave, 60 Hz; Lead Length = 0.375" (9.5mm)

(2) TJ = 25 °C, Pulse Width = 300 μSec, 1.0% Duty Cycle

4.97bgppd300

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. GPPD-400-1B

4 AMP HIGH RELIABILITY SOFT GLASS PASSIVATED SILICON DIODES

FEATURES

- **Proprietary "Soft Glass® " P/N junction passivation**
- **Void-free chip soldering**
- **Extremely low leakage at high tempratures**
- **Ideal for continuous high temperature applications**
- **High surge current capability**
- **Low forward voltage drop**
- **4A at T_A = 75 °C with no thermal runaway**

MECHANICAL DATA

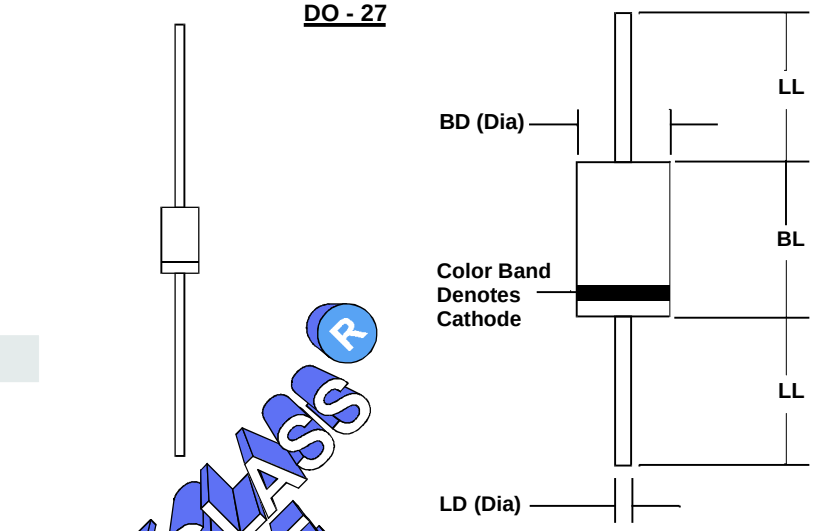
- **Case: JEDEC DO-27 molded silica glass (U/L Flammability Rating 94V-0)**
- **Terminals: Plated axial leads**
- **Soldering: Per MIL-STD 202 Method 208 guaranteed**
- **Polarity: Color band denotes cathode**
- **Mounting Position: Any**
- **Weight: 0.02 Ounces (0.7 Grams)**

MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-27 PACKAGE

SERIES GP400 - GP410

DO - 27



Sym	Minimum		Maximum	
	In	mm	In	mm
BL			0.365	9.28
BD			0.205	5.2
LL	1.00	25.4		
LD	0.048	1.2	0.052	1.3

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		GP400	GP401	GP402	GP404	GP406	GP408	GP410	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 75 °C, Lead length = 0.375 in. (9.5 mm)	I_O	4							AMPS
Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load)	I_{FSM}	200							
Maximum Forward Voltage at 4 Amps DC	V_{FM}	1							VOLTS
Maximum Full Cycle Reverse Current @ T_L = 75 °C (Note 1)	$I_{RM(AV)}$	20							µA
Maximum Average DC Reverse Current @ T_A = 25°C At Rated DC Blocking Voltage @ T_A = 100°C	I_{RM}	2 50							
Typical Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	18							°C/W
Typical Junction Capacitance (Note 2)	C_J	70							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175							°C

4.97fgppd400

NOTES: (1) Lead length = 0.375 in. (9.5 mm)
(2) Measured at 1MHz & applied reverse voltage of 4 volts

DIOTEC ELECTRONICS CORP.
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4 AMP HIGH RELIABILITY SOFT GLASS PASSIVATED SILICON DIODES

RATING & CHARACTERISTIC CURVES FOR SERIES GP400 - GP410

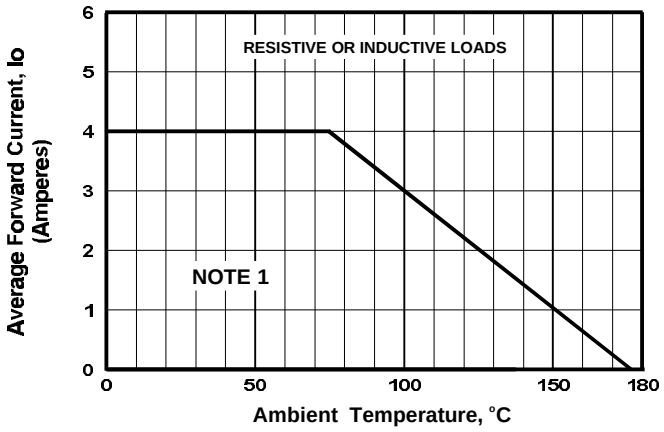


FIGURE 1. FORWARD CURRENT DERATING CURVE

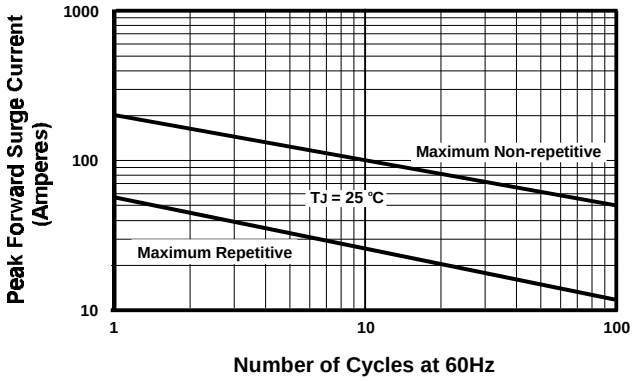


FIGURE 2. FORWARD SURGE CURRENT

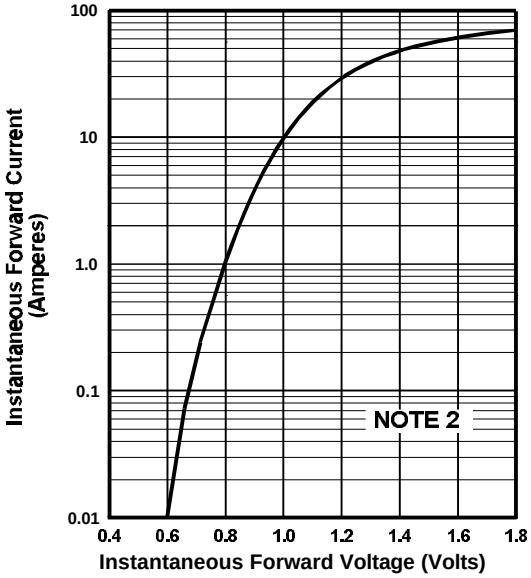


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

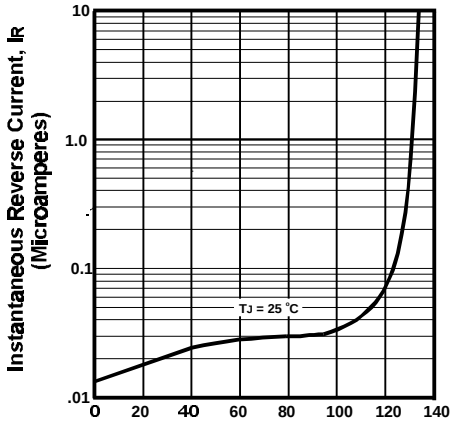


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

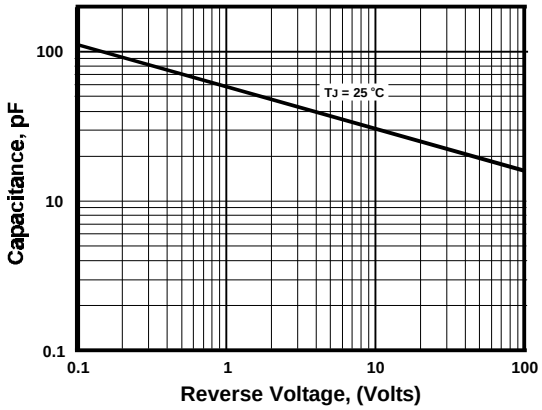


FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) Single Phase, Half Wave, 60 Hz; Lead Length = 0.375" (9.5mm)

(2) TJ = 25 °C, Pulse Width = 300 μSec, 1.0% Duty Cycle

4.97bgpdp400

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. GPDP-601-1C

6 AMP GENERAL PURPOSE SILICON DIODES

FEATURES

- Low cost
- Low leakage
- Low forward voltage drop
- High current capacity
- Easily cleaned with freon, alcohol, chlorothene and similar solvents

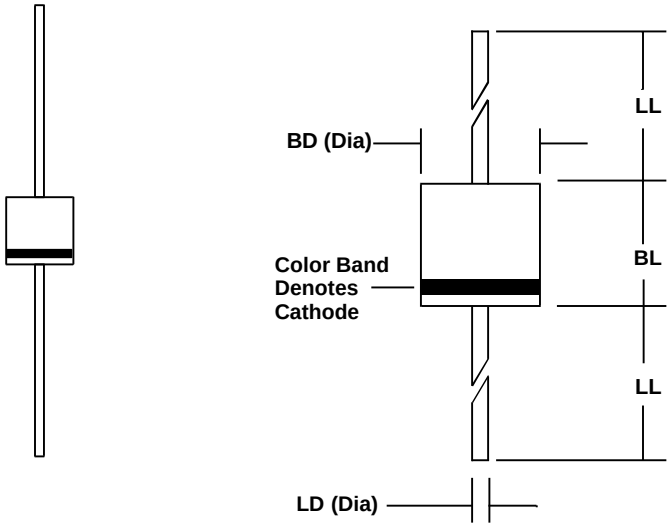
MECHANICAL DATA

- Case: Molded epoxy (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.07 Ounces (2.1 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF GP600 PACKAGE

SERIES GP600 - GP610



Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.340	8.6	0.360	9.1
BD	0.340	8.6	0.360	9.1
LL	1.00	25.4		
LD	0.048	1.2	0.052	1.3

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		GP600	GP601	GP602	GP604	GP606	GP608	GP610	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 60 °C, Lead length = 0.375 in. (9.5 mm)	I_O	6							AMPS
Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load)	I_{FSM}	400							
Maximum Forward Voltage at 6 Amps DC	V_{FM}	1							VOLTS
Maximum Full Cycle Reverse Current @ T_L = 75 °C (Note 1)	$I_{RM(AV)}$	25							µA
Maximum Average DC Reverse Current @ T_A = 25°C At Rated DC Blocking Voltage @ T_A = 100°C	I_{RM}	10 100							
Typical Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	10							°C/W
Typical Junction Capacitance (Note 2)	C_J	100							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175							°C

01.00 fgpdp601

NOTES: (1) Lead length = 0.375 in. (9.5 mm)
(2) Measured at 1MHz & applied reverse voltage of 4 volts

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18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

6 AMP GENERAL PURPOSE SILICON DIODES

RATING & CHARACTERISTIC CURVES FOR SERIES GP600 - GP610

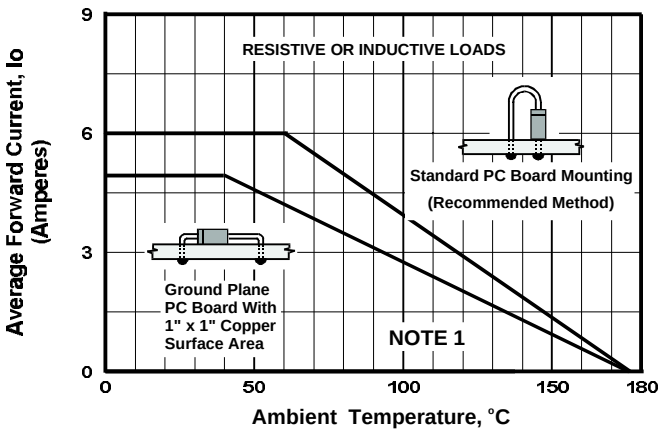


FIGURE 1. FORWARD CURRENT DERATING CURVE

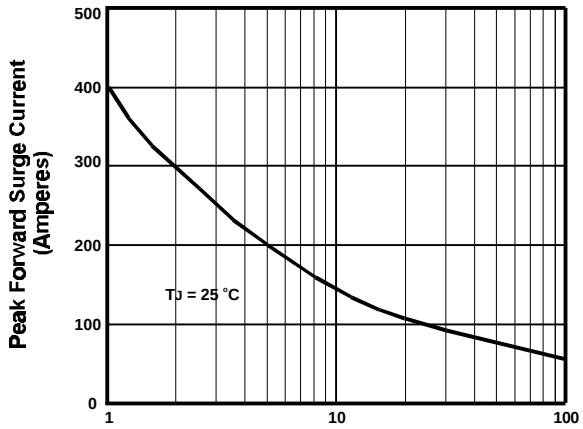


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

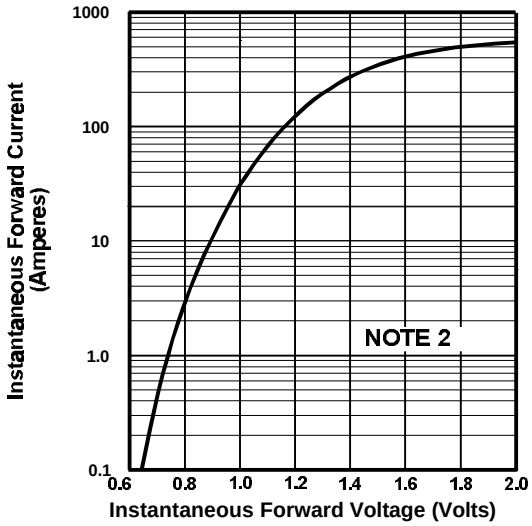


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

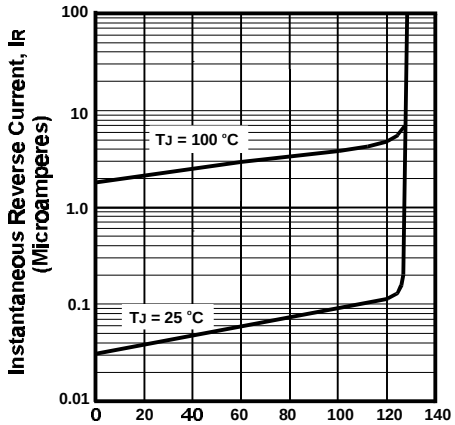


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

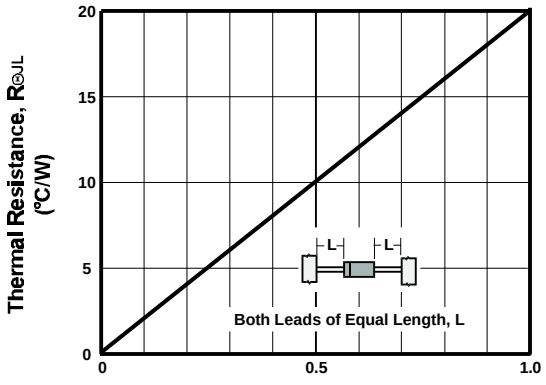


FIGURE 5. TYPICAL THERMAL RESISTANCE

NOTES

(1) Single Phase, Half Wave, 60 Hz

(2) TJ = 25 °C, Pulse Width = 300 μSec, 1.0% Duty Cycle

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

1N4148 MINIATURE ULTRA FAST SWITCHING DIODE

FEATURES

- Hermetically sealed glass package
- Low cost
- Super fast recovery time
- Low leakage
- Low forward voltage drop
- High current capability

MECHANICAL DATA

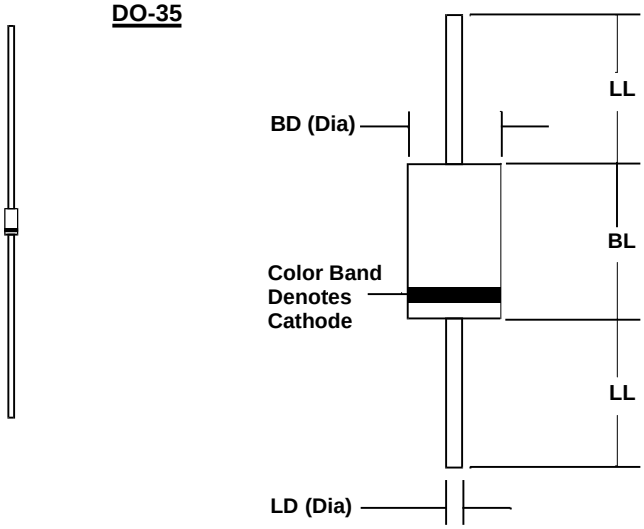
- Case: JEDEC DO-35 molded glass (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.005 Ounces (0.14 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-35 PACKAGE

1N4148

DO-35



Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.142	3.6	0.150	3.81
BD	0.07	1.78	0.072	1.83
LL	1.00	25.4		
LD	0.02	0.52	0.03	0.8

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)		SYMBOL	RATINGS	UNITS
Series Number			**1N4148**	
Breakdown Voltage at I_R = 5 µA		V_B	75	VOLTS
Breakdown Voltage at I_R = 100 µA		V_B	100	
Maximum Peak Recurrent Reverse Voltage		V_{RRM}	75	
Average Forward Rectified Current @ T_A = 50 °C, Lead length = 0.375 in. (9.5 mm)		I_O	150	mA
Peak Forward Surge Current	Pulse Width = 1 Sec Pulse Width = 1 µSec	I_{FSM}	1 4	AMPS
Maximum Forward Voltage at 10 mA DC		V_{FM}	1	VOLTS
Maximum Power Dissipation		P_{FM}	500	mW
Maximum Average DC Reverse Current	@ V_R = 20V, T_A = 25°C @ V_R = 75V, T_A = 150°C	I_{RM}	25 5	nA µA
Maximum Reverse Recovery Time (Note 1)		T_{RR}	4	nS
Typical Junction Capacitance (Note 2)		C_J	4	pF
Operating and Storage Temperature Range		T_J, T_{STG}	-65 to +175	°C

4.97ufsd101

NOTES: (1) Measured at I_R = 10 mA, V_R = 6V, R_L = 100Ω; recover to 1 mA
(2) Measured at 1MHz & applied reverse voltage of 0 volts DC

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1N4148 MINIATURE ULTRA FAST SWITCHING DIODE

RATING & CHARACTERISTIC CURVES FOR THE 1N4148

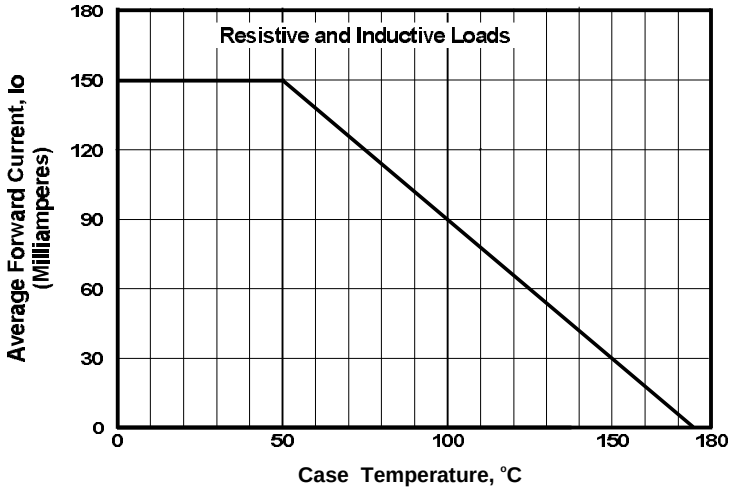


FIGURE 1. FORWARD CURRENT DERATING CURVE

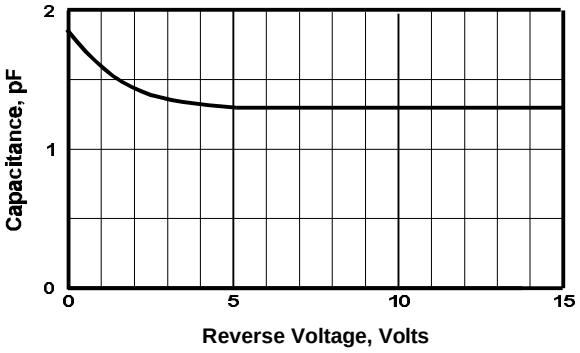


FIGURE 2. TYPICAL JUNCTION CAPACITANCE

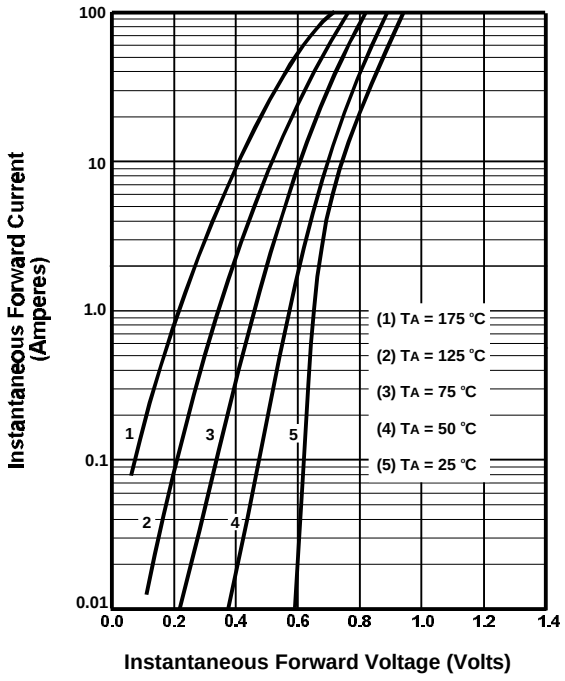


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

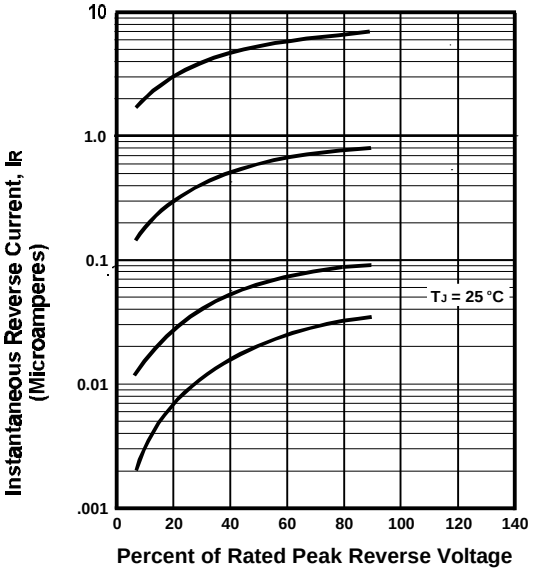


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. FSDP-101-1B

1 AMP FAST RECOVERY SILICON DIODES

FEATURES

- Low cost
- Low leakage
- Low forward voltage drop
- High current capacity
- Fast switching for high efficiency

MECHANICAL DATA

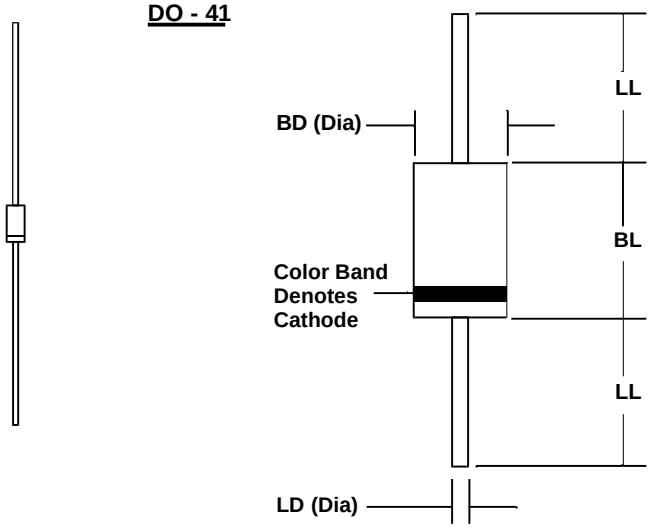
- Case: JEDEC DO-41, molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.012 Ounces (0.34 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-41 PACKAGE

SERIES 1N4933 - 1N4937

DO - 41



Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.160	4.1	0.205	5.2
BD	0.103	2.6	0.107	2.7
LL	1.00	25.4		
LD	0.028	0.71	0.034	0.86

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
Series Number		1N4933	1N4934	1N4935	1N4936	1N4937	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	
Average Forward Rectified Current @ T_A = 75 °C, Lead length = 0.375 in. (9.5 mm)	I_O	1					AMPS
Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load)	I_{FSM}	30					
Maximum Forward Voltage at 1 Amp DC	V_{FM}	1.2					VOLTS
Maximum Reverse Recovery Time (I_F=1A, V_R=30V - See Fig. 5)	T_{RR}	200					nS
Maximum Average DC Reverse Current @ T_A = 25°C At Rated DC Blocking Voltage @ T_A = 100°C	I_{RM}	5 100					µA
Typical Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	41					°C/W
Typical Junction Capacitance (Note 2)	C_J	15					pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175					°C

4.97ffsdp1

NOTES: (1) Thermal resistance from junction to ambient with diode mounted on PC Board and lead lengths = 0.375 in. (9.5 mm)
(2) Measured at 1MHz & applied reverse voltage of 4 volts

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18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

1 AMP FAST RECOVERY SILICON DIODES

RATING & CHARACTERISTIC CURVES FOR SERIES 1N4933 - 1N4937

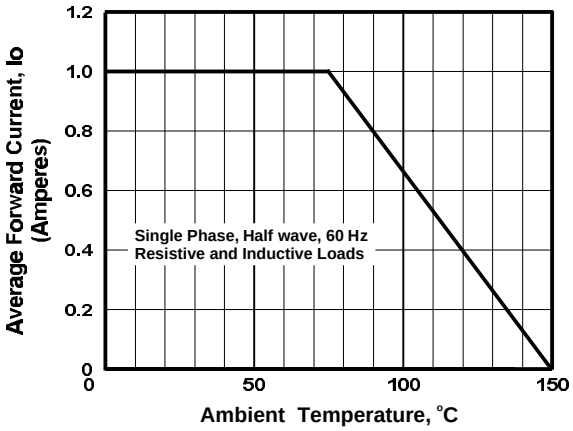


FIGURE 1. FORWARD CURRENT DERATING CURVE

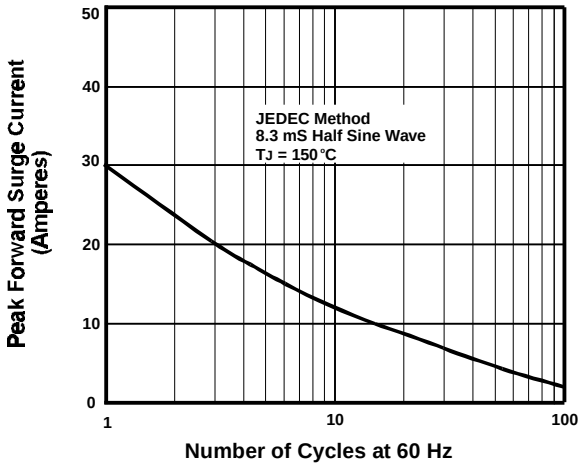


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

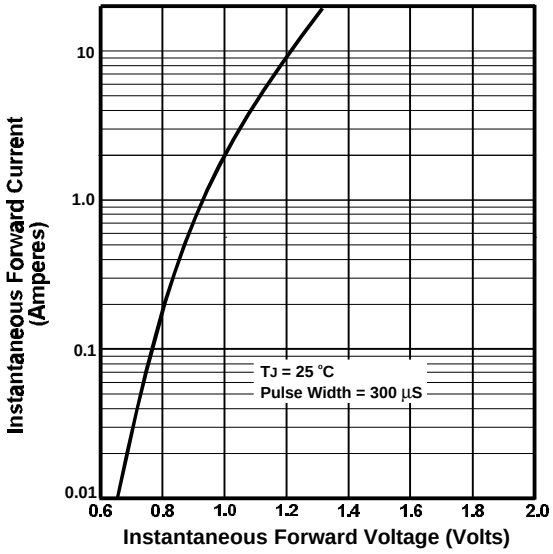


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

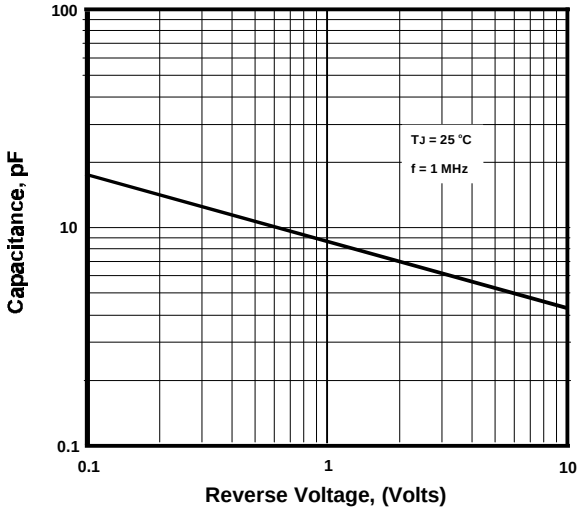
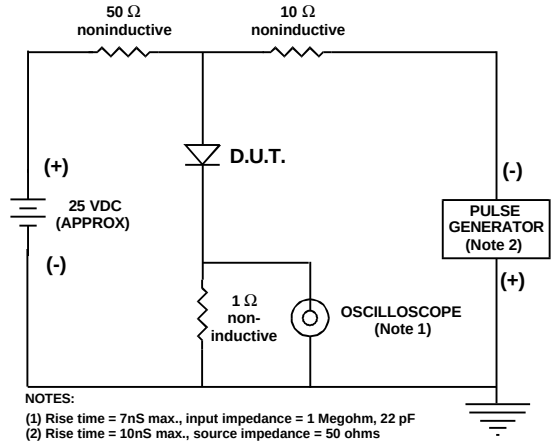


FIGURE 4. TYPICAL JUNCTION CAPACITANCE PER DIODE



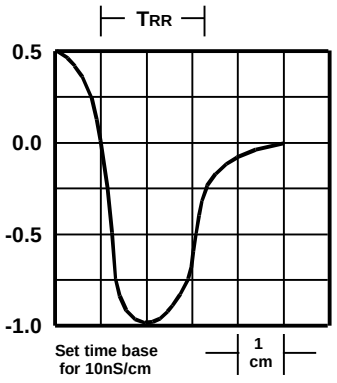


FIGURE 5. REVERSE RECOVERY TEST SETUP AND TIME CHARACTERISTIC

4.97bfsdp101

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. FSDP-103-1B

1 AMP FAST RECOVERY SILICON DIODES

FEATURES

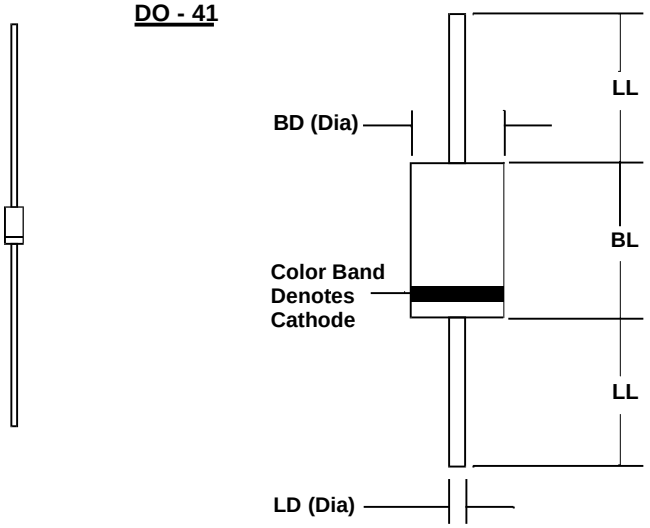
- Low cost
- Low leakage
- Low forward voltage drop
- High current capacity
- Fast switching for high efficiency

MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-41 PACKAGE

SERIES RP100 - RP110

DO - 41



Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.160	4.1	0.205	5.2
BD	0.103	2.6	0.107	2.7
LL	1.00	25.4		
LD	0.028	0.71	0.034	0.86

MECHANICAL DATA

- Case: JEDEC DO-41, molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.012 Ounces (0.34 Grams)

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		RP100	RP101	RP102	RP104	RP106	RP108	RP110	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 75 °C (Lead length = 0.375 in. (9.5 mm))	I_O	1							AMPS
Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load)	I_{FSM}	30							
Maximum Forward Voltage at 1 Amp DC	V_{FM}	1.3							VOLTS
Maximum Reverse Recovery Time (I_F=0.5A, I_R=1A, I_{RR}=0.25A)	T_{RR}	150				250	500 (Note 3)		nS
Maximum Average DC Reverse Current @ T_A = 25°C At Rated DC Blocking Voltage @ T_A = 100°C	I_{RM}	5 50							µA
Typical Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	50							°C/W
Typical Junction Capacitance (Note 2)	C_J	15							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175							°C

4.97ffsdp1a

NOTES: (1) Thermal resistance junction to ambient with diode mounted on PC Board and lead lengths = 0.375 in. (9.5 mm)
(2) Measured at 1MHz & applied reverse voltage of 4 volts
(3) 300nS available - consult factory

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. FSPD-100-1B

1 AMP HIGH RELIABILITY FAST RECOVERY DIODES

FEATURES

- **Proprietary "Soft Glass® " P/N junction passivation**
- **Void-free chip soldering**
- **Extremely low leakage at high temperatures**
- **Ideal for continuous high temperature applications**
- **High surge current capability**
- **Low forward voltage drop**
- **1A at T_A = 75 °C with no thermal runaway**

MECHANICAL DATA

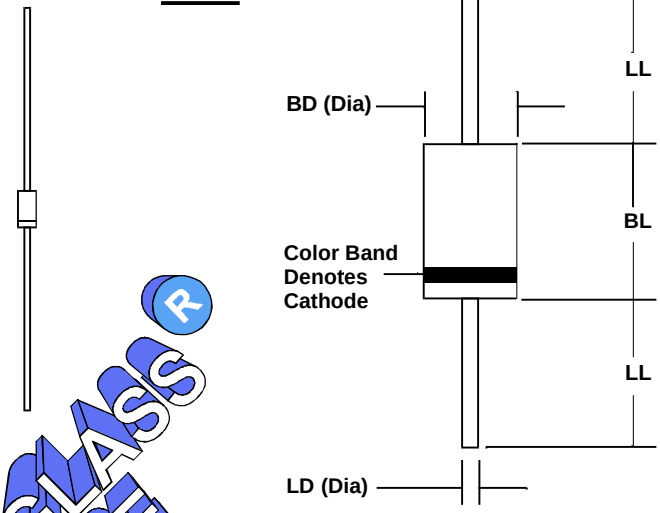
- **Case: JEDEC DO-41, molded silica glass (U/L Flammability Rating 94V-0)**
- **Terminals: Plated axial leads**
- **Soldering: Per MIL-STD 202E Method 208 guaranteed**
- **Polarity: Color band denotes cathode**
- **Mounting Position: Any**
- **Weight: 0.012 Ounces (0.34 Grams)**

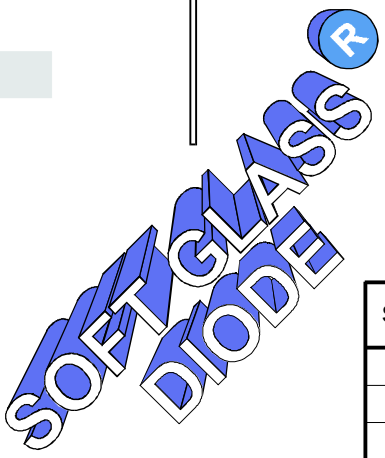
MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-41 PACKAGE

SERIES RGP100 - RGP110

DO - 41





Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.160	4.1	0.205	5.2
BD	0.103	2.6	0.107	2.7
LL	1.00	25.4		
LD	0.028	0.71	0.034	0.86

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		RGP 100	RGP 101	RGP 102	RGP 104	RGP 106	RGP 108	RGP 110	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 75 °C, Lead length = 0.375 in. (9.5 mm)	I_O	1							AMPS
Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load)	I_{FSM}	50							
Maximum Forward Voltage at 1 Amp DC	V_{FM}	1.2							VOLTS
Maximum Reverse Recovery Time (I_F=0.5A, I_R=1A, I_{RR}=0.25A)	T_{RR}	150				250	500 (Note 3)		nS
Maximum Average DC Reverse Current @ T_A = 25°C At Rated DC Blocking Voltage @ T_A = 100°C	I_{RM}	0.5 25							µA
Typical Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	55							°C/W
Typical Junction Capacitance (Note 2)	C_J	15							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175							°C

4.97ffspd100

NOTES: (1) Lead length = 0.375 in. (9.5 mm)
(2) Measured at 1MHz & applied reverse voltage of 4 volts
(3) 300nS avaiable - consult factory

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Gardena, CA 90248 U.S.A
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1 AMP HIGH RELIABILITY FAST RECOVERY DIODES

RATING & CHARACTERISTIC CURVES FOR SERIES RGP100 - RGP110

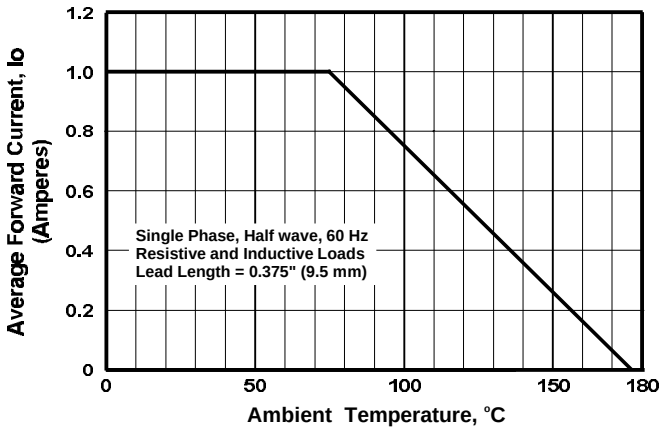


FIGURE 1. FORWARD CURRENT DERATING CURVE

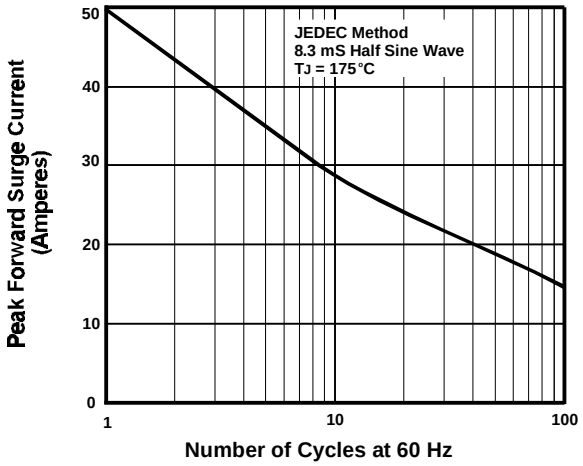


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

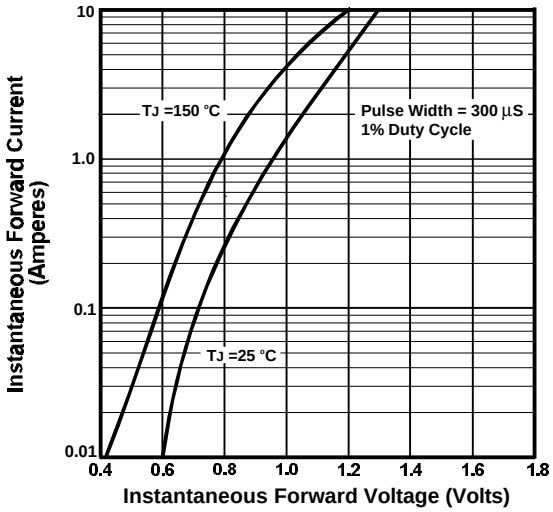


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC

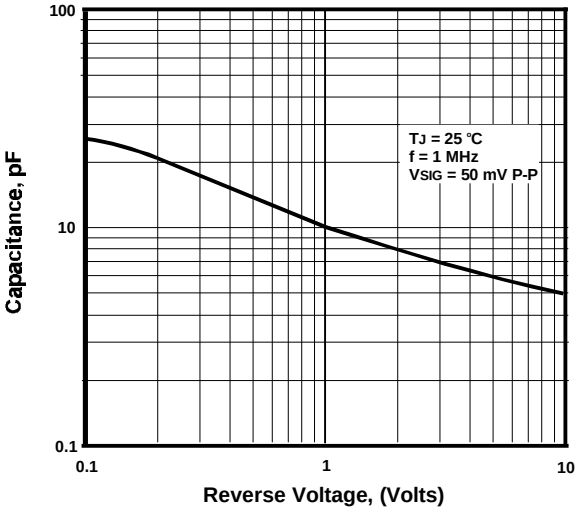
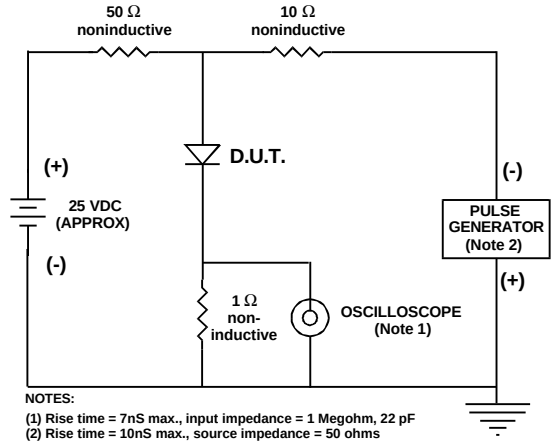


FIGURE 4. TYPICAL JUNCTION CAPACITANCE



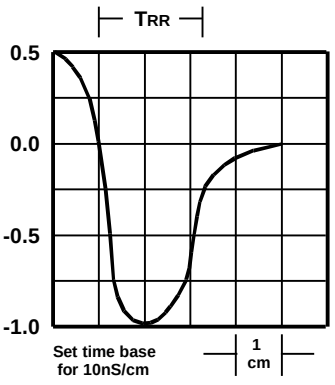


FIGURE 5. REVERSE RECOVERY TEST SETUP AND TIME CHARACTERISTIC

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. FSPD-200-1B

2 AMP FAST RECOVERY SILICON DIODES

FEATURES

- Proprietary "Soft Glass® " P/N junction passivation
- Void-free chip soldering
- Extremely low leakage at high temperatures
- Ideal for continuous high temperature applications
- High surge current capability
- Low forward voltage drop
- 2A at T_A = 75 °C with no thermal runaway

MECHANICAL DATA

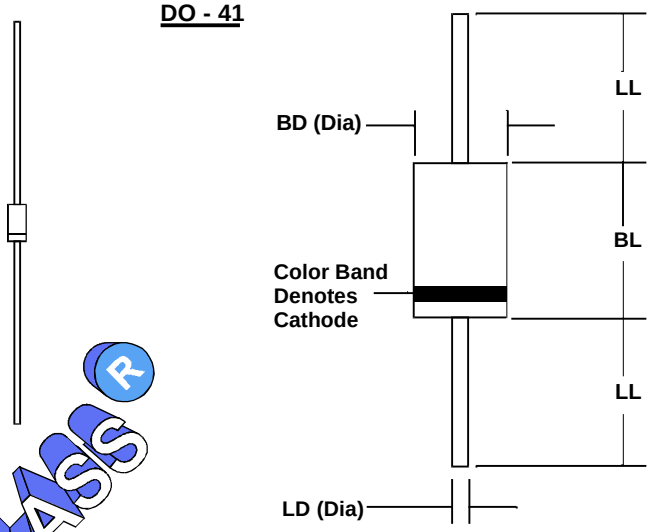
- Case: JEDEC DO-41 molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.01 Ounces (0.4 Grams)

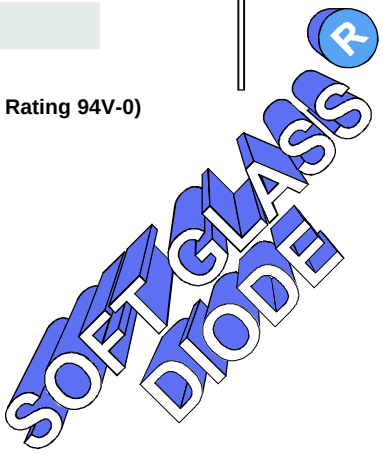
MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-41 PACKAGE

SERIES RGP200 - RGP210

DO - 41





Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.160	4.1	0.205	5.2
BD	0.103	2.6	0.107	2.7
LL	1.00	25.4		
LD	0.028	0.71	0.034	0.86

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		RGP 200	RGP 201	RGP 202	RGP 204	RGP 206	RGP 208	RGP 210	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 75 °C, Lead length = 0.375 in. (9.5 mm)	I_O	2							AMPS
Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load)	I_{FSM}	60							
Maximum Forward Voltage at 2 Amps DC	V_{FM}	1.3							VOLTS
Maximum Reverse Recovery Time (I_F=0.5A, I_R=1A, I_{RR}=0.25A)	T_{RR}	150				250	500 (Note 2)		nS
Maximum Average DC Reverse Current @ T_A = 25°C At Rated DC Blocking Voltage @ T_A = 100°C	I_{RM}	1.0 100							µA
Typical Junction Capacitance (Note 1)	C_J	15							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175							°C

4.97ffspd200

NOTES: (1) Measured at 1MHz & applied reverse voltage of 4 volts
(2) 300 nS available - consult factory

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

2 AMP FAST RECOVERY SILICON DIODES

RATING & CHARACTERISTIC CURVES FOR SERIES RGP200 - RGP210

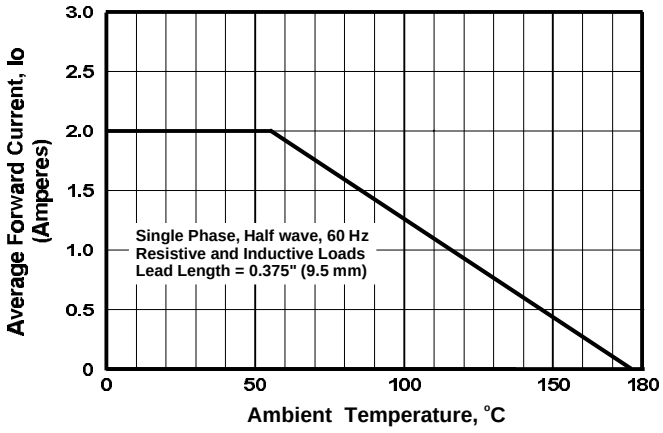


FIGURE 1. FORWARD CURRENT DERATING CURVE

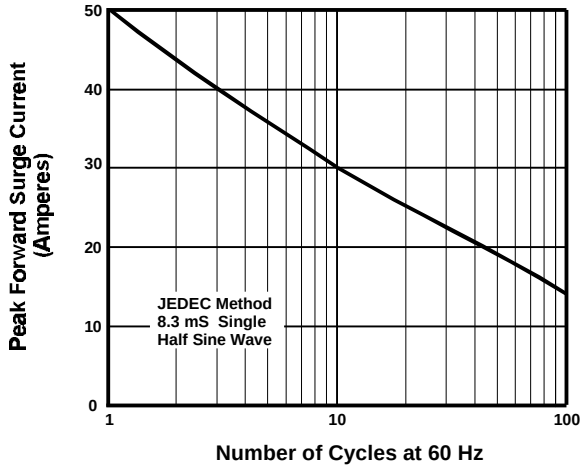


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

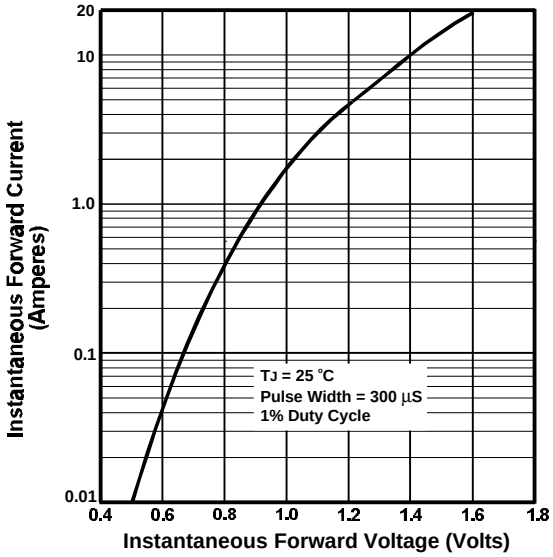


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC

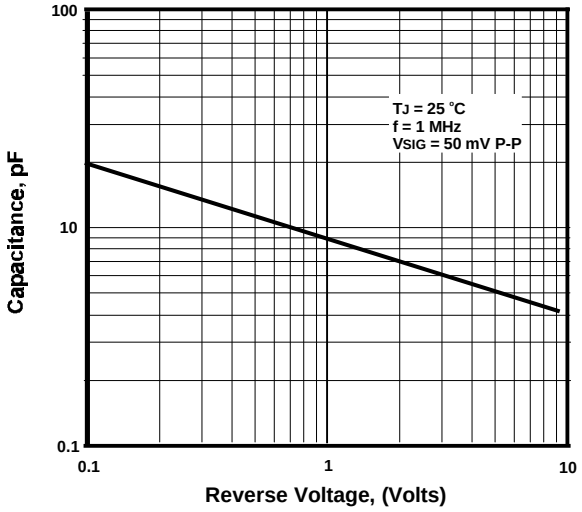
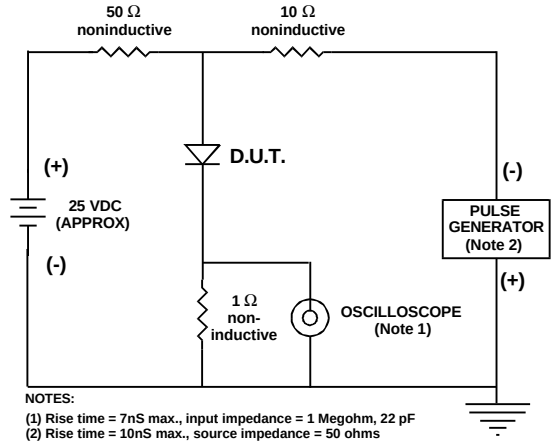


FIGURE 4. TYPICAL JUNCTION CAPACITANCE



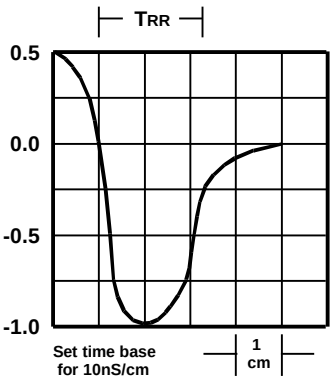


FIGURE 5. REVERSE RECOVERY TEST SETUP AND TIME CHARACTERISTIC

4.97bfspd200

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. FSDP-301-1B

3 AMP FAST RECOVERY SILICON DIODES

FEATURES

- Low cost
- Low leakage
- Low forward voltage drop
- High current capacity
- Fast switching for high efficiency

MECHANICAL DATA

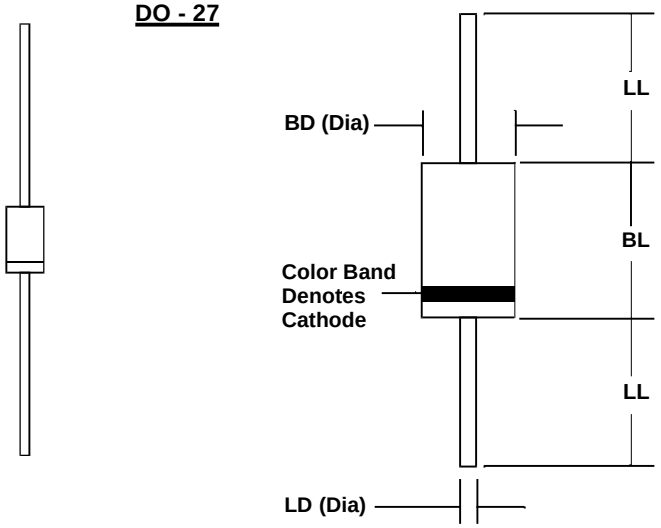
- Case: JEDEC DO-27 molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.02 Ounces (0.7 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-27 PACKAGE

SERIES RP300 - RP310

DO - 27



Sym	Minimum		Maximum	
	In	mm	In	mm
BL			0.365	9.28
BD			0.205	5.2
LL	1.00	25.4		
LD	0.048	1.2	0.052	1.3

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		RP300	RP301	RP302	RP304	RP306	RP308	RP310	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 55 °C, Lead length = 0.375 in. (9.5 mm)	I_O	3							AMPS
Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load)	I_{FSM}	200							
Maximum Forward Voltage at 3 Amps DC	V_{FM}	1.3							VOLTS
Maximum Reverse Recovery Time (I_F=0.5A, I_R=1A, I_{RR}=0.25A)	T_{RR}	150				250	500 (Note 2)		nS
Maximum Average DC Reverse Current @ T_A = 25°C At Rated DC Blocking Voltage @ T_A = 100°C	I_{RM}	10 150							µA
Typical Junction Capacitance (Note 1)	C_J	60							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175							°C

4.97ffsdp301

NOTES: (1) Measured at 1MHz and applied reverse voltage of 4 volts
(2) Test conditions: I_F=0.5A, I_R=1A, I_{RR}=0.25A

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Gardena, CA 90248 U.S.A
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3 AMP FAST RECOVERY SILICON DIODES

RATING & CHARACTERISTIC CURVES FOR SERIES RP300 - RP310

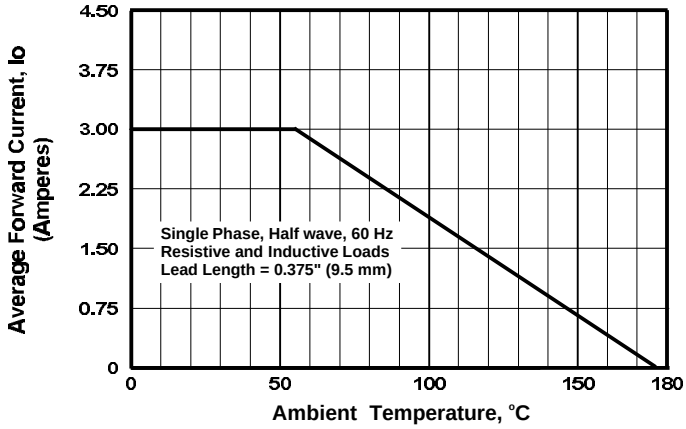


FIGURE 1. FORWARD CURRENT DERATING CURVE

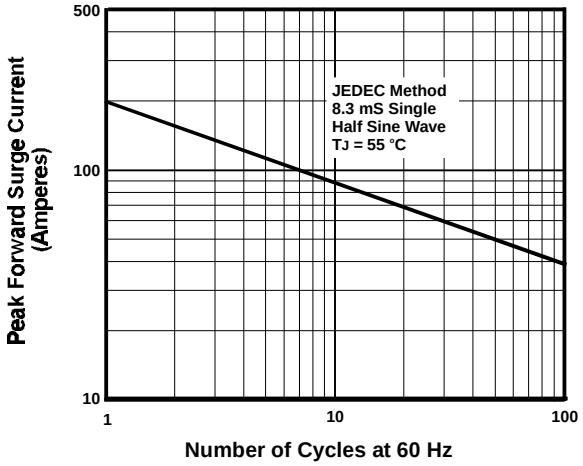


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

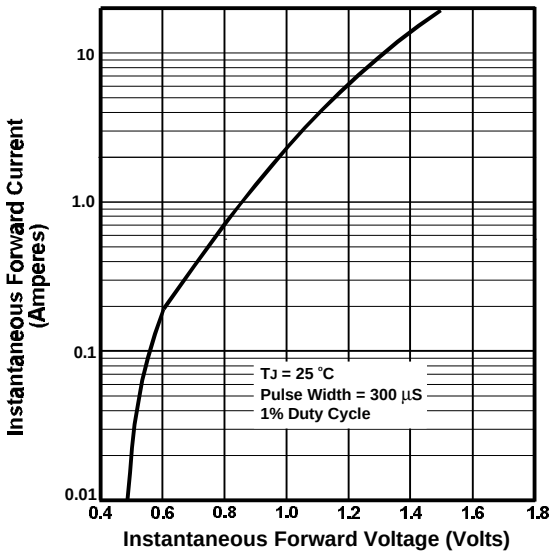


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC

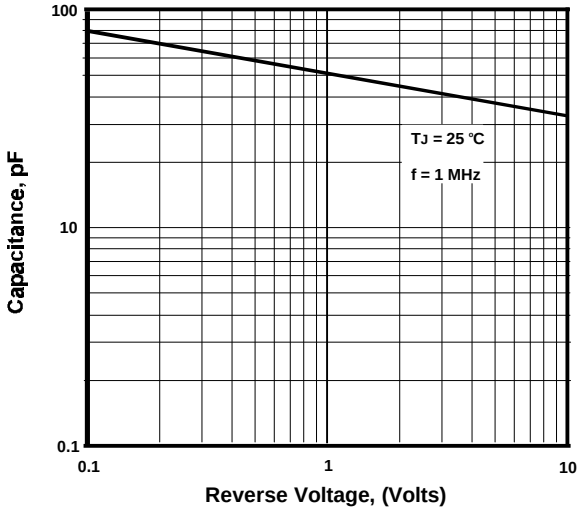
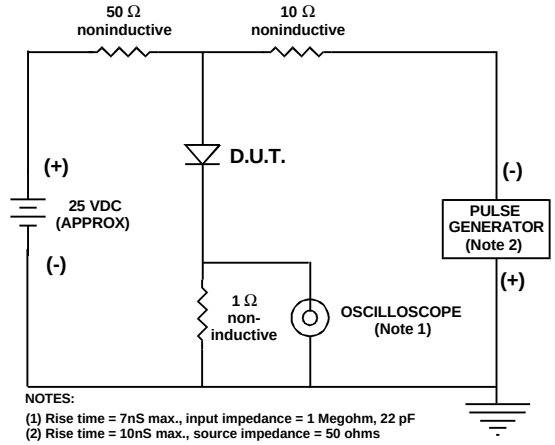


FIGURE 4. TYPICAL JUNCTION CAPACITANCE



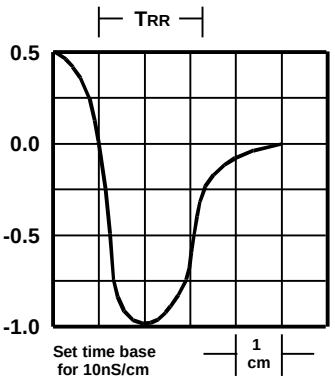


FIGURE 5. REVERSE RECOVERY TEST SETUP AND TIME CHARACTERISTIC

4.97bfsdp301

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. FSPD-300-1B

3 AMP HIGH RELIABILITY FAST RECOVERY DIODES

FEATURES

- Proprietary "Soft Glass® " P/N junction passivation
- Void-free chip soldering
- Extremely low leakage at high temperatures
- Ideal for continuous high temperature applications
- High surge current capability
- Low forward voltage drop
- 3A at T_A = 55 °C with no thermal runaway

MECHANICAL DATA

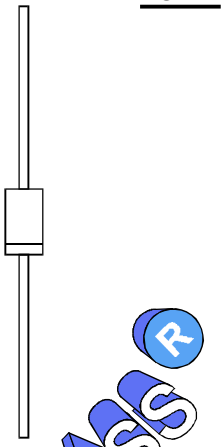
- Case: JEDEC DO-27 molded silica glass (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.02 Ounces (0.7 Grams)

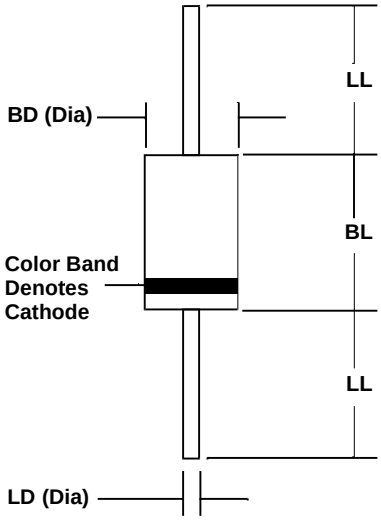
MECHANICAL SPECIFICATION

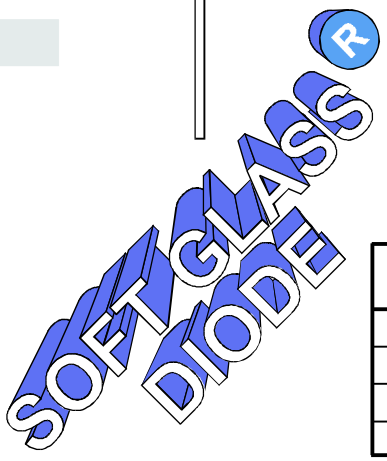
ACTUAL SIZE OF DO-27 PACKAGE

SERIES RGP300 - RGP310

DO - 27







Sym	Minimum		Maximum	
	In	mm	In	mm
BL			0.365	9.28
BD			0.205	5.2
LL	1.00	25.4		
LD	0.048	1.2	0.052	1.3

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		RGP 300	RGP 301	RGP 302	RGP 304	RGP 306	RGP 308	RGP 310	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 55 °C, Lead length = 0.375 in. (9.5 mm)	I_O	3							AMPS
Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load)	I_{FSM}	200							
Maximum Forward Voltage at 3 Amps DC	V_{FM}	1.2							VOLTS
Maximum Reverse Recovery Time (I_F=0.5A, I_R=1A, I_{RR}=0.25A)	T_{RR}	150				250	500 (Note 3)		nS
Maximum Average DC Reverse Current @ T_A = 25°C At Rated DC Blocking Voltage @ T_A = 100°C	I_{RM}	2 100							µA
Typical Junction Capacitance (Note 2)	C_J	40							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175							°C

4.97ffspd300

NOTES: (1) Lead length = 0.375 in. (9.5 mm)
(2) Measured at 1MHz & applied reverse voltage of 4 volts
(3) 300 nS avaiable - consult with factory

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
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3 AMP HIGH RELIABILITY FAST RECOVERY DIODES

RATING & CHARACTERISTIC CURVES FOR SERIES RGP300 - RGP310

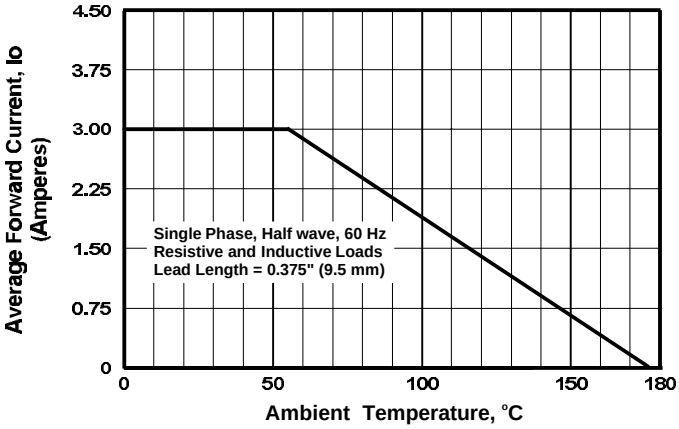


FIGURE 1. FORWARD CURRENT DERATING CURVE

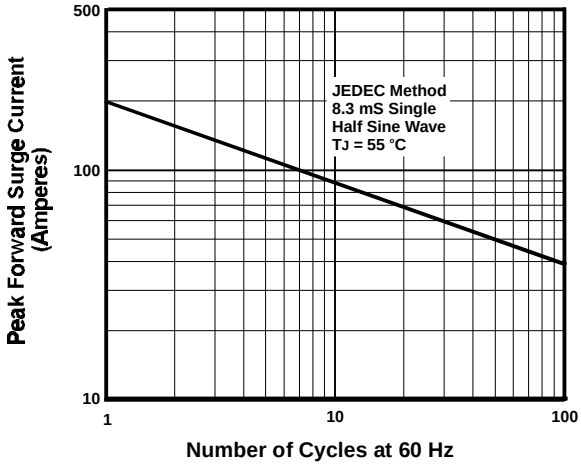


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

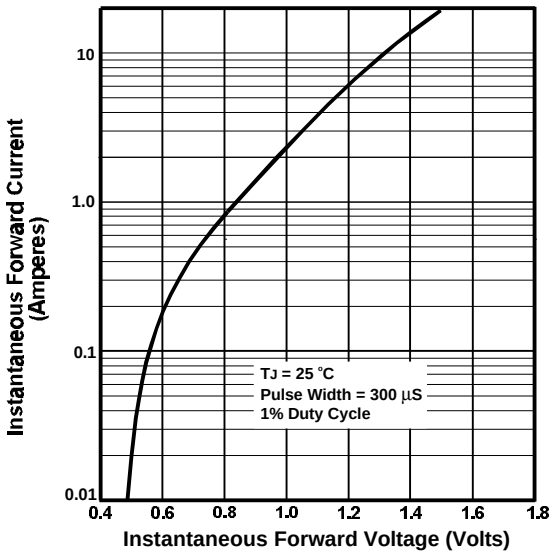


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC

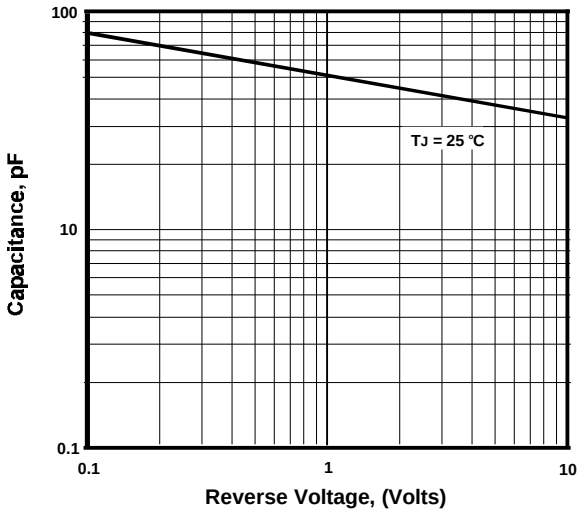
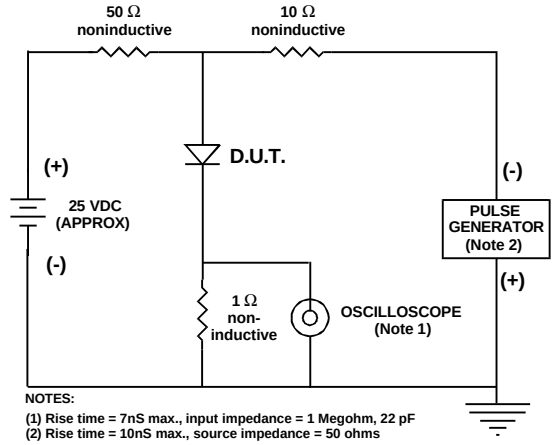


FIGURE 4. TYPICAL JUNCTION CAPACITANCE



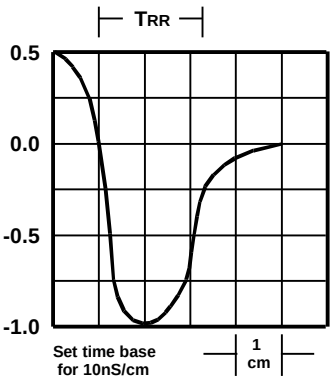


FIGURE 5. REVERSE RECOVERY TEST SETUP AND TIME CHARACTERISTIC

4.97bfspd300

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. FSDP-601-1C

6 AMP FAST RECOVERY SILICON DIODES

FEATURES

- Low cost
- Low leakage
- Low forward voltage drop
- High current capacity
- Fast switching for high efficiency

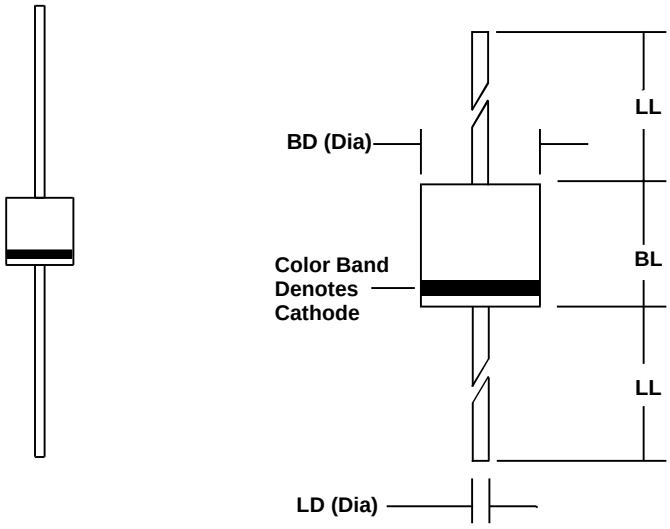
MECHANICAL DATA

- Case: Molded epoxy (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.07 Ounces (2.1 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF RP600 PACKAGE

SERIES RP600 - RP610



Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.340	8.6	0.360	9.1
BD	0.340	8.6	0.360	9.1
LL	1.00	25.4		
LD	0.048	1.2	0.052	1.3

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		RP600	RP601	RP602	RP604	RP606	RP608	RP610	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	
Average Forward Rectified Current @ T_A = 60 °C, Lead length = 0.375 in. (9.5 mm)	I_O	6							AMPS
Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load)	I_{FSM}	300							
Maximum Forward Voltage at 6 Amps DC	V_{FM}	1.3							VOLTS
Maximum Reverse Recovery Time (I_F=0.5A, I_R=1A, I_{RR}=0.25A)	T_{RR}	150				250	500 (Note 3)		nS
Maximum Average DC Reverse Current @ T_A = 25°C At Rated DC Blocking Voltage @ T_A = 100°C	I_{RM}	10 200							µA
Typical Junction Capacitance (Note 2)	C_J	100							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175							°C

01.00ffsdp601

NOTES: (1) Lead length = 0.375 in. (9.5 mm)
(2) Measured at 1MHz & applied reverse voltage of 4 volts
(3) 300 nS avaiable - consult with factory

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18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

6 AMP FAST RECOVERY DIODES

RATING & CHARACTERISTIC CURVES FOR SERIES RP600 - RP610

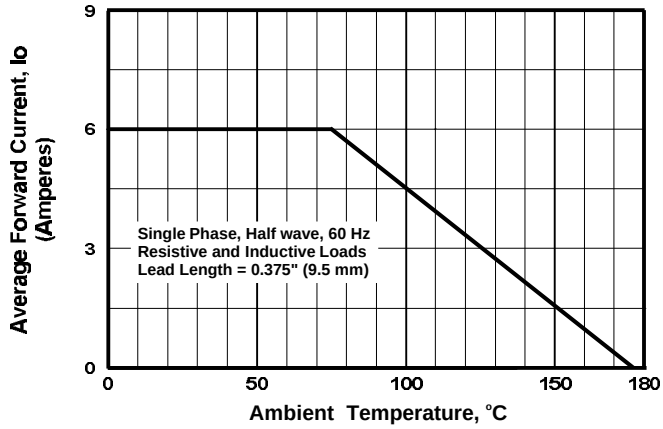


FIGURE 1. FORWARD CURRENT DERATING CURVE

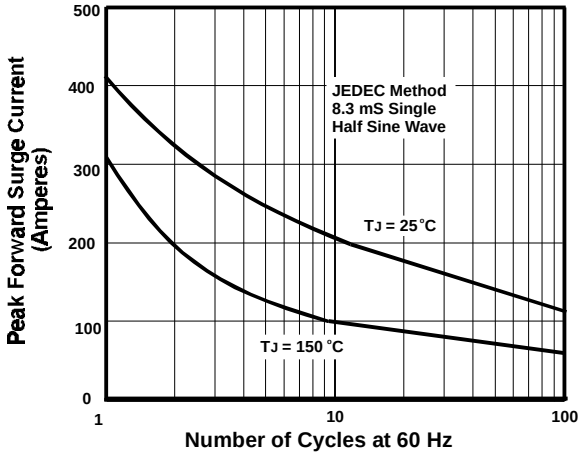


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

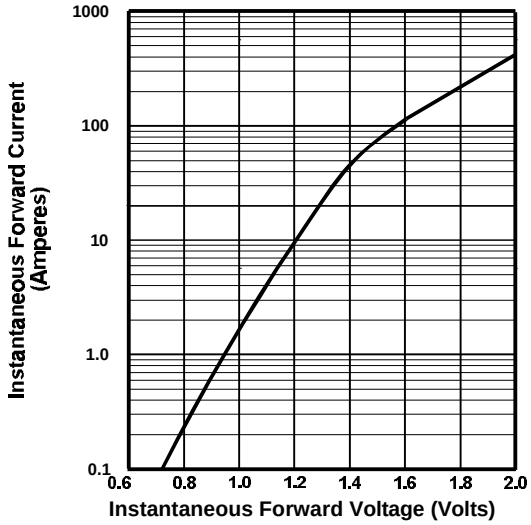


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

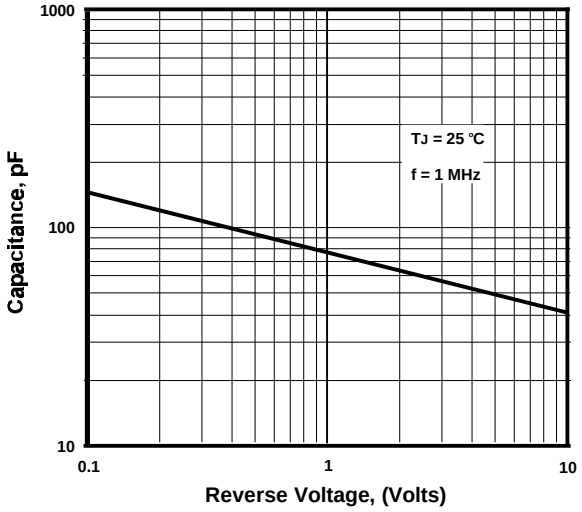
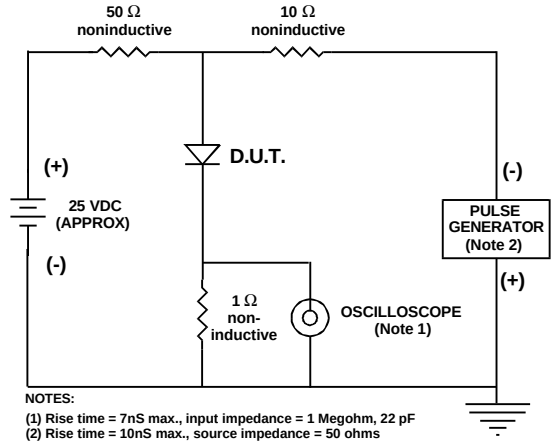


FIGURE 4. TYPICAL JUNCTION CAPACITANCE



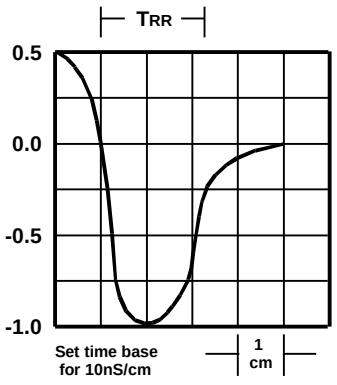


FIGURE 5. REVERSE RECOVERY TEST SETUP AND TIME CHARACTERISTIC

4.97bfsdp601

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

8 AMP FAST RECOVERY RECTIFIERS

FEATURES

- Glass Passivated for high reliability/temperature performance
- Low switching noise
- Low forward voltage drop
- Low thermal resistance
- High surge current capability
- Fast switching for high efficiency
- Low leakage

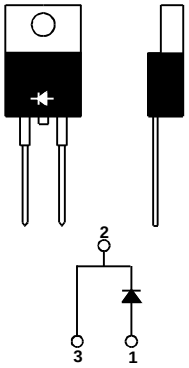
MECHANICAL DATA

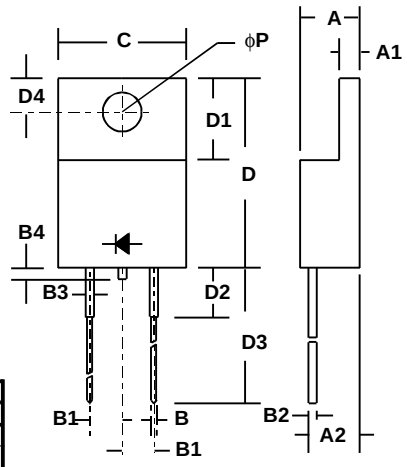
- Case: TO-220 molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Plated rectangular pins
- Solderability: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Marked on case
- Mounting Position: Any
- Weight: 0.07 Ounces (2.05 Grams)

MECHANICAL SPECIFICATION

ACTUAL SIZE OF TO-220AC PACKAGE

SERIES RGP800 - RGP806





TO - 220AC

Sym	Minimum		Maximum	
	in	mm	in	mm
A			0.187	4.75
A1	0.121*	4.75*		
A2	0.14*	3.56*		
B	0.035	0.9	0.043	1.1
B1	0.09	2.3	0.102	2.6
B2	0.025*	0.64*		
B3	0.050*	1.27*		
B4			0.04	1.0
C			0.413	10.5
D	0.59	15.0	0.61	15.5
D1	0.262*	6.6*		
D2			0.16	4.0
D3	0.54	13.7	0.60	15.2
D4	0.108*	2.75*		
ϕP	0.126*	3.2*		

*** These dimensions are "Typicals".**

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS					UNITS
Series Number		RGP800	RGP801	RGP802	RGP804	RGP806	
Maximum DC Blocking Voltage	V_{RM}	50	100	200	400	600	VOLTS
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	50	100	200	400	600	
Average Forward Rectified Current @ Tc = 110 °C	I_O	8					AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	150					
Maximum Forward Voltage at 8 Amps DC	V_{FM}	1.3					VOLTS
Maximum Average DC Reverse Current @ Tc = 25 °C At Rated DC Blocking Voltage @ Tc = 100 °C	I_{RM}	10 250					µA
Typical Thermal Resistance, Junction to Case	$R_{\theta JC}$	3					°C/W
Typical Junction Capacitance (Note 1)	C_J	55					pF
Maximum Reverse Recovery Time (I_F=0.5A, I_R=1A, I_{RR}=0.25A)	T_{RR}	150			200	250	nSec
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-50 to +150					°C

NOTES: (1) Measured at 1MHz and an applied reverse voltage of 4 volts.

4.97ffsdg800

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8 AMP FAST RECOVERY DIODES

RATING & CHARACTERISTIC CURVES FOR SERIES RGP800 - RGP806

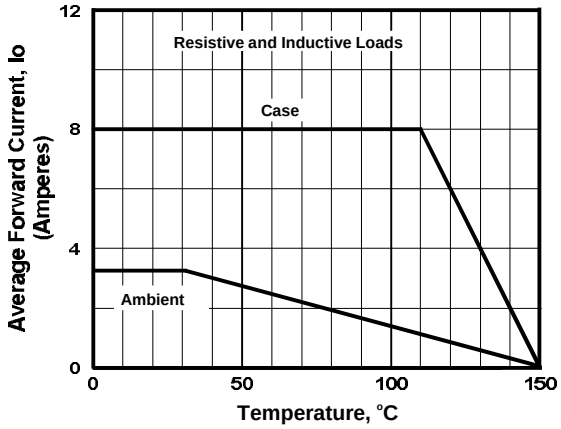


FIGURE 1. FORWARD CURRENT DERATING CURVE

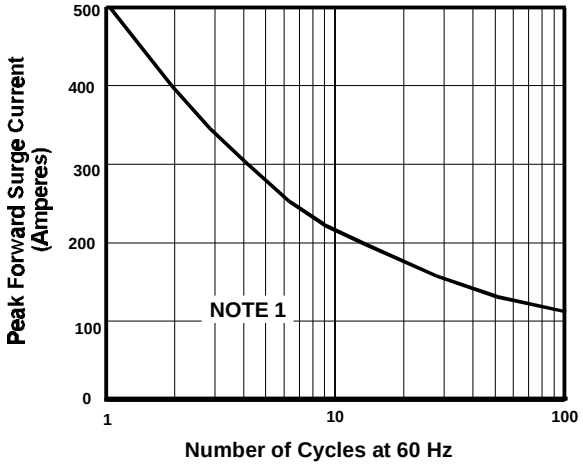


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

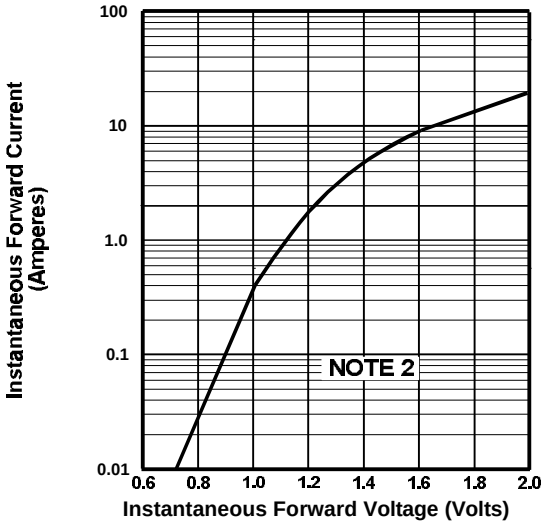


FIGURE 3. TYPICAL FORWARD CHARACTERISTICS

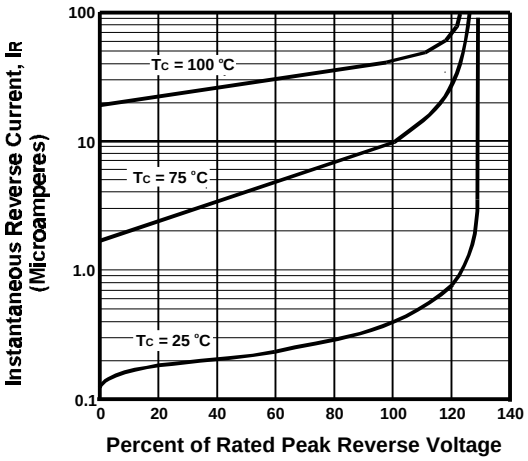


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

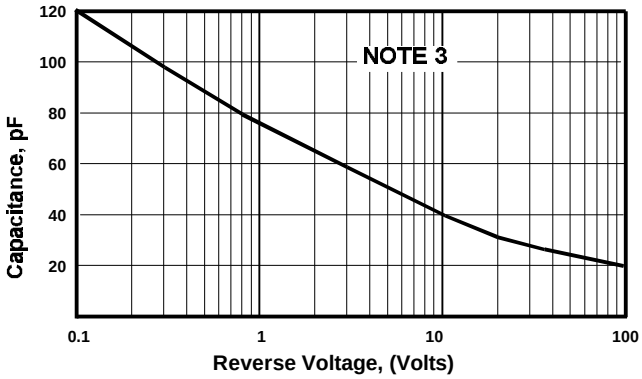


FIGURE 5. TYPICAL JUNCTION CAPACITANCE

NOTES

(1) JEDEC Method, 8.3 mSec. Single Half Sine Wave, T_J = 150 °C

(2) T_J = 25 °C, Pulse Width = 300 µSec, 2.0% Duty Cycle

(3) T_J = 25 °C, f = 1 MHz

4.97bfsdg800

SECTION I

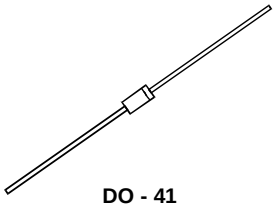
HIGH VOLTAGE DIODES

STANDARD AND FAST RECOVERY

DO-41 PACKAGE

200 to 500 MILLIAMPERES

1200 to 5000 VOLTS



DO - 41

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Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. HVGP-1000-1C

HIGH VOLTAGE DIODE RECTIFIERS

FEATURES

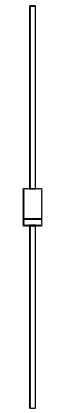
- Proprietary "Soft Glass® " P/N junction passivation
- Void-free chip soldering
- Extremely low leakage at high temperatures
- High current capability
- High surge current capability
- Low forward voltage drop
- High reliability

MECHANICAL DATA

- Case: JEDEC DO-41 molded plastic
  (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: DO-41 - 0.012 Ounces (0.34 Grams)

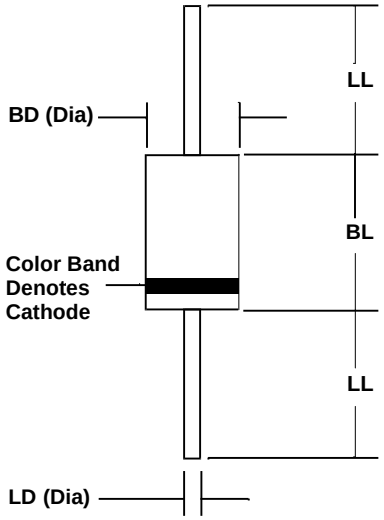
MECHANICAL SPECIFICATION

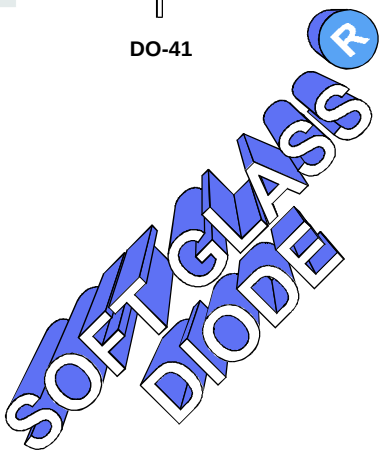
ACTUAL SIZE OF DO-41 PACKAGE



DO-41

SERIES GP1120 - GP1500





Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.160	4.1	0.205	5.2
BD	0.103	2.6	0.107	2.7
LL	1.00	25.4		
LD	0.028	0.71	0.034	0.86

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS								UNITS
Series Number		GP 1150	GP 1180	GP 1200	GP 1250	GP 1300	GP 1400	GP 1500	GP 1600	
Maximum DC Blocking Voltage	V_{RM}	1500	1800	2000	2500	3000	4000	5000	6000	VOLTS
Maximum RMS Voltage	V_{RMS}	1050	1260	1400	1750	2100	2800	3500	4200	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	1500	1800	2000	2500	3000	4000	5000	6000	
Average Forward Rectified Current @ T_A = 50 °C, Lead length = 0.375 in. (9.5 mm)	I_O	1000			500			200		mA
Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load)	I_{FSM}	35			25			15		AMPS
Maximum Forward Voltage at Rated Forward Current	V_{FM}	1.5			3.0			4.5	6.0	VOLTS
Maximum Average DC Reverse Current At Rated DC Blocking Voltage @ T_A = 25°C	I_{RM}	1.0								µA
Typical Junction Capacitance (Note 1)	C_J	12								pF
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150								°C

2.01gp1120

NOTES: (1) Measured at 1MHz & applied reverse voltage of 4 volts

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HIGH VOLTAGE DIODE RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES GP1150 - GP1600

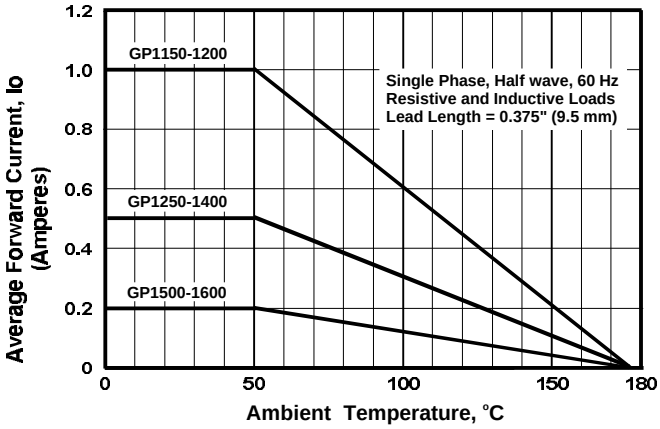

FIGURE 1. FORWARD CURRENT DERATING CURVE

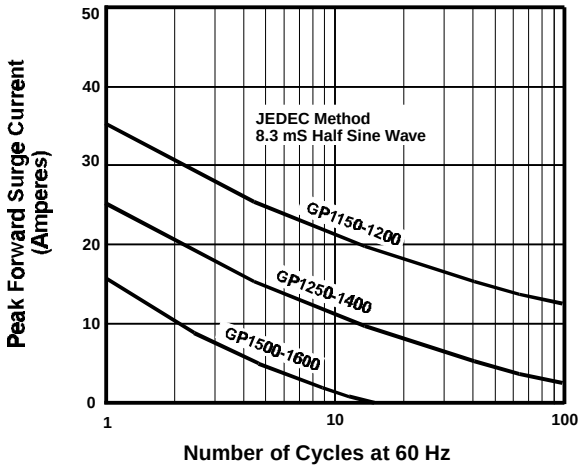

FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

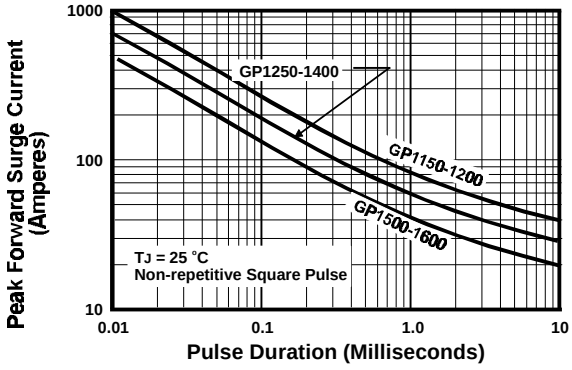

FIGURE 6. PEAK FORWARD SURGE CURRENT

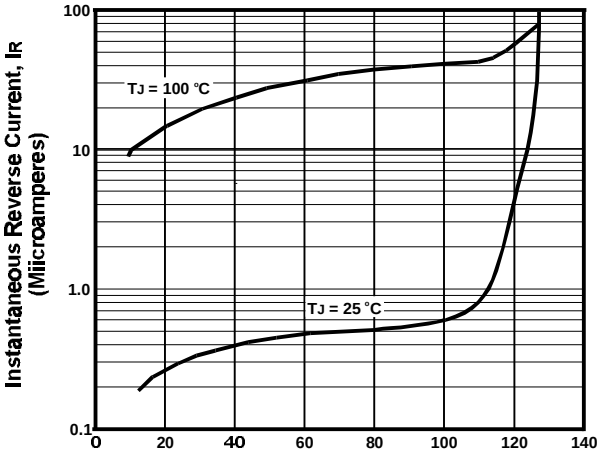

FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

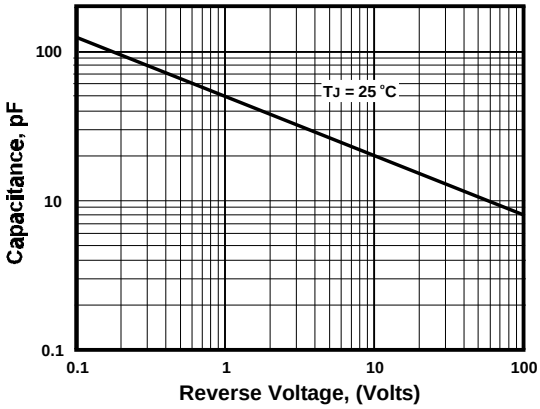

FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

4.97bhvgp100

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Data Sheet No. HVRP-1000-1C

HIGH VOLTAGE FAST RECOVERY DIODES

FEATURES

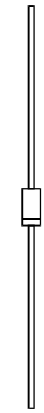
- Proprietary "Soft Glass® " P/N junction passivation
- Void-free chip soldering
- Extremely low leakage at high temperatures
- High current capability
- High surge current capability
- Low forward voltage drop
- High reliability

MECHANICAL DATA

- Case: JEDEC DO-41 molded plastic
  (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: DO-41 - 0.012 Ounces (0.34 Grams)

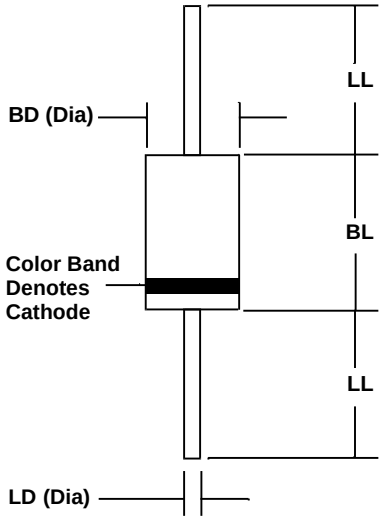
MECHANICAL SPECIFICATION

ACTUAL SIZE OF
DO-41 PACKAGE



DO-41

SERIES RP1120 - RP1500



Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.160	4.1	0.205	5.2
BD	0.103	2.6	0.107	2.7
LL	1.00	25.4		
LD	0.028	0.71	0.034	0.86

SOFT GLASS DIODE

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS								UNITS
Series Number		RGP 1120	RGP 1150	RGP 1180	RGP 1200	RGP 1250	RGP 1300	RGP 1400	RGP 1500	
Maximum DC Blocking Voltage	V_{RM}	1200	1500	1800	2000	2500	3000	4000	5000	VOLTS
Maximum RMS Voltage	V_{RMS}	840	1050	1260	1400	1750	2100	2800	3500	
Maximum Peak Recurrent Reverse Voltage	V_{RRM}	1200	1500	1800	2000	2500	3000	4000	5000	
Average Forward Rectified Current @ T_A = 50 °C (Lead length = 0.375 in. (9.5 mm))	I_O	800			400			200		mA
Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load)	I_{FSM}	30			20			10		AMPS
Maximum Forward Voltage at Rated Forward Current	V_{FM}	2.5			4.5			6.5		VOLTS
Maximum Average DC Reverse Current At Rated DC Blocking Voltage @ T_A = 25°C	I_{RM}	1.0								µA
Maximum Reverse Recovery Time (I_F=0.5A, I_R=1A, I_{RR}=0.25A)	T_{RR}	500								nS
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +125			-65 to +150					°C

2.01rgp1120

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HIGH VOLTAGE FAST RECOVERY RECTIFIERS

RATING & CHARACTERISTIC CURVES FOR SERIES RGP1120 - RGP1500

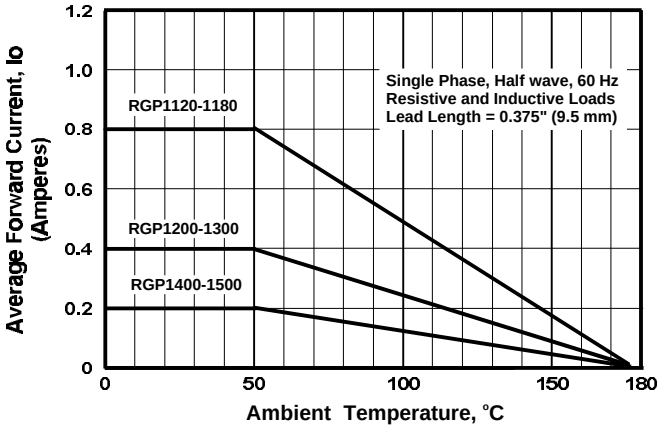


FIGURE 1. FORWARD CURRENT DERATING CURVE

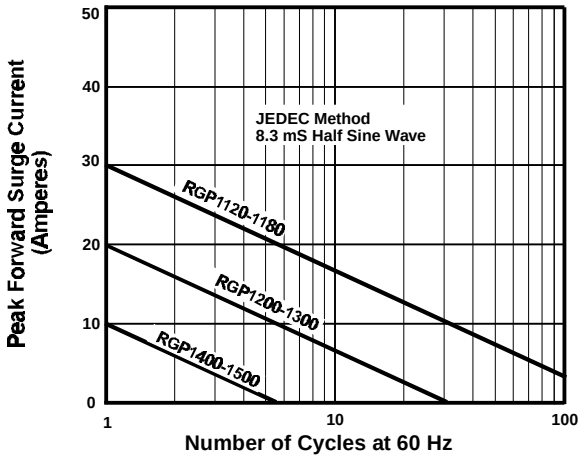


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

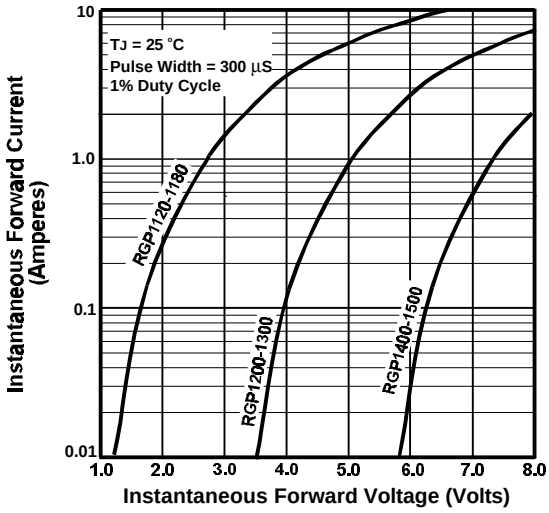


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC

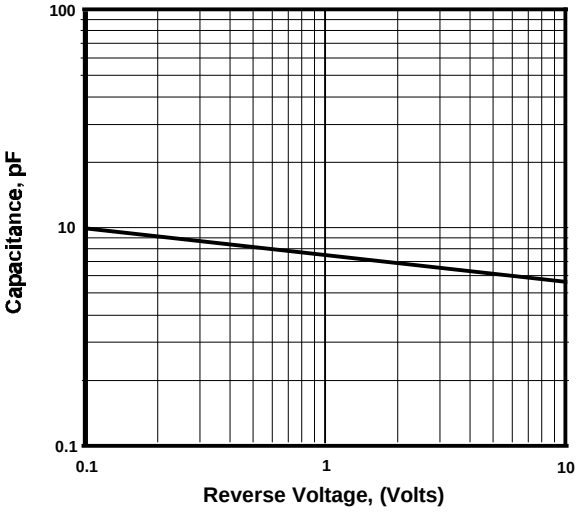
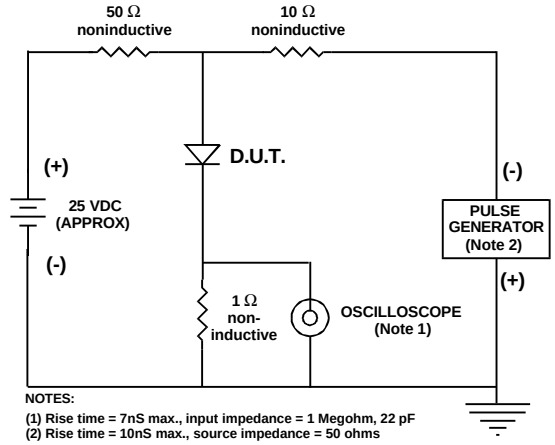


FIGURE 4. TYPICAL JUNCTION CAPACITANCE



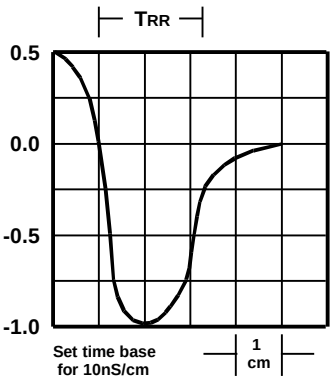


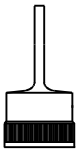
FIGURE 5. REVERSE RECOVERY TEST SETUP AND TIME CHARACTERISTIC

4.97bhvrp100

AUTOMOTIVE DIODES

Transient Voltage Suppressors (Section J)

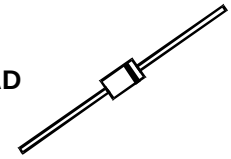
PRESS FIT



MOLDED PRODUCTS

DIODE CELLS

AXIAL LEAD



Standard Diodes (Section K)

MOLDED PRODUCTS

DIODE CELLS

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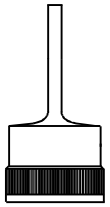
SECTION J

AUTOMOTIVE DIODES

TRANSIENT VOLTAGE SUPPRESSORS

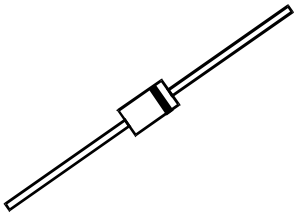
PRESS FIT



MOLDED PRODUCTS

DIODE CELLS

AXIAL LEAD



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35 AMP PRESS FIT TVS DIODES

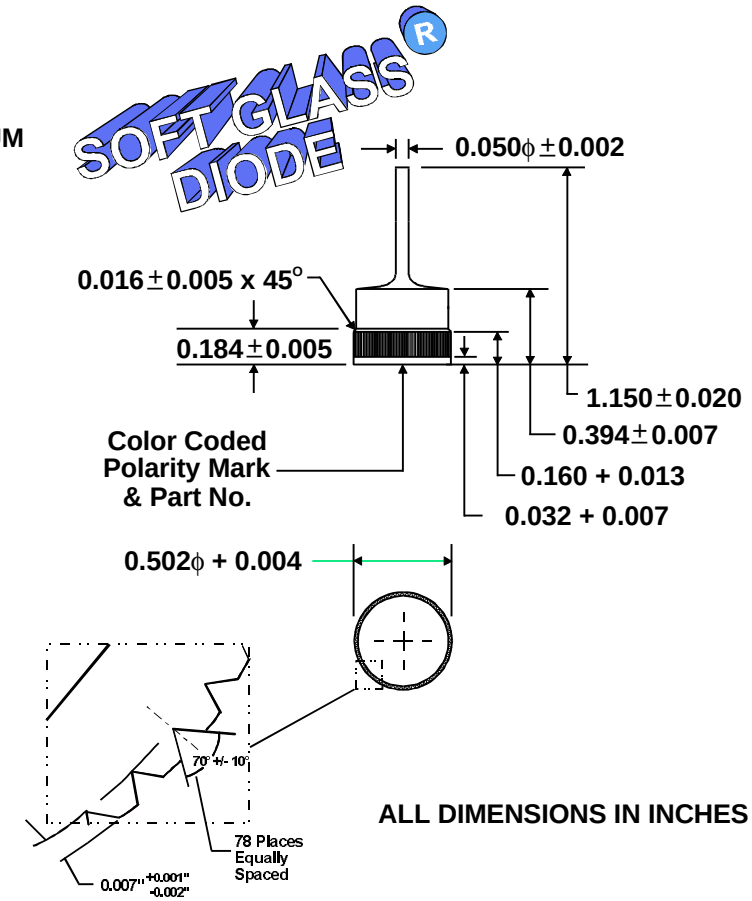
FEATURES

- PROPRIETARY *SOFT GLASS*® JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE
- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical ⩽ 2%, Max. ⩽ 10% of Die Area)
- Large die for high power capability
- Very low forward voltage drop
- Increased capacity by parallel operation
- Protects expensive automotive electronics and mobile equipment

MECHANICAL DATA

- Case: Nickel plated copper
- Finish: All external surfaces are corrosion resistant and the contact areas are readily solderable
- Soldering Temperature: 250 °C maximum
- Mounting Position: Any. Maximum force used for diode insertion to be 12 KN
- Polarity: Color coded polarity mark and part number on cap base (ANODE on LEAD: Part No.=TVS3527PFA) (CATHODE on LEAD; Part No.=TVS3527PFC)

MECHANICAL SPECIFICATION



ALL DIMENSIONS IN INCHES

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS		UNITS
Series Number		TVS3527PFC	TVS3527PFA	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	23	23	VOLTS
Working Peak Reverse Voltage	V_{RWM}			
Maximum DC Blocking Voltage	V_{DC}			
Breakdown Voltage (I_R = 100 mA dc, Tc = 25 °C)	$V_{(BR)}$	24 Min / 32 Max	24 Min / 32 Max	
Average Forward Rectified Current	I_O	35	35	AMPS
Non-repetitive Peak Forward Surge Current (Half wave, single phase, 60 Hz sine applied to rated load)	I_{FSM}	600	600	
Repetitive Peak Reverse Surge Current (Time Constant = 10 mSec Duty Cycle ≤ 1.0%, Tc = 25 °C)	I_{RSM}	110	110	
Instantaneous Forward Voltage (I_F = 100A@ 300 μSecpulse, Tc = 25°C) Maximum / Typical	V_F	1.05 / 1.00	1.05 / 1.00	VOLTS
Maximum DC Reverse Current (V_R = 20V DC, Tc = 25 °C)	I_R	200	200	nA
Maximum Thermal Resistance, Junction to Case (Note 1)	$R_{\theta JC}$	0.8	0.8	°C/W
Junction Operating & Storage Temperature Range	T_J,T_{STG}	-65 to +175	-65 to +175	°C

Notes: 1) Single Side Cooled

3.01tvs3527pf

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60 AMP PRESS FIT TVS DIODES

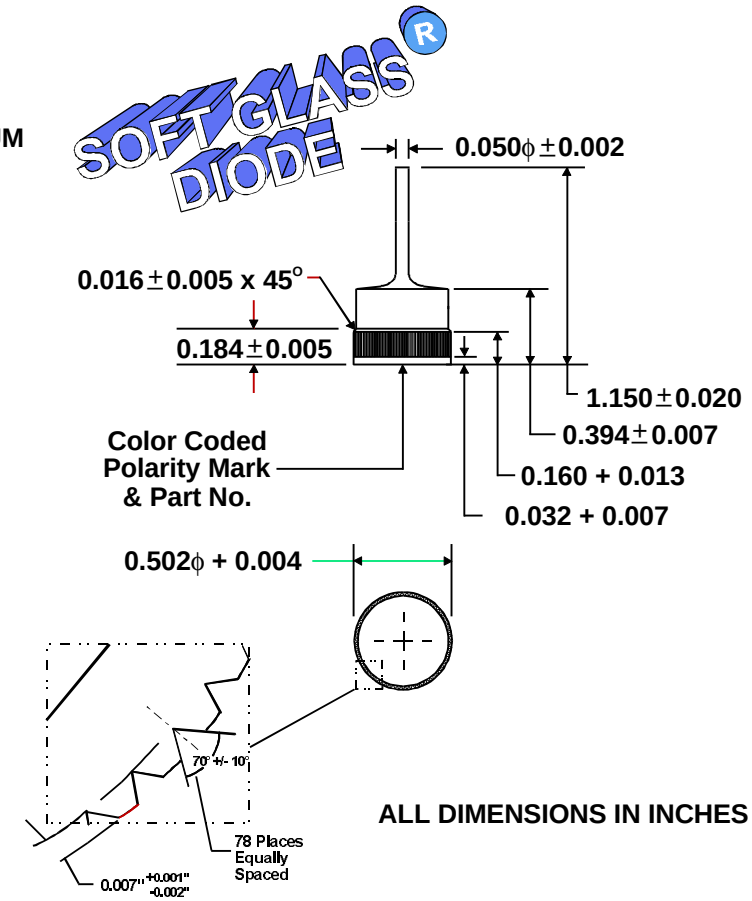
FEATURES

- PROPRIETARY *SOFT GLASS*® JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE
- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical ⩽ 2%, Max. ⩽ 10% of Die Area)
- Large die for high power capability
- Very low forward voltage drop
- Increased capacity by parallel operation
- Protects expensive automotive electronics and mobile equipment

MECHANICAL DATA

- Case: Nickel plated copper
- Finish: All external surfaces are corrosion resistant and the contact areas are readily solderable
- Soldering Temperature: 250 °C maximum
- Mounting Position: Any. Maximum force used for diode insertion to be 12 KN
- Polarity: Color coded polarity mark and part number on cap base (ANODE on LEAD: Part No.=TVS6027PFA) (CATHODE on LEAD; Part No.=TVS6027PFC)

MECHANICAL SPECIFICATION



ALL DIMENSIONS IN INCHES

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS		UNITS
Series Number		TVS6027PFC	TVS6027PFA	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	23	23	VOLTS
Working Peak Reverse Voltage	V_{RWM}			
Maximum DC Blocking Voltage	V_{DC}			
Breakdown Voltage (I_R = 100 mA dc, Tc = 25 °C)	$V_{(BR)}$	24 Min / 32 Max	24 Min / 32 Max	
Average Forward Rectified Current	I_O	60	60	AMPS
Non-repetitive Peak Forward Surge Current (Half wave, single phase, 60 Hz sine applied to rated load)	I_{FSM}	800	800	
Repetitive Peak Reverse Surge Current (Time Constant = 10 mSec Duty Cycle ≤ 1.0%, Tc = 25 °C)	I_{RSM}	140	140	
Instantaneous Forward Voltage (I_F = 100A@ 300 μSecpulse, Tc = 25°C) Maximum / Typical	V_F	1.05 / 1.00	1.05 / 1.00	VOLTS
Maximum DC Reverse Current (V_R = 20V DC, Tc = 25 °C)	I_R	200	200	nA
Maximum Thermal Resistance, Junction to Case (Note 1)	$R_{\theta JC}$	0.8	0.8	°C/W
Junction Operating & Storage Temperature Range	T_J,T_{STG}	-65 to +175	-65 to +175	°C

Notes: 1) Single Side Cooled

3.01tvs6027pf

DIOTEC ELECTRONICS CORP
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. TSBD-3500-1B

35 AMP OVERVOLTAGE TRANSIENT SUPPRESSORS

FEATURES

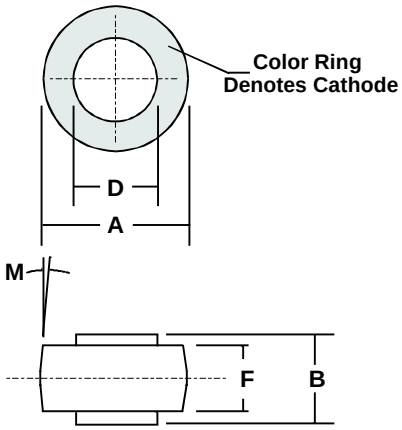
- PROPRIETARY *SOFT GLASS*® JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE
- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION
- Large die for high power capability
- Very low forward voltage drop
- Increased capacity by parallel operation
- Protects expensive automotive electronics and mobile equipment

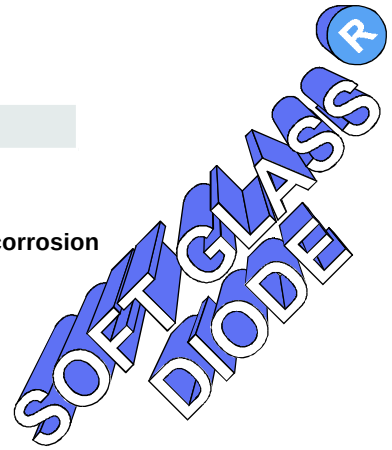
MECHANICAL DATA

- Case: Transfer molded plastic
- Finish: All external surfaces are silver plated for corrosion resistance superior solderability
- Soldering Temperature: 250 °C maximum
- Mounting Position: Any
- Polarity: Color band denotes cathode
- Weight: 0.6 Ounces (1.8 Grams)

MECHANICAL SPECIFICATION

Die Size: 0.180" x 0.180" Square





DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	9.78	10.29	0.385	0.405
B	6.05	6.20	0.238	0.244
D	5.54	5.60	0.218	0.220
F	4.19	4.45	0.165	0.175
M	5° NOM		5° NOM	

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz resistive or inductive load.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS	UNITS
Series Number		**TVS3527**	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	23	VOLTS
Working Peak Reverse Voltage	V_{RWM}		
Maximum DC Blocking Voltage	V_{DC}		
Breakdown Voltage (I_R = 100 mA dc, Tc = 25 °C)	$V_{(BR)}$	24 Min / 32 Max	
Average Forward Rectified Current	I_O	35	AMPS
Non-repetitive Peak Forward Surge Current (Half wave, single phase, 60 Hz sine applied to rated load)	I_{FSM}	600	
Repetitive Peak Reverse Surge Current (Time Constant = 10 mSec Duty Cycle ≤ 1.0%, Tc = 25 °C)	I_{RSM}	110	
Instantaneous Forward Voltage (I_F = 100A @ 300 µSec pulse, Tc = 25°C) Maximum / Typical	V_F	1.05 / 1.00	VOLTS
Maximum DC Reverse Current (V_R = 20V DC, Tc = 25 °C)	I_R	200	nA
Maximum Thermal Resistance, Junction to Case (Note 1)	$R_{\theta JC}$	0.8	°C/W
Junction Operating & Storage Temperature Range	T_J,T_{STG}	-65 to +175	°C

3.01 tvs35

Notes: 1) Single Side Cooled

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18020 Hobart Blvd., Unit B
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Data Sheet No. TSBD-3500S-1B

35 AMP OVERVOLTAGE TRANSIENT SUPPRESSORS

FEATURES

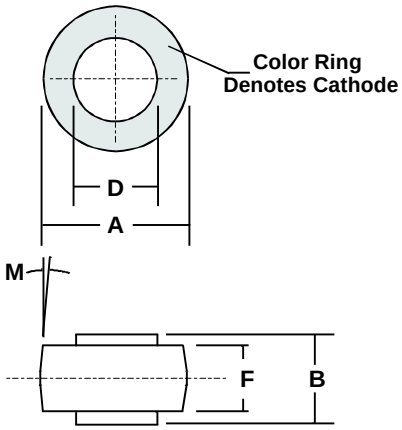
- PROPRIETARY *SOFT GLASS*® JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE
- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION
- Large die for high power capability
- Very low forward voltage drop
- Increased capacity by parallel operation
- Protects expensive automotive electronics and mobile equipment

MECHANICAL DATA

- Case: Transfer molded plastic
- Finish: All external surfaces are silver plated for corrosion resistance superior solderability
- Soldering Temperature: 250 °C maximum
- Mounting Position: Any
- Polarity: Color band denotes cathode
- Weight: 0.6 Ounces (1.8 Grams)

MECHANICAL SPECIFICATION

Die Size: 0.180" x 0.180" Square



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.43	8.69	0.332	0.342
B	5.94	6.25	0.234	0.246
D	5.46	5.71	0.215	0.225
F	4.19	4.45	0.165	0.175
M	5° NOM		5° NOM	

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz resistive or inductive load.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS	UNITS
Series Number		**TVS3527S**	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	23	VOLTS
Working Peak Reverse Voltage	V_{RWM}		
Maximum DC Blocking Voltage	V_{DC}		
Breakdown Voltage (I_R = 100 mA dc, Tc = 25 °C)	$V_{(BR)}$	24 Min / 32 Max	
Average Forward Rectified Current	I_O	35	AMPS
Non-repetitive Peak Forward Surge Current (Half wave, single phase, 60 Hz sine applied to rated load)	I_{FSM}	600	
Repetitive Peak Reverse Surge Current (Time Constant = 10 mSec Duty Cycle ≤ 1.0%, Tc = 25 °C)	I_{RSM}	110	
Instantaneous Forward Voltage (I_F = 100A @ 300 µSec pulse, Tc = 25°C) Maximum / Typical	V_F	1.05 / 1.00	VOLTS
Maximum DC Reverse Current (V_R = 20V DC, Tc = 25 °C)	I_R	200	nA
Maximum Thermal Resistance, Junction to Case (Note 1)	$R_{\theta JC}$	0.8	°C/W
Junction Operating & Storage Temperature Range	T_J,T_{STG}	-65 to +175	°C

3.01tvs35s

Notes: 1) Single Side Cooled

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18020 Hobart Blvd., Unit B
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Data Sheet No. TSBD-3500D-1B

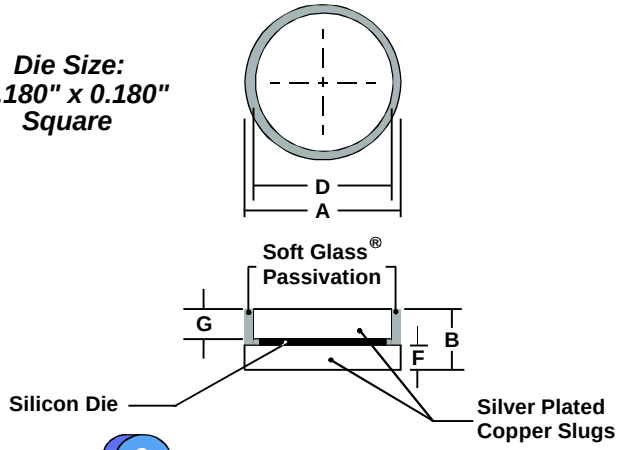
35 AMP OVERVOLTAGE TRANSIENT DISH DIODE

FEATURES

- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION
- PROPRIETARY *SOFT GLASS*® JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE
- Large die for high power capability
- Very low forward voltage drop
- Built-in stress relief mechanism for die protection
- Silver plated substrates for corrosion resistance and superior soldeability
- Soldering temperature: 250 °C maximum
- Protects expensive automotive electronics and mobile equipment

MECHANICAL SPECIFICATION

Die Size:
0.180" x 0.180"
Square



SOFT GLASS® DIODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.33	5.46	0.210	0.215
B	2.03	2.16	0.080	0.085
D	4.70	4.83	0.185	0.190
F	0.64	0.76	0.025	0.030
G	0.96	1.09	0.038	0.043

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS	UNITS
Series Number		**TVS3527D**	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	23	VOLTS
Working Peak Reverse Voltage	V_{RWM}		
Maximum DC Blocking Voltage	V_{DC}		
Breakdown Voltage (I_R = 100 mA dc, Tc = 25 °C)	$V_{(BR)}$	24 Min / 32 Max	
Average Rectified Forward Current (Single phase, Resistive load, 60 Hz)	I_O	35	AMPS
Non-repetitive Peak Forward Surge Current (Half wave, Single phase, 60 Hz sine applied to rated load)	I_{FSM}	500	
Repetitive Peak Reverse Surge Current (Time constant = 10 mSec Duty cycle ≤ 1.0%, Tc = 25 °C)	I_{RSM}	110	
Instantaneous Forward Voltage (I_F = 80A @300 µSec pulse, Tc = 25°C) Maximum / Typical	V_F	1.05 / 1.00	VOLTS
Maximum DC Reverse Current (V_R = 20V DC, Tc = 25 °C)	I_R	200	nA
Maximum Thermal Resistance, Junction to Lead (Note 1)	$R_{\theta JC}$	0.8	°C/W
Junction Operating & Storage Temperature Range	T_J,T_{STG}	-65 to +175	°C

3.01 tvs35d

Notes: 1) Single Side Cooled

DIOTEC ELECTRONICS CORP
18020 Hobart Blvd., Unit B
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Data Sheet No. TSBD-5000-1A

50 AMP OVERVOLTAGE TRANSIENT SUPPRESSORS

FEATURES

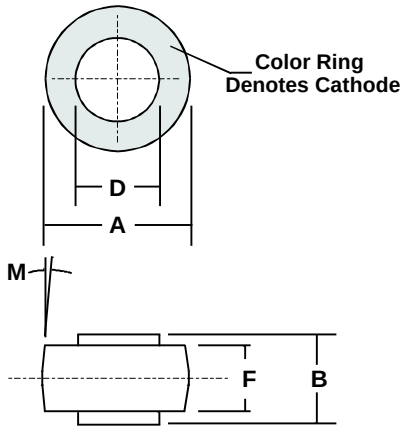
- **PROPRIETARY *SOFT GLASS*® JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE**
- **VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION**
- **INDUSTRY'S LARGEST DIE FOR HIGHEST POWER CAPABILITY**
- **Very low forward voltage drop**
- **Increased capacity by parallel operation**
- **Protects expensive automotive electronics and mobile equipment**

MECHANICAL DATA

- **Case: Transfer molded plastic**
- **Finish: All external surfaces are silver plated for corrosion resistance superior solderability**
- **Soldering Temperature: 250 °C maximum**
- **Mounting Position: Any**
- **Polarity: Color band denotes cathode**
- **Weight: 0.6 Ounces (1.8 Grams)**

MECHANICAL SPECIFICATION

Die Size:
0.216" Flat to Flat Hex



SOFT GLASS® DIODE

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	9.78	10.29	0.385	0.405
B	6.05	6.20	0.238	0.244
D	5.54	5.60	0.218	0.220
F	4.19	4.45	0.165	0.175
M	5° NOM		5° NOM	

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz resistive or inductive load.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS	UNITS
Series Number		**TVS5027**	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	23	VOLTS
Working Peak Reverse Voltage	V_{RWM}		
Maximum DC Blocking Voltage	V_{DC}		
Breakdown Voltage (I_R = 100 mA dc, Tc = 25 °C)	$V_{(BR)}$	24 Min / 32 Max	
Average Forward Rectified Current	I_O	50	AMPS
Non-repetitive Peak Forward Surge Current (Half wave, single phase, 60 Hz sine applied to rated load)	I_{FSM}	800	
Repetitive Peak Reverse Surge Current (Time Constant = 10 mSec Duty Cycle ≤ 1.0%, Tc = 25 °C)	I_{RSM}	140	
Instantaneous Forward Voltage (I_F = 100A@ 300 μSecpulse, Tc = 25°C) Maximum / Typical	V_F	1.05 / 1.00	VOLTS
Maximum DC Reverse Current (V_R = 20V DC, Tc = 25 °C)	I_R	200	nA
Maximum Thermal Resistance, Junction to Case (Note 1)	$R_{\theta JC}$	0.8	°C/W
Junction Operating & Storage Temperature Range	T_J,T_{STG}	-65 to +175	°C

Notes: 1) Single Side Cooled

1.99ftsbd050

DIOTEC ELECTRONICS CORP
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. TSBD-5000S-1A

50 AMP OVERVOLTAGE TRANSIENT SUPPRESSORS

FEATURES

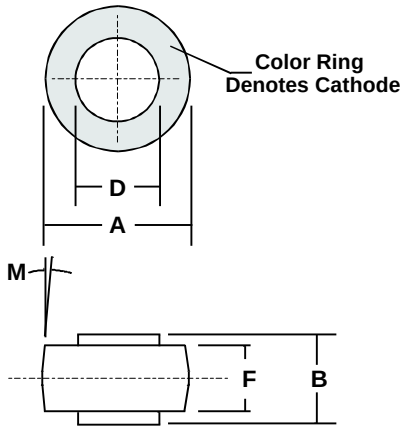
- **PROPRIETARY *SOFT GLASS*® JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE**
- **VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION**
- **INDUSTRY'S LARGEST DIE FOR HIGHEST POWER CAPABILITY**
- **Very low forward voltage drop**
- **Increased capacity by parallel operation**
- **Protects expensive automotive electronics and mobile equipment**

MECHANICAL DATA

- **Case: Transfer molded plastic**
- **Finish: All external surfaces are silver plated for corrosion resistance superior solderability**
- **Soldering Temperature: 250 °C maximum**
- **Mounting Position: Any**
- **Polarity: Color band denotes cathode**
- **Weight: 0.6 Ounces (1.8 Grams)**

MECHANICAL SPECIFICATION

Die Size:
0.216" Flat to Flat Hex



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.43	8.69	0.332	0.342
B	5.94	6.25	0.234	0.246
D	5.46	5.71	0.215	0.225
F	4.19	4.45	0.165	0.175
M	5° NOM		5° NOM	

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
Single phase, half wave, 60 Hz resistive or inductive load.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS	UNITS
Series Number		**TVS5027S**	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	23	VOLTS
Working Peak Reverse Voltage	V_{RWM}		
Maximum DC Blocking Voltage	V_{DC}		
Breakdown Voltage (I_R = 100 mA dc, Tc = 25 °C)	$V_{(BR)}$	24 Min / 32 Max	
Average Forward Rectified Current	I_O	50	AMPS
Non-repetitive Peak Forward Surge Current (Half wave, single phase, 60 Hz sine applied to rated load)	I_{FSM}	800	
Repetitive Peak Reverse Surge Current (Time Constant = 10 mSec Duty Cycle ≤ 1.0%, Tc = 25 °C)	I_{RSM}	140	
Instantaneous Forward Voltage (I_F = 100A@ 300 μSecpulse, Tc = 25°C) Maximum / Typical	V_F	1.05 / 1.00	VOLTS
Maximum DC Reverse Current (V_R = 20V DC, Tc = 25 °C)	I_R	200	nA
Maximum Thermal Resistance, Junction to Case (Note 1)	$R_{\theta JC}$	0.8	°C/W
Junction Operating & Storage Temperature Range	T_J,T_{STG}	-65 to +175	°C

Notes: 1) Single Side Cooled

1.99ftsbd050

DIOTEC ELECTRONICS CORP
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

600 WATT TRANSIENT VOLTAGE SUPPRESSORS

FEATURES

- PROPRIETARY *SOFT GLASS*® JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE
- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION
- 600 Watt peak power capability on 10/1000 µS waveform
- Excellent clamping capability
- Repetition rate (Duty Cycle): 0.01%
- Low incremental surge resistance
- Fast response time (0 to BV Volts)

  Unidirectional - typically less than 1pS

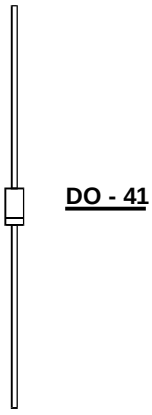
  Bidirectional - typically less then 5nS
- Typical Reverse Leakage (I_D) less than 1µA above 10 Volts

MECHANICAL DATA

- Case: JEDEC DO-41 molded epoxy (UL Flammability Rating 94V-O)
- Terminals: Plated Axial Leads
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Mounting Position: Any
- Polarity: Color band denotes cathode
- Weight: 0.012 Ounces (0.34 Grams)

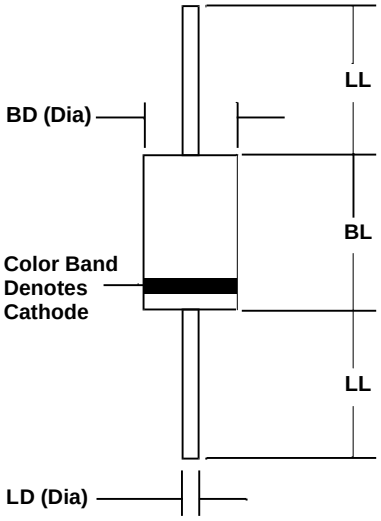
MECHANICAL SPECIFICATION

ACTUAL SIZE OF DO-41 PACKAGE



DO - 41

SERIES P6KE6.8 - P6KE400CA



Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.160	4.1	0.205	5.2
BD	0.103	2.6	0.107	2.7
LL	1.00	25.4		
LD	0.028	0.71	0.034	0.86

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified. Resistive or inductive load.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS	UNITS
Peak Pulse Power Dissipation on 10/1000µS Waveform (Note 1, Fig 1)	P_{PPM}	Minimum 600	WATTS
Peak Pulse Current on 10/1000mS Waveform (Note 1, Fig 1)	I_{PPM}	See Table 1	AMPS
Steady State Power Dissipation at T_L= 75 °C With Lead Length =0.375" (9.5mm) (Note 2)	$P_{M(AV)}$	5.0	WATTS
Peak Forward Surge Current (8.3mS Single Half Sine Wave Superimposed on Rated Load - JEDEC Method) Unidirectional Only. (Note 2)	I_{FSM}	100	AMPS
Maximum Instantaneous Forward Voltage at 50A; Unidirectional Only (Note 2)	V_F	3.5	VOLTS
Junction Operating & Storage Temperature Range	T_J,T_{STG}	-65 to +175	°C/W

Notes:
1) Non-Repetitive Current Pulse Per Fig. 3 and Derated Above T_A=25 °C Per Fig 2.
2) Mounted on Copper Leaf Area of 1.58 in² (40mm²) Per Fig 5.
3) 8.3mS Single Half Sine Wave or Equivalent Square Wave. Duty Cycle =4 Pulses Per Minute Maximum.

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600 WATT TRANSIENT VOLTAGE SUPPRESSORS

RATINGS AND CHARACTERISTIC CURVES FOR SERIES P6KE6.8 - P6KE400CA

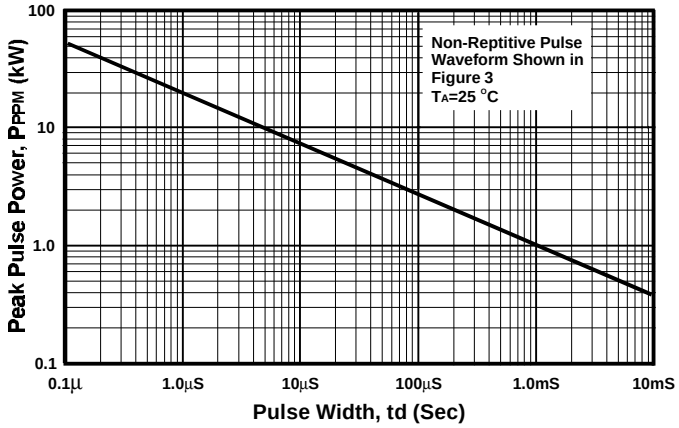

FIGURE 1. PEAK PULSE POWER RATING CURVE

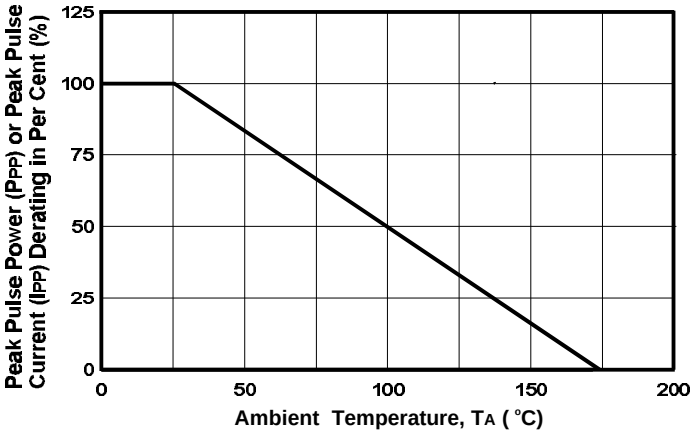

FIGURE 2. PULSE DERATING CURVE

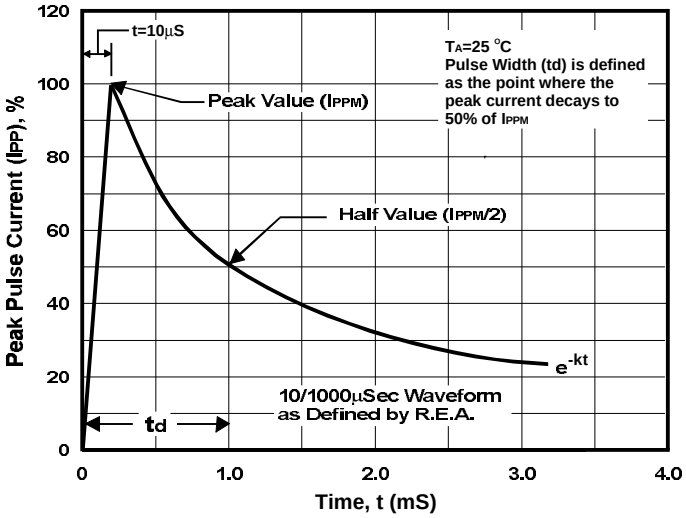

FIGURE 3. PULSE WAVEFORM

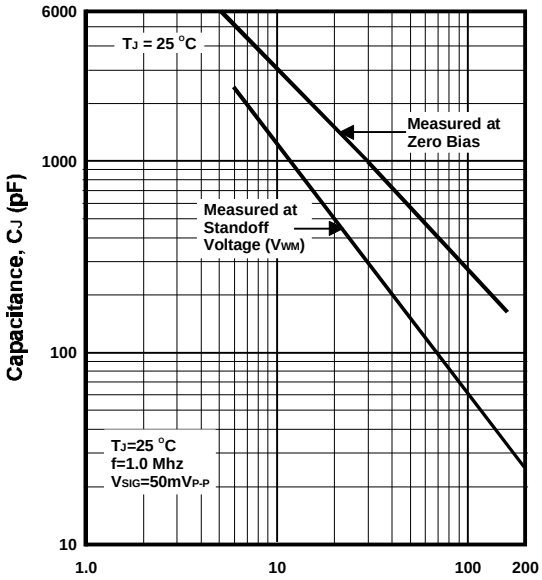

FIGURE 4. TYPICAL JUNCTION CAPACITANCE-UNIDIRECTIONAL

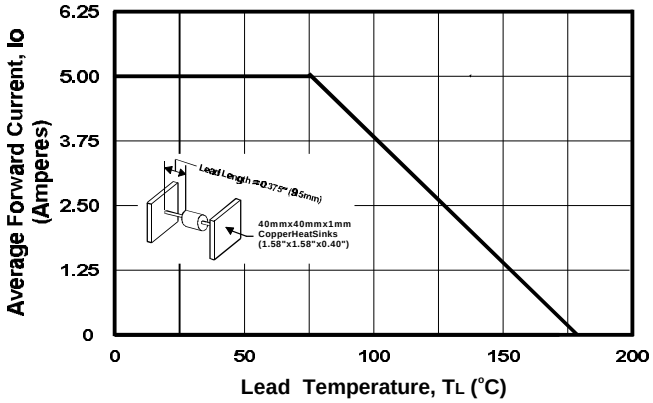

FIGURE 5. STEADY STATE POWER DERATING CURVE

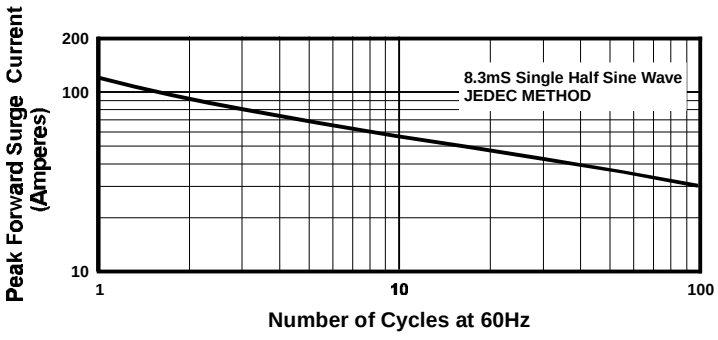

FIGURE 6. MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT - UNIDIRECTIONAL

4.97bgppd300

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18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

600 WATT TRANSIENT VOLTAGE SUPPRESSORS

RATINGS AND CHARACTERISTIC CURVES FOR SERIES P6KE6.8 - P6KE400CA

FOR BIDIRECTIONAL APPLICATIONS: **USE "C" OR "CA" FOR TYPES P6KE6.8-PKE440. FOR EXAMPLE: P6KE6.8C OR P6KE400CA. ELECTRICAL CHARACTERISTICS APPLY IN BOTH DIRECTIONS.**

PART NO.	BREAKDOWN VOLTAGE (V_{BR}) (NOTE 1) VOLTS MIN	VOLTS MAX	@ I_T (mA)	V_{WM} (VOLTS)	MAX. I_D @ V_{WM} (µA) (Note 3)	MAX. I_{PPM} (AMPS) (Note 2)	V_C @ I_{PPM} (VOLTS)	MAX. TEMPERATURE COEFFICIENT OF $V_{(BR)}$ (% °C)
P6KE6.8	6.12	7.48	10	5.50	1000	56	10.8	0.057
P6KE6.8A	6.45	7.14	10	5.80	1000	57	10.5	0.057
P6KE7.5	6.75	8.25	10	6.05	500	51	11.7	0.061
P6KE7.5A	7.13	7.88	10	6.40	500	53	11.3	0.061
P6KE8.2	7.38	9.02	10	6.63	200	48	12.5	0.065
P6KE8.2A	7.79	8.61	10	7.02	200	50	12.1	0.065
P6KE9.1	8.19	10.0	1.0	7.37	50	44	13.8	0.068
P6KE9.1A	8.65	9.55	1.0	7.78	50	45	13.4	0.068
P6KE10	9.00	11.0	1.0	8.10	10	40	15.0	0.073
P6KE10A	9.50	10.5	1.0	8.55	10	41	14.5	0.073
P6KE11	9.90	12.1	1.0	8.92	5.0	37	16.2	0.075
P6KE11A	10.5	11.6	1.0	9.40	5.0	38	15.6	0.075
P6KE12	10.8	13.2	1.0	9.72	5.0	35	17.3	0.078
P6KE12A	11.4	12.6	1.0	10.2	5.0	36	16.7	0.078
P6KE13	11.7	14.3	1.0	10.5	5.0	32	19.0	0.061
P6KE13A	12.4	13.7	1.0	11.1	5.0	33	18.2	0.081
P6KE15	13.5	16.5	1.0	12.1	5.0	27	22.0	0.084
P6KE15A	14.3	15.8	1.0	12.8	5.0	28	21.2	0.084
P6KE16	14.4	17.6	1.0	12.9	5.0	26	23.5	0.086
P6KE16A	15.2	16.8	1.0	13.6	5.0	27	22.5	0.086
P6KE18	16.2	19.8	1.0	14.5	5.0	23	26.5	0.088
P6KE18A	17.1	18.9	1.0	15.3	5.0	24	25.2	0.088
P6KE20	18.0	22.0	1.0	16.2	5.0	21	29.1	0.090
P6KE20A	19.0	21.0	1.0	17.1	5.0	22	27.7	0.090
P6KE22	19.8	24.2	1.0	17.8	5.0	19	31.9	0.092
P6KE22A	20.9	23.1	1.0	18.8	5.0	20	30.6	0.092
P6KE24	21.6	26.4	1.0	19.4	5.0	17	34.7	0.094
P6KE24A	22.8	25.2	1.0	20.5	5.0	18	33.2	0.094
P6KE27	24.3	29.7	1.0	21.8	5.0	15	39.1	0.096
P6KE27A	25.7	28.4	1.0	23.1	5.0	16	37.5	0.096
P6KE30	27.0	33.0	1.0	24.3	5.0	14	43.5	0.097
P6KE30A	28.5	31.5	1.0	25.6	5.0	14.4	41.4	0.097
P6KE33	29.7	36.3	1.0	26.8	5.0	12.6	47.7	0.098
P6KE33A	31.4	34.7	1.0	28.2	5.0	13.2	45.7	0.098
P6KE36	32.4	39.6	1.0	29.1	5.0	11.6	52.0	0.099
P6KE36A	34.2	37.8	1.0	30.8	5.0	12.0	49.9	0.099
P6KE39	35.1	42.9	1.0	31.6	5.0	10.6	56.4	0.100
P6KE39A	37.1	41.0	1.0	33.3	5.0	11.2	53.9	0.100
P6KE43	38.7	47.3	1.0	34.8	5.0	9.6	61.9	0.101
P6KE43A	40.9	45.2	1.0	36.8	5.0	10.1	59.3	0.101
P6KE47	42.3	51.7	1.0	38.1	5.0	8.9	67.8	0.101
P6KE47A	44.7	49.4	1.0	40.2	5.0	9.3	64.8	0.101

1. $V_{(BR)}$ measured after I_T applied for 300µS, I_T=square wave pulse or equivalent
2. Surge current waveform per Figure 3 and derate per Figure 2.
3. For Bidirectional types with V_R of 10 Volts and less, the I_P limit is doubled
4. All Terms and Symbols are consistant with ANSI/IEEE C62.35

Table Symbols:

I_D - Reverse Leakage Current
I_{PPM} - Maximum Peak Pulse Current
I_T - Test Current (To Determine V_{BR})
mA - Milliamperes
Max. - Maximum
Min - Minimum
$V_{(BR)}$ - Breakdown Voltage
V_C - Clamping Voltage
V_{WM} - Reverse Standoff Voltage
% - Per Cent
°C - Degrees Celsius

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
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Tel.: (310) 767-1052 Fax: (310) 767-7958

600 WATT TRANSIENT VOLTAGE SUPPRESSORS

RATINGS AND CHARACTERISTIC CURVES FOR SERIES P6KE6.8 - P6KE400CA

FOR BIDIRECTIONAL APPLICATIONS: **USE "C" OR "CA" FOR TYPES P6KE6.8-PKE440. FOR EXAMPLE: P6KE6.8C OR P6KE400CA. ELECTRICAL CHARACTERISTICS APPLY IN BOTH DIRECTIONS.**

PART NO.	BREAKDOWN VOLTAGE (V_{BR}) (NOTE 1) VOLTS MIN	VOLTS MAX	@ I_T (mA)	V_{WM} (VOLTS)	MAX. I_D @ V_{WM} (µA) (Note 3)	MAX. I_{PPM} (AMPS) (Note 2)	V_C @ I_{PPM} (VOLTS)	MAX. TEMPERATURE COEFFICIENT OF $V_{(BR)}$ (% °C)
P6KE51	45.9	56.1	1.0	41.3	5.0	8.2	73.5	0.102
P6KE51A	48.5	53.6	1.0	43.6	5.0	8.6	70.1	0.102
P6KE56	50.4	61.6	1.0	45.4	5.0	7.4	80.5	0.103
P6KE56A	53.2	58.8	1.0	47.8	5.0	7.8	77.0	0.103
P6KE62	55.8	68.2	1.0	50.2	5.0	6.8	89.0	0.104
P6KE62A	58.9	65.1	1.0	53.0	5.0	7.1	85.0	0.104
P6KE68	61.2	74.8	1.0	55.1	5.0	6.1	98.0	0.104
P6KE68A	64.6	71.4	1.0	58.1	5.0	6.5	92.0	0.104
P6KE75	67.5	82.5	1.0	60.7	5.0	5.5	108	0.105
P6KE75A	71.3	78.8	1.0	64.1	5.0	5.8	103	0.105
P6KE82	73.8	90.2	1.0	66.4	5.0	5.1	118	0.105
P6KE82A	77.9	86.1	1.0	70.1	5.0	5.3	113	0.105
P6KE91	81.9	100	1.0	73.7	5.0	4.5	131	0.106
P6KE91A	86.5	95.5	1.0	77.8	5.0	4.8	125	0.106
P6KE100	90.0	110	1.0	81.0	5.0	4.2	144	0.106
P6KE100A	95.0	105	1.0	85.5	5.0	4.4	137	0.106
P6KE110	99.0	121	1.0	89.2	5.0	3.8	158	0.107
P6KE110A	105	116	1.0	94.0	5.0	4.0	152	0.107
P6KE120	108	132	1.0	97.2	5.0	3.5	173	0.107
P6KE120A	114	126	1.0	102	5.0	3.6	165	0.107
P6KE130	117	143	1.0	105	5.0	3.2	187	0.107
P6KE130A	124	137	1.0	111	5.0	3.3	179	0.107
P6KE150	135	165	1.0	121	5.0	2.8	215	0.108
P6KE150A	143	158	1.0	128	5.0	2.9	207	0.108
P6KE160	144	176	1.0	130	5.0	2.6	230	0.108
P6KE160A	152	168	1.0	136	5.0	2.7	219	0.108
P6KE170	153	187	1.0	138	5.0	2.5	244	0.108
P6KE170A	162	179	1.0	145	5.0	2.6	234	0.108
P6KE180	162	198	1.0	146	5.0	2.3	258	0.108
P6KE180A	171	189	1.0	154	5.0	2.4	246	0.108
P6KE200	180	220	1.0	162	5.0	2.1	287	0.108
P6KE200A	190	210	1.0	171	5.0	2.2	274	0.108
P6KE220	198	242	1.0	175	5.0	1.75	344	0.108
P6KE220A	209	231	1.0	185	5.0	1.83	328	0.108
P6KE250	225	275	1.0	202	5.0	1.67	360	0.110
P6KE250A	237	263	1.0	214	5.0	1.75	344	0.110
P6KE300	270	330	1.0	243	5.0	1.40	430	0.110
P6KE300A	285	315	1.0	256	5.0	1.45	414	0.110
P6KE350	315	385	1.0	284	5.0	1.20	504	0.110
P6KE350A	332	368	1.0	300	5.0	1.25	482	0.110
P6KE400	360	440	1.0	324	5.0	1.05	574	0.110
P6KE400A	380	420	1.0	342	5.0	1.10	548	0.110
P6KE440	396	484	1.0	356	5.0	0.95	631	0.110
P6KE440A	418	462	1.0	376	5.0	1.00	602	0.110

Table Symbols:

I_D - Reverse Leakage Current
I_{PPM} - Maximum Peak Pulse Current
I_T - Test Current (To Determine V_{BR})
mA - Milliamperes
Max. - Maximum
Min - Minimum
$V_{(BR)}$ - Breakdown Voltage
V_C - Clamping Voltage
V_{WM} - Reverse Standoff Voltage
% - Per Cent
°C - Degrees Celsius

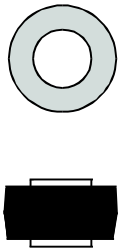
1. **$V_{(BR)}$ measured after I_T applied for 300µS, I_T=square wave pulse or equivalent**
2. **Surge current waveform per Figure 3 and derate per Figure 2.**
3. **For Bidirectional types with V_R of 10 Volts and less, the I_P limit is doubled**
4. **All Terms and Symbols are consistant with ANSI/IEEE C62.35**

SECTION K

AUTOMOTIVE DIODES

STANDARD DIODES

MOLDED PRODUCTS



DIODE CELLS

DIOTEC ELECTRONICS CORP. • **18020 Hobart Blvd., Unit B** • **Gardena, CA 90248 U.S.A.** • **PH: 310-767-1052 - FX: 310-767-7958**

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BUDI-1200D-1A

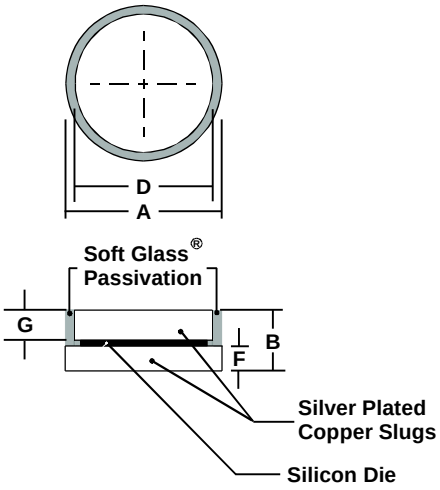
12 AMP PR4 DIODE CELLS

FEATURES

- PROPRIETARY *SOFT GLASS*® JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE
- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical < 2%, Max. < 10% of Die Area)
- Large die for high power capability
- Very low forward voltage drop
- Built-in stress relief mechanism for die protection
- Silver plated substrates for easy soldering or installation
- Soldering temperature: 250 °C maximum
- Protects expensive automotive electronics and mobile equipment

MECHANICAL SPECIFICATION

Die Size: 0.120" Round



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	3.86	4.06	0.152	0.160
B	1.98	2.18	0.078	0.086
D	3.07	3.28	0.121	0.129
F	0.76 Typ		0.030 Typ	
G	1.02 Typ		0.040 Typ	

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		BAR 1200D	BAR 1201D	BAR 1202D	BAR 1204D	BAR 1206D	BAR 1208D	BAR 1210D	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS
Working Peak Reverse Voltage	V_{RWM}								
Maximum DC Blocking Voltage	V_{DC}								
Non-repetitive Peak Reverse Voltage (Half wave, Single phase, 60Hz peak)	V_{RSM}	60	120	240	480	720	960	1200	
Average Rectified Forward Current (Single phase, Resistive load, 60Hz)	I_O	12							AMPS
Non-repetitive Peak Forward Surge Current (Half wave, Single phase, 60Hz sine applied to rated load)	I_{FSM}	250							
Maximum Instantaneous Forward Voltage @ I_F = 3 Amps @ I_F = 12 Amps	V_F	0.90 1.05					0.95 1.10		VOLTS
Maximum DC Reverse Current At Rated DC Blocking Voltage @ Tc = 25 °C	I_R	0.5							µA
Operating & Storage Temperature Range	T_J,T_{STG}	-65 to +175							°C

BAR12d

DIOTEC ELECTRONICS CORP.
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BUDI-2500D-1A

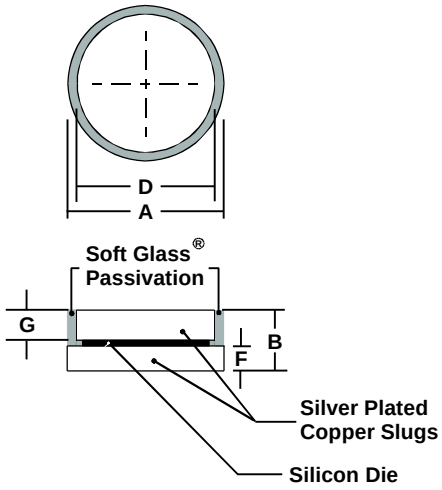
25 AMP SOZA DIODE CELLS

FEATURES

- PROPRIETARY *SOFT GLASS*® JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE
- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical < 2%, Max. < 10% of Die Area)
- Large die for high power capability
- Very low forward voltage drop
- Built-in stress relief mechanism for die protection
- Silver plated substrates for easy soldering or installation
- Soldering temperature: 250 °C maximum
- Protects expensive automotive electronics and mobile equipment

MECHANICAL SPECIFICATION

Die Size: 0.180" Round



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.36	5.56	0.211	0.219
B	1.98	2.18	0.078	0.086
D	4.72	4.93	0.186	0.194
F	0.76 Typ		0.030 Typ	
G	1.02 Typ		0.040 Typ	

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		BAR 2500D	BAR 2501D	BAR 2502D	BAR 2504D	BAR 2506D	BAR 2508D	BAR 2510D	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS
Working Peak Reverse Voltage	V_{RWM}								
Maximum DC Blocking Voltage	V_{DC}								
Non-repetitive Peak Reverse Voltage (Half wave, Single phase, 60Hz peak)	V_{RSM}	60	120	240	480	720	960	1200	
Average Rectified Forward Current (Single phase, Resistive load, 60Hz)	I_O	25							AMPS
Non-repetitive Peak Forward Surge Current (Half wave, Single phase, 60Hz sine applied to rated load)	I_{FSM}	500							
Maximum Instantaneous Forward Voltage @ I_F = 6 Amps @ I_F = 25 Amps	V_F	0.85 1.05					0.90 1.10		VOLTS
Maximum DC Reverse Current At Rated DC Blocking Voltage @ Tc = 25 °C	I_R	0.5							µA
Operating & Storage Temperature Range	T_J,T_{STG}	-65 to +175							°C

BAR25d

DIOTEC ELECTRONICS CORP
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BUDI-3500-1B

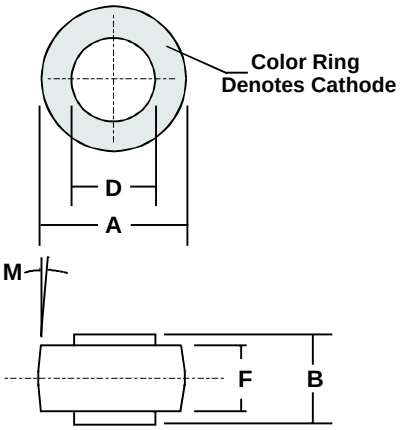
35 AMP BUTTON DIODES

FEATURES

- PROPRIETARY *SOFT GLASS*® JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE
- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical < 2%, Max. < 10% of Die Area)
- Compact molded design
- High surge current, 600 A @ T_J = 175 °C
- Low cost
- Peak performance at elevated temperatures: 35 A @ T_J = 175 °C

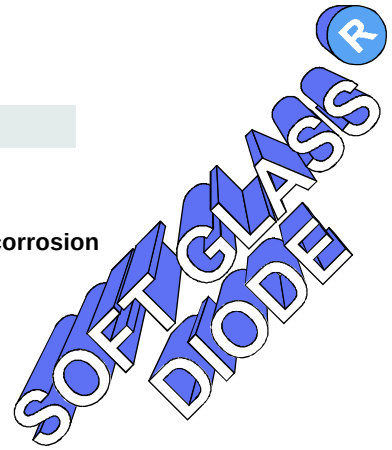
MECHANICAL SPECIFICATION

Die Size: 0.165" x 0.165" Square



MECHANICAL DATA

- Case: Transfer molded plastic
- Finish: All external surfaces are silver plated for corrosion resistance and superior solderability
- Soldering Temperature: 250 °C maximum
- Mounting Position: Any
- Polarity: Color band denotes cathode
- Weight: 0.6 Ounces (1.8 Grams)



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	9.78	10.29	0.385	0.405
B	5.97	6.35	0.235	0.250
D	5.46	5.71	0.215	0.225
F	4.19	4.45	0.165	0.175
M	5° NOM		5° NOM	

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		BAR 3500	BAR 3501	BAR 3502	BAR 3504	BAR 3506	BAR 3508	BAR 3510	
Maximum DC Blocking Voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RWM}								
Maximum Peak Recurrent Reverse Voltage	V_{DC}								
Non-repetitive Peak Reverse Voltage (Half wave, single phase, 60 Hz peak)	V_{RSM}	60	120	240	480	720	960	1200	
Average Forward Rectified Current @ T_C =150 °C	I_O	35							AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	600							
Repetitive Peak Reverse Surge Current (Half wave, single phase, 60 Hz applied to rated load)	I_{RSM}	110							
Maximum Forward Voltage Drop at 35 Amp DC	V_{FM}	1.1 (Typical 0.95)					1.2		VOLTS
Maximum Average DC Reverse Current @ T_A = 25 °C At Rated DC Blocking Voltage @ T_A = 100 °C	I_{RM}	1 50							µA
Maximum Thermal Resistance, Junction to Case (Note 1)	$R_{\theta JC}$	0.9							°C/W
Junction Operating and Storage Temperature Range	T_J ,T_{STG}	-65 to +175							°C

Notes: 1) Single Side Cooled

BAR35

DIOTEC ELECTRONICS CORP
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Data Sheet No. BUDI-3500S-1A

35 AMP BUTTON DIODES

FEATURES

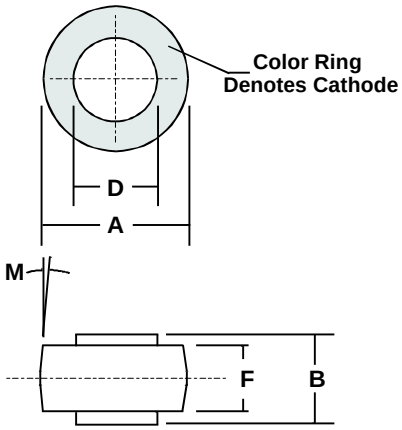
- PROPRIETARY *SOFT GLASS*® JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE
- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical ⩽ 2%, Max. ⩽ 10% of Die Area)
- Compact molded design
- High surge current, 600 A @ T_J = 175 °C
- Low cost
- Peak performance at elevated temperatures: 35 A @ T_J = 175 °C

MECHANICAL DATA

- Case: Transfer molded plastic
- Finish: All external surfaces are corrosion resistant and the contact areas are readily solderable
- Soldering Temperature: 250 °C maximum
- Mounting Position: Any
- Polarity: Color band denotes cathode
- Weight: 0.6 Ounces (1.8 Grams)

MECHANICAL SPECIFICATION

Die Size: 0.165" x 0.165" Square



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.43	8.69	0.332	0.342
B	5.94	6.25	0.234	0.246
D	5.46	5.71	0.215	0.225
F	4.19	4.45	0.165	0.175
M	5° NOM		5° NOM	

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		BAR 3500S	BAR 3501S	BAR 3502S	BAR 3504S	BAR 3506S	BAR 3508S	BAR 3510S	
Maximum DC Blocking Voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RWM}								
Maximum Peak Recurrent Reverse Voltage	V_{DC}								
Non-repetitive Peak Reverse Voltage (Half wave, single phase, 60 Hz peak)	V_{RSM}	60	120	240	480	720	960	1200	
Average Forward Rectified Current @ T_C=150 °C	I_O	35							AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	600							
Repetitive Peak Reverse Surge Current (Half wave, single phase, 60 Hz applied to rated load)	I_{RSM}	110							
Maximum Forward Voltage Drop at 35 Amp DC	V_{FM}	1.1 (Typical 0.95)					1.2		VOLTS
Maximum Average DC Reverse Current @ T_A = 25 °C At Rated DC Blocking Voltage @ T_A = 100 °C	I_{RM}	1 50							µA
Maximum Thermal Resistance, Junction to Case (Note 1)	$R_{\theta JC}$	0.9							°C/W
Junction Operating and Storage Temperature Range	T_J ,T_{STG}	-65 to +175							°C

BAR35s

Notes: 1) Single Side Cooled

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Data Sheet No. BUDI-3500D-1A

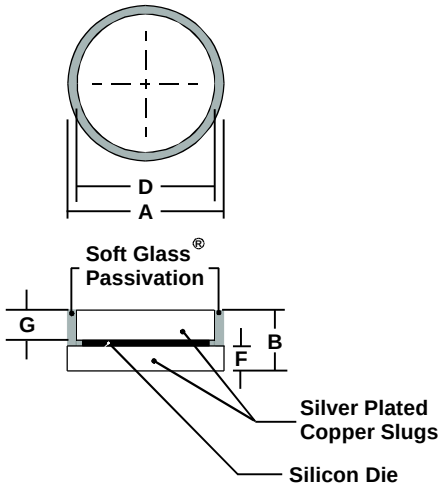
35 AMP JUMBO DIODE CELLS

FEATURES

- PROPRIETARY *SOFT GLASS*® JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE
- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical < 2%, Max. < 10% of Die Area)
- Large die for high power capability
- Very low forward voltage drop
- Built-in stress relief mechanism for die protection
- Silver plated substrates for easy soldering or installation
- Soldering temperature: 250 °C maximum
- Protects expensive automotive electronics and mobile equipment

MECHANICAL SPECIFICATION

Die Size: 0.165" x 0.165" Square



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.33	5.46	0.210	0.215
B	2.03	2.16	0.080	0.085
D	4.70	4.83	0.185	0.190
F	0.64	0.76	0.025	0.030
G	0.96	1.09	0.038	0.043

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		BAR 3500D	BAR 3501D	BAR 3502D	BAR 3504D	BAR 3506D	BAR 3508D	BAR 3510D	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS
Working Peak Reverse Voltage	V_{RWM}								
Maximum DC Blocking Voltage	V_{DC}								
Non-repetitive Peak Reverse Voltage (Half wave, Single phase, 60Hz peak)	V_{RSM}	60	120	240	480	720	960	1200	
Average Rectified Forward Current (Single phase, Resistive load, 60Hz)	I_O	35							AMPS
Non-repetitive Peak Forward Surge Current (Half wave, Single phase, 60Hz sine applied to rated load)	I_{FSM}	600							
Repetitive Peak Reverse Surge Current (Time constant = 10 mSec, Duty cycle ≤ 1.0%, Tc = 25 °C)	I_{RSM}	110							
Maximum Instantaneous Forward Voltage (I_F = 80A @300 µSec pulse, Tc = 25°C)	V_F	1.1 (1.05 Typical)					1.2		VOLTS
Maximum DC Reverse Current @ Tc = 25 °C At Rated DC Blocking Voltage @ Tc = 100 °C	I_R	0.5 50							µA
Maximum Thermal Resistance, Junction to Lead (Note 1)	$R_{\theta JC}$	0.9							°C/W
Operating & Storage Temperature Range	T_J,T_{STG}	-65 to +175							°C

Notes: 1) Single Side Cooled

BAR35d

DIOTEC ELECTRONICS CORP
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BUDI-5000-1A

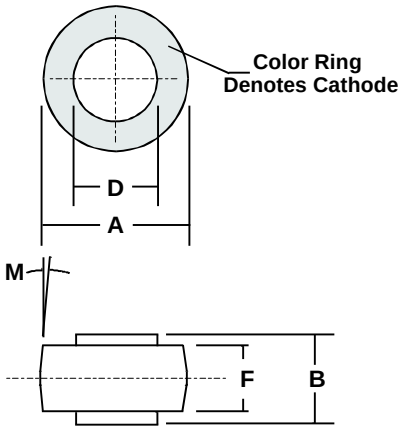
50 AMP BUTTON DIODES

FEATURES

- PROPRIETARY *SOFT GLASS*® JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE
- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical ≤ 2%, Max. ≤ 10% of Die Area)
- Compact molded design
- High surge current, 720 A @ T_J = 175 °C
- Low cost
- Peak performance at elevated temperatures: 50 A @ T_J = 175 °C

MECHANICAL SPECIFICATION

Die Size: 0.180" x 0.180" Square



MECHANICAL DATA

- Case: Transfer molded plastic
- Finish: All external surfaces are corrosion resistant and the contact areas are readily solderable
- Soldering Temperature: 250 °C maximum
- Mounting Position: Any
- Polarity: Color band denotes cathode
- Weight: 0.6 Ounces (1.8 Grams)

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	9.78	10.29	0.385	0.405
B	6.05	6.20	0.238	0.244
D	5.54	6.60	0.218	0.220
F	4.19	4.45	0.165	0.175
M	5° NOM		5° NOM	

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		BAR 5000	BAR 5001	BAR 5002	BAR 5004	BAR 5006	BAR 5008	BAR 5010	
Maximum DC Blocking Voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RWM}								
Maximum Peak Recurrent Reverse Voltage	V_{DC}								
Non-repetitive Peak Reverse Voltage (Half wave, single phase, 60 Hz peak)	V_{RSM}	60	120	240	480	720	960	1200	
Average Forward Rectified Current @ T_C=125 °C	I_O	50							AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	720							
Repetitive Peak Reverse Surge Current (Half wave, single phase, 60 Hz applied to rated load)	I_{RSM}	120							
Maximum Forward Voltage Drop at 50 Amp DC	V_{FM}	1.1 (Typical 0.95)					1.2		VOLTS
Maximum Average DC Reverse Current @ T_A = 25 °C At Rated DC Blocking Voltage @ T_A = 100 °C	I_{RM}	1 50							µA
Maximum Thermal Resistance, Junction to Case (Note 1)	$R_{\theta JC}$	0.8							°C/W
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175							°C

BAR50

Notes: 1) Single Side Cooled

DIOTEC ELECTRONICS CORP
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BUDI-5000S-1A

50 AMP BUTTON DIODES

FEATURES

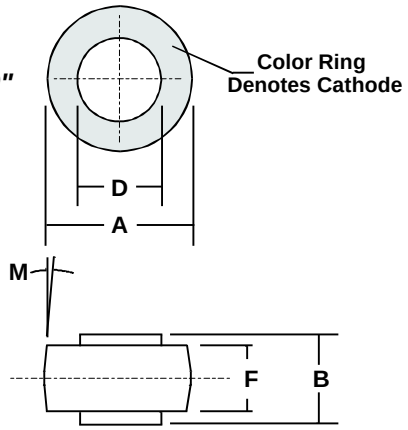
- PROPRIETARY *SOFT GLASS*® JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE
- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical ≤ 2%, Max. ≤ 10% of Die Area)
- Compact molded design
- High surge current, 720 A @ T_J = 175 °C
- Low cost
- Peak performance at elevated temperatures: 50 A @ T_J = 175 °C

MECHANICAL DATA

- Case: Transfer molded plastic
- Finish: All external surfaces are corrosion resistant and the contact areas are readily solderable
- Soldering Temperature: 250 °C maximum
- Mounting Position: Any
- Polarity: Color band denotes cathode
- Weight: 0.6 Ounces (1.8 Grams)

MECHANICAL SPECIFICATION

Die Size: 0.180" x 0.180" Square



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.43	8.69	0.332	0.342
B	5.94	6.25	0.234	0.246
D	5.46	5.71	0.215	0.225
F	4.19	4.45	0.165	0.175
M	5° NOM		5° NOM	

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		BAR 5000S	BAR 5001S	BAR 5002S	BAR 5004S	BAR 5006S	BAR 5008S	BAR 5010S	
Maximum DC Blocking Voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RWM}								
Maximum Peak Recurrent Reverse Voltage	V_{DC}								
Non-repetitive Peak Reverse Voltage (Half wave, single phase, 60 Hz peak)	V_{RSM}	60	120	240	480	720	960	1200	
Average Forward Rectified Current @ T_C=125 °C	I_O	50							AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	720							
Repetitive Peak Reverse Surge Current (Half wave, single phase, 60 Hz applied to rated load)	I_{RSM}	120							
Maximum Forward Voltage Drop at 100 Amp DC	V_{FM}	1.1 (Typical 1.05)					1.2		VOLTS
Maximum Average DC Reverse Current @ T_A = 25 °C At Rated DC Blocking Voltage @ T_A = 100 °C	I_{RM}	1 50							µA
Maximum Thermal Resistance, Junction to Case (Note 1)	$R_{\theta JC}$	0.8							°C/W
Junction Operating and Storage Temperature Range	T_J ,T_{STG}	-65 to +175							°C

Notes: 1) Single Side Cooled

BAR50s

DIOTEC ELECTRONICS CORP
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BUDI-5000D-1A

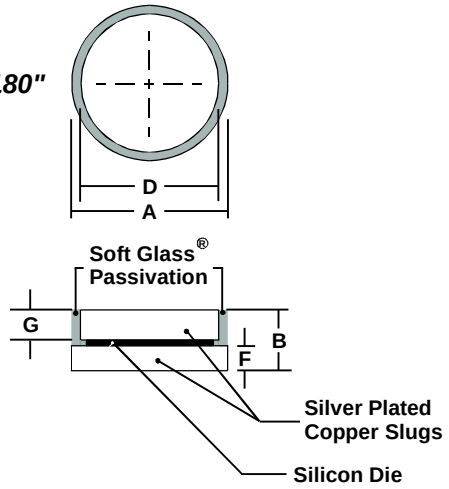
50 AMP JUMBO DIODE CELL

FEATURES

- PROPRIETARY *SOFT GLASS*® JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE
- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical ⩽ 2%, Max. ⩽ 10% of Die Area)
- Large die for high power capability
- Very low forward voltage drop
- Built-in stress relief mechanism for die protection
- Silver plated substrates for easy soldering or installation
- Soldering temperature: 250 °C maximum
- Protects expensive automotive electronics and mobile equipment

MECHANICAL SPECIFICATION

Die Size: 0.180" x 0.180" Square



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	7.25	7.35	0.285	0.290
B	2.05	2.15	0.080	0.085
D	6.50	6.60	0.256	0.260
F	0.72	0.82	0.028	0.032
G	0.96	1.07	0.038	0.042

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		BAR 5000D	BAR 5001D	BAR 5002D	BAR 5004D	BAR 5006D	BAR 5008D	BAR 5010D	
Maximum DC Blocking Voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RWM}								
Maximum Peak Recurrent Reverse Voltage	V_{DC}								
Non-repetitive Peak Reverse Voltage (Half wave, single phase, 60 Hz peak)	V_{RSM}	60	120	240	480	720	960	1200	
Average Forward Rectified Current @ T_C=125 °C	I_O	50							AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	720							
Repetitive Peak Reverse Surge Current (Half wave, single phase, 60 Hz applied to rated load)	I_{RSM}	120							
Maximum Instantaneous Forward Voltage Drop (I_F=100A @300 µSec Pulse, T_C=25 °C)	V_{FM}	1.1 (1.05 Typical)					1.2		VOLTS
Maximum Average DC Reverse Current @ T_A = 25 °C At Rated DC Blocking Voltage @ T_A = 125 °C	I_{RM}	2 50							µA
Maximum Thermal Resistance, Junction to Case (Note 1)	$R_{\theta JC}$	0.8							°C/W
Junction Operating and Storage Temperature Range	T_J ,T_{STG}	-65 to +175							°C

Notes: 1) Single Side Cooled

BAR59d

DIOTEC ELECTRONICS CORP
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BUDI-6000-1A

60 AMP BUTTON DIODES

FEATURES

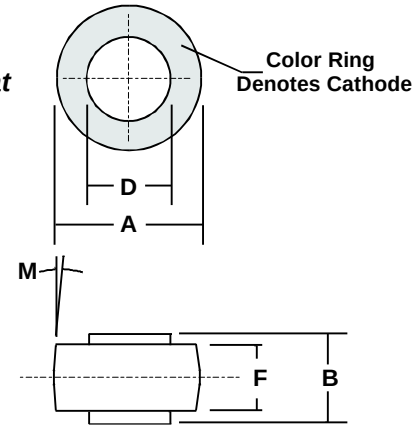
- PROPRIETARY *SOFT GLASS*® JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE
- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical < 2%, Max. < 10% of Die Area)
- Compact molded design
- High surge current, 800 A @ T_J = 175 °C
- Low cost
- Peak performance at elevated temperatures: 60 A @ T_J = 150 °C

MECHANICAL DATA

- Case: Transfer molded plastic
- Finish: All external surfaces are corrosion resistant and the contact areas are readily solderable
- Soldering Temperature: 250 °C maximum
- Mounting Position: Any
- Polarity: Color band denotes cathode
- Weight: 0.6 Ounces (1.8 Grams)

MECHANICAL SPECIFICATION

Die Size: 0.216" Flat to Flat Hex



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	9.78	10.29	0.385	0.405
B	6.05	6.20	0.238	0.244
D	5.54	6.60	0.218	0.220
F	4.19	4.45	0.165	0.175
M	5° NOM		5° NOM	

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		BAR 6000	BAR 6001	BAR 6002	BAR 6004	BAR 6006	BAR 6008	BAR 6010	
Maximum DC Blocking Voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RWM}								
Maximum Peak Recurrent Reverse Voltage	V_{DC}								
Non-repetitive Peak Reverse Voltage (Half wave, single phase, 60 Hz peak)	V_{RSM}	60	120	240	480	720	960	1200	
Average Forward Rectified Current @ T_C=125 °C	I_O	60							AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	800							
Repetitive Peak Reverse Surge Current (Half wave, single phase, 60 Hz applied to rated load)	I_{RSM}	140							
Maximum Instantaneous Forward Voltage Drop (I_F=100A @300 µSec Pulse, T_C=25 °C)	V_{FM}	1.06 (1.03 Typical)					1.10		VOLTS
Maximum Average DC Reverse Current @ T_A = 25 °C At Rated DC Blocking Voltage @ T_A = 125 °C	I_{RM}	1 50							µA
Maximum Thermal Resistance, Junction to Case (Note 1)	$R_{\theta JC}$	0.8							°C/W
Junction Operating and Storage Temperature Range	T_J ,T_{STG}	-65 to +175							°C

BAR60

Notes: 1) Single Side Cooled

DIOTEC ELECTRONICS CORP
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BUDI-6000-1A

60 AMP BUTTON DIODES

FEATURES

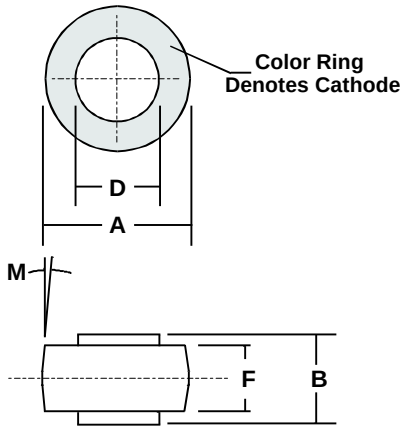
- PROPRIETARY *SOFT GLASS*® JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE
- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical < 2%, Max. < 10% of Die Area)
- Compact molded design
- High surge current, 800 A @ T_J = 175 °C
- Low cost
- Peak performance at elevated temperatures: 60 A @ T_J = 150 °C

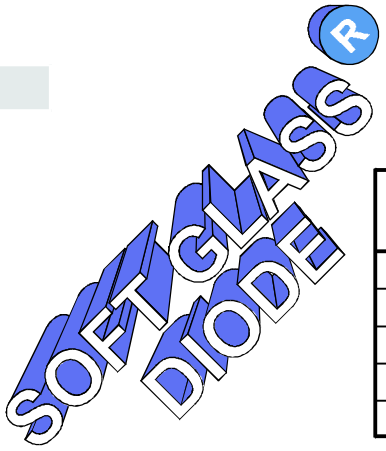
MECHANICAL DATA

- Case: Transfer molded plastic
- Finish: All external surfaces are corrosion resistant and the contact areas are readily solderable
- Soldering Temperature: 250 °C maximum
- Mounting Position: Any
- Polarity: Color band denotes cathode
- Weight: 0.6 Ounces (1.8 Grams)

MECHANICAL SPECIFICATION

Die Size:
0.216" Flat to Flat Hex





DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.43	8.69	0.332	0.342
B	5.94	6.25	0.234	0.246
D	5.46	5.71	0.215	0.225
F	4.19	4.45	0.165	0.175
M	5° NOM		5° NOM	

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		BAR 6000S	BAR 6001S	BAR 6002S	BAR 6004S	BAR 6006S	BAR 6008S	BAR 6010S	
Maximum DC Blocking Voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RWM}								
Maximum Peak Recurrent Reverse Voltage	V_{DC}								
Non-repetitive Peak Reverse Voltage (Half wave, single phase, 60 Hz peak)	V_{RSM}	60	120	240	480	720	960	1200	
Average Forward Rectified Current @ T_C=125 °C	I_O	60							AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	800							
Repetitive Peak Reverse Surge Current (Half wave, single phase, 60 Hz applied to rated load)	I_{RSM}	140							
Maximum Instantaneous Forward Voltage Drop (I_F=100A @300 µSec Pulse, T_C=25 °C)	V_{FM}	1.06 (1.03 Typical)					1.10		VOLTS
Maximum Average DC Reverse Current @ T_A = 25 °C At Rated DC Blocking Voltage @ T_A = 125 °C	I_{RM}	1 50							µA
Maximum Thermal Resistance, Junction to Case (Note 1)	$R_{\theta JC}$	0.8							°C/W
Junction Operating and Storage Temperature Range	T_J ,T_{STG}	-65 to +175							°C

Notes: 1) Single Side Cooled

BAR60s

DIOTEC ELECTRONICS CORP
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BUDI-6000-1A

60 AMP BUTTON DIODES

FEATURES

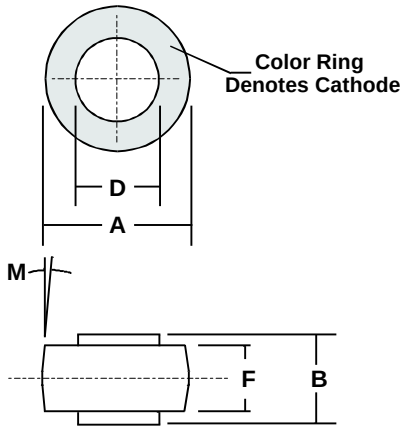
- PROPRIETARY *SOFT GLASS*® JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE
- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical < 2%, Max. < 10% of Die Area)
- Compact molded design
- High surge current, 800 A @ T_J = 175 °C
- Low cost
- Peak performance at elevated temperatures: 60 A @ T_J = 150 °C

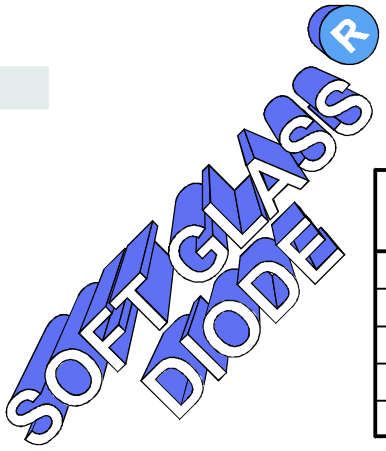
MECHANICAL DATA

- Case: Transfer molded plastic
- Finish: All external surfaces are corrosion resistant and the contact areas are readily solderable
- Soldering Temperature: 250 °C maximum
- Mounting Position: Any
- Polarity: Color band denotes cathode
- Weight: 0.6 Ounces (1.8 Grams)

MECHANICAL SPECIFICATION

Die Size:
0.216" Flat to Flat Hex





DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.43	8.69	0.332	0.342
B	5.94	6.25	0.234	0.246
D	5.46	5.71	0.215	0.225
F	4.19	4.45	0.165	0.175
M	5° NOM		5° NOM	

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		BAR 6000S	BAR 6001S	BAR 6002S	BAR 6004S	BAR 6006S	BAR 6008S	BAR 6010S	
Maximum DC Blocking Voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RWM}								
Maximum Peak Recurrent Reverse Voltage	V_{DC}								
Non-repetitive Peak Reverse Voltage (Half wave, single phase, 60 Hz peak)	V_{RSM}	60	120	240	480	720	960	1200	
Average Forward Rectified Current @ T_C=125 °C	I_O	60							AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	800							
Repetitive Peak Reverse Surge Current (Half wave, single phase, 60 Hz applied to rated load)	I_{RSM}	140							
Maximum Instantaneous Forward Voltage Drop (I_F=100A @300 µSec Pulse, T_C=25 °C)	V_{FM}	1.06 (1.03 Typical)					1.10		VOLTS
Maximum Average DC Reverse Current @ T_A = 25 °C At Rated DC Blocking Voltage @ T_A = 125 °C	I_{RM}	1 50							µA
Maximum Thermal Resistance, Junction to Case (Note 1)	$R_{\theta JC}$	0.8							°C/W
Junction Operating and Storage Temperature Range	T_J ,T_{STG}	-65 to +175							°C

Notes: 1) Single Side Cooled

BAR60s

DIOTEC ELECTRONICS CORP
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BUDI-7500-1A

75 AMP BUTTON DIODES

FEATURES

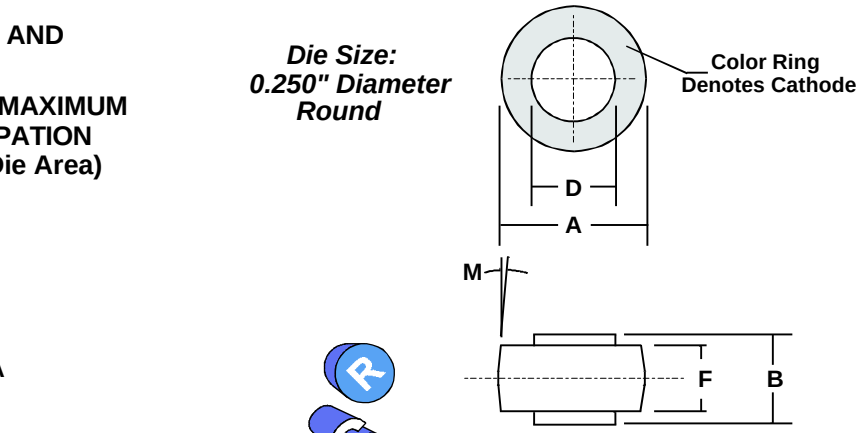
- PROPRIETARY *SOFT GLASS*® JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE
- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical < 2%, Max. < 10% of Die Area)
- Compact molded design
- High surge current, 800 A @ T_J = 175 °C
- Low cost
- Peak performance at elevated temperatures: 75 A @ T_J = 150 °C

MECHANICAL DATA

- Case: Transfer molded plastic
- Finish: All external surfaces are corrosion resistant and the contact areas are readily solderable
- Soldering Temperature: 250 °C maximum
- Mounting Position: Any
- Polarity: Color band denotes cathode
- Weight: 0.6 Ounces (1.8 Grams)

MECHANICAL SPECIFICATION

Die Size: 0.250" Diameter Round



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	9.78	10.29	0.385	0.405
B	6.05	6.20	0.238	0.244
D	5.54	6.60	0.218	0.220
F	4.19	4.45	0.165	0.175
M	5° NOM		5° NOM	

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		BAR 7500	BAR 7501	BAR 7502	BAR 7504	BAR 7506	BAR 7508	BAR 7510	
Maximum DC Blocking Voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RWM}								
Maximum Peak Recurrent Reverse Voltage	V_{DC}								
Non-repetitive Peak Reverse Voltage (Half wave, single phase, 60 Hz peak)	V_{RSM}	60	120	240	480	720	960	1200	
Average Forward Rectified Current @ T_C=150 °C	I_O	75							AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	800							
Repetitive Peak Reverse Surge Current (Half wave, single phase, 60 Hz applied to rated load)	I_{RSM}	140							
Maximum Forward Voltage Drop at 100 Amp DC	V_{FM}	1.05 (Typical <1.0)					1.1		VOLTS
Maximum Average DC Reverse Current @ T_A = 25 °C At Rated DC Blocking Voltage @ T_A = 100 °C	I_{RM}	1 50							µA
Maximum Thermal Resistance, Junction to Case (Note 1)	$R_{\theta JC}$	0.8							°C/W
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175							°C

BAR75

Notes: 1) Single Side Cooled

DIOTEC ELECTRONICS CORP
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BUDI-7500S-1A

75 AMP BUTTON DIODES

FEATURES

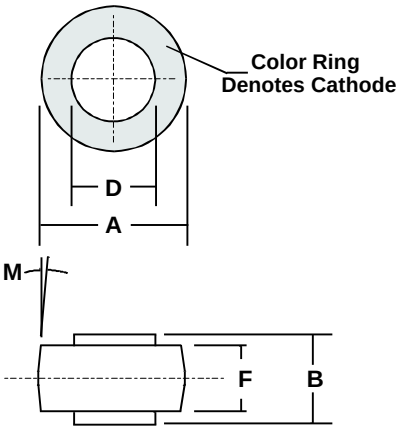
- PROPRIETARY *SOFT GLASS*® JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE
- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical ≤ 2%, Max. ≤ 10% of Die Area)
- Compact molded design
- High surge current, 800 A @ T_J = 175 °C
- Low cost
- Peak performance at elevated temperatures: 75 A @ T_J = 150 °C

MECHANICAL DATA

- Case: Transfer molded plastic
- Finish: All external surfaces are corrosion resistant and the contact areas are readily solderable
- Soldering Temperature: 250 °C maximum
- Mounting Position: Any
- Polarity: Color band denotes cathode
- Weight: 0.6 Ounces (1.8 Grams)

MECHANICAL SPECIFICATION

Die Size: 0.250" Diameter Round



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	8.43	8.69	0.332	0.342
B	5.94	6.25	0.234	0.246
D	5.46	5.71	0.215	0.225
F	4.19	4.45	0.165	0.175
M	5° NOM		5° NOM	

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		BAR 7500S	BAR 7501S	BAR 7502S	BAR 7504S	BAR 7506S	BAR 7508S	BAR 7510S	
Maximum DC Blocking Voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RWM}								
Maximum Peak Recurrent Reverse Voltage	V_{DC}								
Non-repetitive Peak Reverse Voltage (Half wave, single phase, 60 Hz peak)	V_{RSM}	60	120	240	480	720	960	1200	
Average Forward Rectified Current @ T_C=150 °C	I_O	75							AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	800							
Repetitive Peak Reverse Surge Current (Half wave, single phase, 60 Hz applied to rated load)	I_{RSM}	140							
Maximum Forward Voltage Drop at 100 Amp DC	V_{FM}	1.05 (Typical < 1.0)					1.1		VOLTS
Maximum Average DC Reverse Current @ T_A = 25 °C At Rated DC Blocking Voltage @ T_A = 100 °C	I_{RM}	1 50							µA
Maximum Thermal Resistance, Junction to Case (Note 1)	$R_{\theta JC}$	0.8							°C/W
Junction Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175							°C

Notes: 1) Single Side Cooled

BAR75s

DIOTEC ELECTRONICS CORP
18020 Hobart Blvd., Unit B
Gardena, CA 90248 U.S.A
Tel.: (310) 767-1052 Fax: (310) 767-7958

Data Sheet No. BUDI-7500D-1A

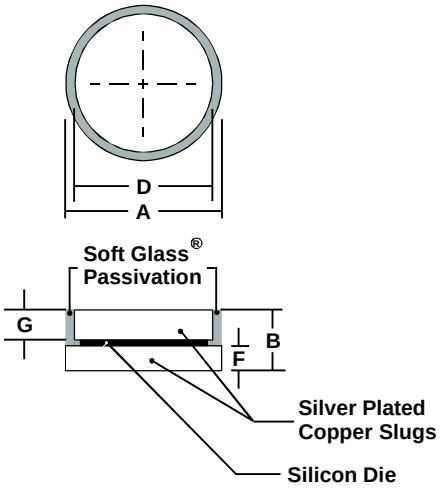
75 AMP JUMBO DIODE CELL

FEATURES

- PROPRIETARY *SOFT GLASS*® JUNCTION PASSIVATION FOR SUPERIOR RELIABILITY AND PERFORMANCE
- VOID FREE VACUUM DIE SOLDERING FOR MAXIMUM MECHANICAL STRENGTH AND HEAT DISSIPATION (Solder Voids: Typical ⩽ 2%, Max. ⩽ 10% of Die Area)
- Large die for high power capability
- Very low forward voltage drop
- Built-in stress relief mechanism for die protection
- Silver plated substrates for easy soldering or installation
- Soldering temperature: 250 °C maximum
- Protects expensive automotive electronics and mobile equipment

MECHANICAL SPECIFICATION

Die Size:
0.250" Diameter
Round die



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	7.25	7.35	0.285	0.290
B	2.05	2.15	0.080	0.085
D	6.50	6.60	0.256	0.260
F	0.72	0.82	0.028	0.032
G	0.96	1.07	0.038	0.042

MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS							UNITS
Series Number		BAR 7500D	BAR 7501D	BAR 7502D	BAR 7504D	BAR 7506D	BAR 7508D	BAR 7510D	
Maximum DC Blocking Voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS Voltage	V_{RWM}								
Maximum Peak Recurrent Reverse Voltage	V_{DC}								
Non-repetitive Peak Reverse Voltage (Half wave, single phase, 60 Hz peak)	V_{RSM}	60	120	240	480	720	960	1200	
Average Forward Rectified Current @ T_C=125 °C	I_O	75							AMPS
Peak Forward Surge Current (8.3mS single half sine wave superimposed on rated load)	I_{FSM}	800							
Repetitive Peak Reverse Surge Current (Half wave, single phase, 60 Hz applied to rated load)	I_{RSM}	140							
Maximum Instantaneous Forward Voltage Drop (I_F=100A @300 µSec Pulse, T_C=25 °C)	V_{FM}	1.05 (1.00 Typical)					1.10		VOLTS
Maximum Average DC Reverse Current @ T_A = 25 °C At Rated DC Blocking Voltage @ T_A = 125 °C	I_{RM}	2 50							µA
Maximum Thermal Resistance, Junction to Case (Note 1)	$R_{\theta JC}$	0.8							°C/W
Junction Operating and Storage Temperature Range	T_J ,T_{STG}	-65 to +175							°C

Notes: 1) Single Side Cooled

BAR75d

APPENDICES

PACKAGING INFORMATION

CROSS REFERENCES

ACRONYMS, ABBREVIATIONS, AND SYMBOLS

ALPHA-NUMERIC PRODUCT INDEX

SAMPLE REQUEST FORM

SOFT GLASS DIODE®

APPENDIX I - PACKAGING INFORMATION

TAPE AND REEL PACKAGING (AXIAL LEAD DIODES)

DIODE PACKAGE	COMPONENT SPACING FIG 1. "A" Inches (mm)	TAPE SPACING FIG 1. "B" Inches (mm)	REEL DIAMETER FIG 2. "C" Inches (mm)	QUANITY		CARTON DIMENSIONS Inches (mm)	CARTON GROSS WEIGHT Lbs (Kgs
				PER REEL	PER CARTON		
DO-41/DT-41	0.200 (5)	0.395 (10)	12.82 (326)	5,000	20,000	14 x 14 x 14 (355 x 355 x 355)	22.0 (10.5)
DO-15/DT-15	0.200 (5)	0.395 (10)	12.82 (326)	3,500	14,000		19.0 (8.5)
DO-27/DT-27	0.395 (10)	0.395 (10)	12.82 (326)	1,250	5,000		21.0 (9.4)
G-6	0.395 (10)	0.395 (10)	12.82 (326)	600	2,400		16.5 (7.5)

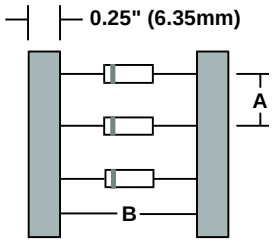


FIGURE 1

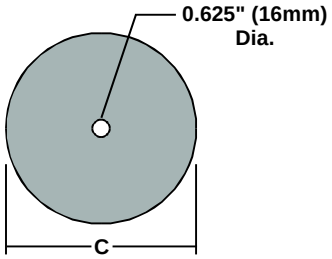


FIGURE 2

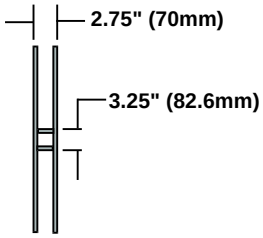


FIGURE 3

BULK PACKAGING

AXIAL LEAD DIODES

PACKAGE	BOX SIZE Inches	CARTON SIZE Inches	QUANTITY		GROSS WEIGHT, Lbs (Kgs)	
			PER BOX	PER CARTON	PER BOX	PER CARTON
DO-41/DT-41	7.88 x 3.31 x.0.94	17.25 x 8.75 x.10.00	1,000	40,000	0.825 (0.37)	43.0 (19.5)
DO-15/DT-15	7.88 x 3.31 x.0.94	17.25 x 8.75 x.10.00	1,500	40,000	1.030 (0.48)	43.0 (19.5)
DO-27/DT-27	12.00 x 3.00 x.1.56	16.50 x 12.25 x.11.25	500	15,000	1.438 (0.65)	44.0 (20.0)
G-6	12.00 x 3.00 x.1.56	16.50 x 12.25 x.11.25	400	12,000	1.500 (0.68)	44.0 (20.0)

BRIDGE RECTIFIERS

WB	12.00 x 4.25 x.3.75	20.0 x 10.0 x.10.0	1,000	10,000	2.50 (1.14)	25.0 (11.4)
SB2	8.50 x 8.50 x.2.12	17.0 x 9.0 x.10.0	400	4,000	2.80 (1.40)	28.0 (15.0)
KBL	12.50 x 6.50 x.0.50	13.5 x 13.5 x. 8.0	50 (Tray)	2,000	5.12 (2.35)	39.6 (18.0)
SB4	12.50 x 6.50 x.0.50	13.5 x 13.5 x. 8.0	54 (Tray)	2,160	2.87 (1.30)	39.6 (18.0)
SB5	9.50 x 5.50 x.2.50	17.0 x 9.0 x.10.0	100	1,000	3.00 (1.36)	30.0 (13.6)
SBU6	12.50 x 6.50 x.0.50	13.5 x 13.5 x. 8.0	50 (Tray)	2,000	2.87 (1.30)	39.6 (18.0)
DB6	7.62 x 7.62 x.1.56	13.5 x 13.5 x.14.0	200	2,000	2.96 (1.48)	29.6 (14.8)
DB8	9.00 x 9.00 x.1.90	17.0 x 9.0 x.10.0	50	500	2.10 (0.96)	21.0 (9.6)
DB25/T	7.62 x 7.62 x.1.56	17.0 x 9.0 x.10.0	50	500	4.00 (1.82)	40.0 (18.2)
DB25/W	7.62 x 7.62 x.1.56	17.0 x 9.0 x.10.0	50	500	4.00 (1.82)	40.0 (18.2)
DB25P/T	7.62 x 7.62 x.1.56	17.0 x 9.0 x.10.0	50	500	2.70 (1.23)	27.0 (12.3)
DB25P/W	7.62 x 7.62 x.1.56	17.0 x 9.0 x.10.0	50	500	2.50 (1.14)	25.0 (11.4)
SDB	7.62 x 7.62 x.1.56	17.0 x 9.0 x.10.0	72	720	3.90 (1.77)	39.0 (17.7)

ANTI-STATIC TUBE PACKAGING

PACKAGE	BOX SIZE Length - Inches	CARTON SIZE Inches	QUANTITY		GROSS WEIGHT, Lbs (Kgs)	
			PER TUBE	PER CARTON	PER TUBE	PER CARTON
DI (BRIDGE)	19.2	24 x 6 x 6	50	2,500	0.28 (0.13)	14.1 (6.4)
SINB (BRIDGE)	19.2	24 x 6 x 6	50	2,500	0.28 (0.13)	14.1 (6.4)
TO-220AB	20.5	24 x 6 x 6	50	2,500	0.28 (0.13)	14.1 (6.4)
TO-220AC	20.5	24 x 6 x 6	50	2,500	0.28 (0.13)	14.1 (6.4)
TO-247 AB	16.0	24 x 6 x 6	25	1,250	0.41 (0.19)	20.5 (9.5)
TO-247 AC	16.0	24 x 6 x 6	25	1,250	0.41 (0.19)	20.5 (9.5)

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APPENDIX II - SCHOTTKY BARRIER RECTIFIER CROSS REFERENCE

INDUSTRY PART NO.	SUGGESTED DIOTEC REPLACEMENT PART NO.	PAGE NO.
1N5817	1N5817	A1
1N5818	1N5818	A1
1N5819	1N5819	A1
1N5820	1N5820	A5
1N5821	1N5821	A5
1N5822	1N5822	A5
1N5823	SK502	A9
1N5824	SK504	A9
1N5825	SK504	A9
MBR1035	12SK40	A13
MBR1045	12SK50	A13
MBR1050	12SK50	A13
MBR1060	12SK60	A13
MBR1090	12SK100	A13
MBR10100	12SK100	A13
MBR150	SK106	A3
MBR1535CT	SK1640C	B3
MBR1540CT	SK1640C	B3
MBR1545CT	SK1650C	B3
MBR1550CT	SK1650C	B3
MBR1560CT	SK1660C	B3
MBR160	SK106	A3
MBR1635	12SK40	A13
MBR1645	12SK40	A13
MBR1650	12SK50	A13
MBR1660	12SK60	A13
MBR2035CT	SK1640C	B3
MBR2045CT	SK1650C	B3
MBR2050CT	SK1650C	B3
MBR2060CT	SK1660C	B3
MBR2090CT	SK16100C	B3
MBR20100CT	SK16100C	B3
MBR2535CT	SK2440C	B5
MBR2545CT	SK2450C	B5
MBR2550CT	SK2450C	B5
MBR2560CT	SK2460C	B5
MBR3035PT	SK3040C	B7
MBR3045PT	SK3050C	B7
MBR3050PT	SK3050C	B7
MBR3060PT	SK3060C	B7
MBR320	SK302	A7
MBR330	SK304	A7
MBR340	SK304	A7
MBR350	SK306	A7
MBR360	SK306	A7
MBR4035PT	SK4040C	B7
MBR4045PT	SK4050C	B7
MBR4050PT	SK4050C	B7
MBR4060PT	SK4060C	B7
MBR735	12SK40	A13
MBR745	12SK50	A13
MBR750	12SK50	A13
MBR760	12SK60	A13
MBRF1035	12SK40	A13
MBRF1045	12SK50	A13
MBRF1050	12SK50	A13
MBRF1060	12SK60	A13
MBR2050CT	SK1650C	B3
MBR2060CT	SK1660C	B3
NST520	6SK40	A11
NST530	6SK40	A11

INDUSTRY PART NO.	SUGGESTED DIOTEC REPLACEMENT PART NO.	PAGE NO.
NST545	6SK50	A11
NST1020	12SK40	A13
NST1030	12SK40	A13
NST1045	12SK50	A13
NST1625	16SK40	A15
NST1635	16SK40	A15
NST1645	16SK50	A15
NST2025	16SK50	A15
NST2035	16SK50	A15
NST2045	16SK50	A15
NST2525	SK2440C	B5
NST2535	SK2440C	B5
NST3020	SK1640C	B3
NST3030	SK1640C	B3
NST3045	SK1650C	B3
SB020	SK102	A3
SB030	SK104	A3
SB040	SK104	A3
SB120	SK102	A3
SB130	SK104	A3
SB140	SK104	A3
SB150	SK106	A3
SB160	SK106	A3
SB170	SK108	A3
SB180	SK108	A3
SB190	SK110	A3
SB1100	SK110	A3
SB320	SK302	A7
SB330	SK304	A7
SB340	SK304	A7
SB350	SK306	A7
SB360	SK306	A7
SB380	SK310	A7
SB3100	SK310	A7
SB520	SK502	A9
SB530	SK504	A9
SB540	SK504	A9
SB550	SK506	A9
SB560	SK506	A9
SB590	SK510	A9
SB5100	SK510	A9
SBL1030CT	SK1240C	B1
SBL1040CT	SK1240C	B1
SBL1630CT	SK1640C	B3
SBL1640CT	SK1640C	B3
SBL530	6SK40	A11
SBL530CT	SK1240C	B1
SBL540	6SK40	A11
SBL540CT	SK1240C	B1
SBLF1030	12SK40	A13
SBLF1040	12SK40	A13
SBLF1630CT	SK1640C	B3
SBLF1640CT	SK1640C	B3
SD241P	SK3050C	B7
SD115	SK102	A3
SD120	SK104	A3
SD130	SK104	A3
SD140	SK106	A3
SD150	SK106	A3
SD160	SK108	A3
SD170	SK108	A3

INDUSTRY PART NO.	SUGGESTED DIOTEC REPLACEMENT PART NO.	PAGE NO.
SD180	SK108	A3
SD315	SK302	A7
SD320	SK302	A7
SD330	SK304	A7
SD340	SK304	A7
SD350	SK306	A7
SD360	SK306	A7
SD380	SK310	A7
SD520	SK502	A9
SD530	SK504	A9
SD540	SK504	A9
SDS1620L	16SK40	A15
SDS1630L	16SK40	A15
SDS1640L	16SK40	A15
SDS1645L	16SK50	A15
SR102	SK102	A3
SR103	SK104	A3
SR104	SK104	A3
SR105	SK106	A3
SR106	SK106	A3
SR302	SK302	A7
SR303	SK304	A7
SR304	SK304	A7
SR305	SK306	A7
SR306	SK306	A7
SR502	SK502	A9
SR503	SK504	A9
SR504	SK504	A9
SR505	SK506	A9
SR506	SK506	A9
SR802	12SK40	A13
SR803	12SK40	A13
SR804	12SK40	A13
SR805	12SK50	A13
SR806	12SK60	A13
SR1002	12SK40	A13
SR1003	12SK40	A13
SR1004	12SK40	A13
SR1005	12SK50	A13
SR1006	12SK60	A13
SR1602	SK1640C	B3
SR1603	SK1640C	B3
SR1604	SK1640C	B3
SR1605	SK1650C	B3
SR1606	SK1660C	B3
SR2020	SK2440C	B5
SR2030	SK2440C	B5
SR2045	SK2450C	B5
SR3030	SK3040C	B7
SR3040	SK3040C	B7
SR3045	SK3050C	B7
SR3050	SK3050C	B7
SR3060	SK3060C	B7
SR4020	SK4040C	B9
SR4030	SK4040C	B9
SR4040	SK4040C	B9
SR4050	SK4040C	B9
SR5020	SK4040C	B9
SR5030	SK4040C	B9
SR5040	SK4040C	B9
SR5050	SK4050C	B9

INDUSTRY PART NO.	SUGGESTED DIOTEC REPLACEMENT PART NO.	PAGE NO.
USD320C	SK3040C	B9
USD335C	SK3040C	B9
USD345C	SK3050C	B9
USD620	6SK40	A11
USD620C	SK1240C	B1
USD635	6SK40	A11
USD635C	SK1240C	B1
USD640	6SK40	A11
USD640C	SK1240C	B1
USD645	6SK50	A11
USD645C	SK1250C	B1
USD720	12SK40	A13
USD720C	SK1640C	B3
USD735	12SK40	A13
USD735C	SK1640C	B3
USD740	12SK40	A13
USD740C	SK1640C	B3
USD745	12SK50	A13
USD745C	SK1650C	B3
USD820	12SK40	A13
USD830	12SK40	A13
USD835	12SK40	A13
USD840	12SK40	A13
USD845	12SK50	A13
USD920	16SK40	A15
USD935	16SK40	A15
USD940	16SK40	A15
USD945	16SK50	A15
VSK1020	12SK40	A13
VSK1035	12SK40	A13
VSK1045	12SK50	A13
VSK12	SK1240C	B1
VSK13	SK1240C	B1
VSK14	SK1240C	B1
VSK120	SK102	A3
VSK130	SK104	A3
VSK140	SK104	A3
VSK2020	SK1640C	B3
VSK2035	SK1640C	B3
VSK2045	SK1650C	B3
VSK2420	SK2440C	B5
VSK2435	SK2440C	B5
VSK2445	SK2450C	B5
VSK320	SK302	A7
VSK330	SK304	A7
VSK340	SK304	A7
VSK520	SK502	A9
VSK530	SK504	A9
VSK540	SK504	A9
VSK62	6SK40	A11
VSK63	6SK40	A11
VSK64	6SK40	A11
VSK920	16SK40	A15
VSK935	16SK40	A15
VSK945	16SK50	A15

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APPENDIX III - SUPER EFFICIENT and ULTRA FAST RECOVERY DIODE CROSS REFERENCE

INDUSTRY PART NO.	*SUGGESTED DIOTEC REPLACEMENT PART NO.*	*PAGE NO.*
BYT01-200	SPR12	C1
BYT01-300	SPR13	C1
BYT01-400	UFR104	C3
BYT03-200	SPR32	C7
BYT03-300	SPR33	C7
BYT03-400	SPR34	C7
BYT08P-200A	SPR82	C21
BYT08P-300A	SPR83	C21
BYT08P-400A	SPR84	C21
BYT08PI-200	8SPR02	C19
BYT08PI-300	8SPR03	C19
BYT08PI-400	8SPR04	C19
BYT12P-600A	SPR156	C25
BYT30P-200	CALL	
BYT30P-300	CALL	
BYT30P-400	CALL	
BYV27-100	SPR21	C5
BYV27-150	SPR22	C5
BYV27-200	SPR22	C5
BYV27-50	SPR21	C5
BYV28-100	SPR51	C13
BYV28-150	SPR52	C13
BYW100-100	SPR21	C5
BYW100-150	SPR22	C5
BYW100-200	SPR22	C5
BYW100-50	SPR21	C5
BYW29-100	SPR81	C21
BYW29-100A	SPR81	C21
BYW29-150	SPR82	C21
BYW29-150A	SPR82	C21
BYW29-200	SPR82	C21
BYW29-200A	SPR82	C21
BYW29-50	SPR81	C21
BYW29-50A	SPR81	C21
BYW51-50A	SPR161C	D7
BYW51-100A	SPR161C	D7
BYW51-150A	SPR162C	D7
BYW51-200A	SPR162C	D7
BYW77P-50	CALL	
BYW77P-100	CALL	
BYW77P-150	CALL	
BYW77P-200	CALL	
BYW80-50A	8SPR01	C19
BYW80-100A	8SPR01	C19
BYW80-150A	8SPR02	C19
BYW80-200A	8SPR02	C19
BYW81P-50A	SPR150	C25
BYW81P-100A	SPR151	C25
BYW81P-150A	SPR152	C25
BYW81P-200A	SPR152	C25
BYW98-50	SPR31	C7
BYW98-100	SPR31	C7
BYW98-150	SPR32	C7
BYW98-200	SPR32	C7
BYW99P-50	UFR3001C	D9
BYW99P-100	UFR3001C	D9
BYW99P-150	UFR3002C	D9
BYW99P-200	UFR3002C	D9
EGP10A	UFR101	C3
EGP10B	UFR102	C3
EGP10C	UFR102	C3
EGP10D	UFR102	C3
EGP10F	UFR103	C3
EGP10G	UFR104	C3
EGP10J	UFR106	C3
EGP10K	UFR108	C3
EGP10M	UFR110	C3
EGP20A	SPR21	C5
EGP20B	SPR21	C5
EGP20C	SPR22	C5
EGP20D	SPR22	C5
EGP20F	SPR23	C5
EGP20G	UFR24	C5
EGP20J	UFR26	C5
EGP20K	UFR28	C5
EGP30A	SPR31	C7
EGP30B	SPR31	C7
EGP30C	SPR32	C7
EGP30D	SPR32	C7
EGP30F	SPR33	C7
EGP30G	SPR34	C7
EGP30J	UFR306	C9
EGP30K	UFR308	C9
EGP50A	SPR51	C13
EGP50B	SPR51	C13
EGP50C	SPR52	C13
EGP50D	SPR52	C13
EGP50F	SPR53	C13
EGP50G	SPR54	C13
ER1001	UFR100	C3
ER1002	UFR101	C3
ER1003	UFR102	C3
ER1004	UFR104	C3
ER1005	UFR106	C3
ER1006	UFR108	C3
FE1A	SPR11	C1
FE1B	SPR11	C1
FE1C	SPR12	C1
FE1D	SPR12	C1
FE2A	SPR21	C5
FE2B	SPR21	C5
FE2C	SPR22	C5
FE2D	SPR22	C5
FE3A	SPR31	C7
FE3B	SPR31	C7
FE3C	SPR32	C7
FE3D	SPR32	C7
FE5A	SPR51	C13
FE5B	SPR51	C13
FE5C	SPR52	C13
FE5D	SPR52	C13
FE6A	SPR51	C13
FE6B	SPR51	C13
FE6C	SPR52	C13
FE6D	SPR52	C13
FEP16AT	SPR161C	D7
FEP16BT	SPR161C	D7
FEP16CT	SPR162C	D7
FEP16DT	SPR162C	D7
FEP16FT	SPR163C	D7
FEP16GT	SPR164C	D7
FEP16JT	SPR166C	D7
FEP16HT	SPR165C	D7
FEPF16AT	SPR1601C	D5
FEPF16BT	SPR1601C	D5
FEPF16CT	SPR1602C	D5
FEPF16DT	SPR1602C	D5
FEPF16FT	SPR1603C	D5
FEPF16GT	SPR1604C	D5
FEPF16HT	SPR1605C	D5
FEP30AP	UFR3001C	D9
FEP30BP	UFR3001C	D9
FEP30CP	UFR3002C	D9
FEP30DP	UFR3002C	D9
FEP30FP	UFR3003C	D9
FEP30GP	UFR3004C	D9
FEP30HP	UFR3005C	D9
FES16AT	SPR150	C25
FES16BT	SPR151	C25
FES16CT	SPR152	C25
FES16DT	SPR152	C25
FES16FT	SPR153	C25
FES16GT	SPR154	C25
FES16HT	SPR155	C25
FES16JT	SPR156	C25
FES8AT	SPR80	C21
FES8BT	SPR81	C21
FES8CT	SPR82	C21
FES8DT	SPR82	C21
FES8FT	SPR83	C21
FES8GT	SPR84	C21
FES8HT	SPR85	C21
FES8JT	SPR86	C21
FESF8AT	8SPR01	C19
FESF8BT	8SPR01	C19
FESF8CT	8SPR02	C19
FESF8DT	8SPR02	C19
FESF8FT	8SPR03	C19
FESF8GT	8SPR04	C19
FESF8HT	8SPR05	C19
GI1001	SPR11	C1
GI1002	SPR11	C1
GI1003	SPR12	C1
GI1004	SPR12	C1
GI1101	SPR21	C5
GI1102	SPR21	C5
GI1103	SPR22	C5
GI1104	SPR22	C5
GI1301	SPR51	C13
GI1302	SPR51	C13
GI1303	SPR52	C13
GI1304	SPR52	C13
GI1401	SPR80	C21
GI1402	SPR81	C21
GI1403	SPR82	C21
GI1404	SPR82	C21
GI2401	SPR1601C	D5
GI2402	SPR1601C	D5
GI2403	SPR1602C	D5
GI2404	SPR1602C	D5
HER101	UFR100	C3
HER102	UFR101	C3
HER103	UFR102	C3
HER104	UFR103	C3
HER105	UFR104	C3
HER106	UFR106	C3
HER151	SPR21	C5
HER152	SPR21	C5
HER153	SPR22	C5
HER154	SPR23	C5
HER155	UFR24	C5
HER156	UFR26	C5
HER301	UFR300	C9
HER302	UFR301	C9
HER303	UFR302	C9
HER304	UFR303	C9
HER305	UFR304	C9
HER601	UFR600	C9
HER602	UFR601	C9
HER603	UFR602	C9
HER604	UFR603	C9
HER605	UFR604	C9
HER801	SPR81	C21
HER802	SPR81	C21
HER803	SPR82	C21
HER804	SPR83	C21
HER805	SPR84	C21
HER806	SPR85	C21
HER1601	SPR161C	D7
HER1602	SPR161C	D7
HER1603	SPR162C	D7
HER1604	SPR163C	D7
HER1605	SPR164C	D7
HER3001	UFR3001C	D9
HER3002	UFR3001C	D9
HER3003	UFR3002C	D9
HER3004	UFR3003C	D9
HER3005	UFR3004C	D9
HER3006	UFR3005C	D9
MUR105	SPR11	C1
MUR110	SPR11	C1
MUR115	SPR12	C1
MUR120	SPR12	C1
MUR130	SPR13	C1
MUR140	UFR104	C3
MUR150	UFR106	C3
MUR160	UFR106	C3
MUR170	UFR108	C3
MUR180	UFR108	C3
MUR405	SPR51	C13
MUR410	SPR51	C13
MUR415	SPR52	C13
MUR420	SPR52	C13
MUR430	SPR53	C13
MUR440	SPR54	C13
MUR605CT	SPR601C	D5
MUR610CT	SPR601C	D5
MUR615CT	SPR602C	D5
MUR620CT	SPR602C	D5
MUR805	SPR81	C21
MUR810	SPR81	C21
MUR815	SPR82	C21
MUR820	SPR82	C21
MUR830	SPR83	C21

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APPENDIX III - SUPER EFFICIENT and ULTRA FAST RECOVERY DIODE CROSS REFERENCE (Cont'd)

INDUSTRY PART NO.	SUGGESTED DIOTEC REPLACEMENT PART NO.	PAGE NO.
MUR840	SPR84	C21
MUR850	SPR85	C21
MUR860	SPR86	C21
MUR1505	SPR150	C25
MUR1510	SPR151	C25
MUR1515	SPR152	C25
MUR1520	SPR152	C25
MUR1530	SPR153	C25
MUR1540	SPR154	C25
MUR1550	SPR155	C25
MUR1560	SPR156	C25
MUR1605CT	SPR1601C	D5
MUR1610CT	SPR1601C	D5
MUR1615CT	SPR1602C	D5
MUR1620CT	SPR1602C	D5
MUR1630CT	SPR1603C	D5
MUR1640CT	SPR1604C	D5
MUR1650CT	SPR1605C	D5
MUR3005PT	UFR3001C	D9
MUR3010PT	UFR3001C	D9
MUR3015PT	UFR3002C	D9
MUR3020PT	UFR3002C	D9
MUR3030PT	UFR3003C	D9
MUR3040PT	UFR3004C	D9
R710XPT	UFR3001C	D9
R711XPT	UFR3001C	D9
R712XPT	UFR3002C	D9
R714XPT	UFR3004C	D9
SDF10U40DN	UFR3004C	D9
SDF15U20DN	UFR3002C	D9
SDF15U40DN	UFR3004C	D9
SDF20U20DN	UFR3002C	D9
SDF20U40DN	UFR3004C	D9
SDF30U20DN	UFR3002C	D9
SDF30U60DN	UFR3004C	D9
SDP04U40DN	SPR84	C21
SDP05U60DN	SPR86	C21
SDP06U20DN	SPR82	C21
SDP06U40DN	SPR84	C21
SDP10U20DN	SPR152	C25
SDP10U60DN	SPR156	C25
SDP15U20DN	SPR152	C25
SDS04U40S	6SPR04	C17
SDS05U60S	6SPR06	C17
SDS06U20DN	SPR602C	D1
SDS06U20S	6SPR02	C17
SDS06U40S	6SPR04	C17
SDS10U20DN	SPR1002C	D3
SDS10U20S	12SPR02	C23
SDS10U40S	12SPR04	C23
SDS10U60S	12SPR06	C23
SDS16U20DN	SPR1602C	D5
SET801	SPR81	C21
SET802	SPR81	C21
SET803	SPR82	C21
SET804	SPR82	C21
SET5401	SPR161C	D7
SET5402	SPR161C	D7
SET5403	SPR162C	D7
SET5404	SPR162C	D7
SF11	SPR11	C17
SF12	SPR11	C1
SF13	SPR12	C1
SF14	SPR12	C1
SF21	SPR21	C5
SF22	SPR21	C5
SF23	SPR22	C5
SF24	SPR22	C5
SF31	SPR31	C7
SF32	SPR31	C7
SF33	SPR32	C7
SF34	SPR32	C7
SF51	SPR51	C13
SF52	SPR51	C13
SF53	SPR52	C13
SF54	SPR52	C13
SF81	SPR81	C21
SF82	SPR81	C21
SF83	SPR82	C21
SF84	SPR82	C21
SF161	SPR161C	D7
SF162	SPR161C	D7
SF163	SPR162C	D7
SF164	SPR162C	D7
SF301	UFR3001C	D9
SF302	UFR3001C	D9
SF303	UFR3002C	D9
SF304	UFR3002C	D9
SF1401	SPR81	C21
SF1402	SPR81	C21
SF1403	SPR82	C21
SF1404	SPR82	C21
SF2001	SPR150	C25
SF2002	SPR151	C25
SF2003	SPR152	C25
SF2004	SPR152	C25
SF2401	SPR161C	D7
SF2402	SPR161C	D7
SF2403	SPR162C	D7
SF2404	SPR162C	D7
TG24	UFR24	C5
TG26	UFR26	C5
TG28	UFR28	C5
TG284	UFR24	C5
TG286	UFR24	C5
TG288	UFR24	C5
TG4	UFR104	C3
TG6	UFR106	C3
TG8	UFR108	C3
TG84	SPR84	C21
TG86	SPR86	C21
UF4001	UFR100	C3
UF4002	UFR101	C3
UF4003	UFR102	C3
UF4004	UFR104	C3
UF4005	UFR106	C3
UF4006	UFR108	C3
UF4007	UFR110	C3
UF5400	UFR300	C9
UF5401	UFR301	C9
UF5402	UFR302	C9
UF5404	UFR304	C9
UF5406	UFR306	C9
UF5407	UFR308	C9
UF5408	UFR310	C9
UF600A	UFR600	C15
UF600B	UFR601	C15
UF600D	UFR602	C15
UF600G	UFR604	C15
UF600J	UFR606	C15
UF600K	UFR608	C15
UF600M	UFR610	C15
VHE1401	12SPR01	C23
VHE1402	12SPR01	C23
VHE1403	12SPR02	C23
VHE1404	12SPR02	C23
VHE205	SPR21	C5
VHE210	SPR21	C5
VHE215	SPR22	C5
VHE220	SPR22	C5
VHE2401	SPR161C	D7
VHE2402	SPR161C	D7
VHE2403	SPR162C	D7
VHE2404	SPR162C	D7
VHE605	SPR51	C13
VHE610	SPR51	C13
VHE615	SPR52	C13
VHE620	SPR52	C13

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APPENDIX IV - STANDARD and FAST RECOVERY FULL WAVE BRIDGE RECTIFIER CROSS REFERENCE

INDUSTRY PART NO.	SUGGESTED DIOTEC REPLACEMENT PART NO.	PAGE NO.
2KBP005	SB200	E11
2KBP005M	SB200	E11
2KBP01	SB201	E11
2KBP01M	SB201	E11
2KBP02	SB202	E11
2KBP02M	SB202	E11
2KBP04	SB204	E11
2KBP04M	SB204	E11
2KBP06	SB206	E11
2KBP06M	SB206	E11
2KBP08	SB208	E11
2KBPO8M	SB208	E11
2KBP10	SB210	E11
2KBP10M	SB210	E11
2W005	WB200	E9
2W01	WB201	E9
2W02	WB202	E9
2W04	WB204	E9
2W06	WB206	E9
2W08	WB208	E9
2W10	WB210	E9
3N246	SB200	E11
3N247	SB201	E11
3N248	SB202	E11
3N249	SB204	E11
3N250	SB206	E11
3N251	SB208	E11
3N252	SB210	E11
3N253	SB200	E11
3N254	SB201	E11
3N255	SB202	E11
3N256	SB204	E11
3N257	SB206	E11
3N258	SB208	E11
3N259	SB210	E11
APBPC303	ADB304	E13
APBPC304	ADB304	E13
APBPC305	ADB306	E13
APBPC306	ADB308	E13
APBPC603	ADB604	E25
APBPC604	ADB604	E25
APBPC605	ADB606	E25
APBPC606	ADB606	E25
APBPC1502	ADB1504P	E37
APBPC1504	ADB1504P	E37
APBPC1506	ADB1506P	E37
APBPC1508	ADB1508P	E37
APBPC2502	ADB2504P	E41
APBPC2504	ADB2504P	E41
APBPC2506	ADB2506P	E41
APBPC2508	ADB2508P	E41
APBPC3502	ADB3504P	E45
APBPC3504	ADB3504P	E45
APBPC3506	ADB3506P	E45
APBPC3508	ADB3508P	E45
B125C1000M	WB154	E7
B125C1500M	WB154	E7
B125C3700/200	SB504	E21
B125C5000/3000	SB504	E21
B125C800M	WB154	E7
B125C800DM	DI104	E1
B250C1000M	WB156	E7
B250C1500M	WB156	E7

INDUSTRY PART NO.	SUGGESTED DIOTEC REPLACEMENT PART NO.	PAGE NO.
B250C3700/2200	SB506	E21
B250C5000/3300	SB506	E21
B250C800M	WB156	E7
B250C800DM	DI106	E11
B380C1000M	WB151	E7
B380C1500M	WB151	E7
B380C3700/2200	SB510	E21
B380C5000/3300	SB510	E21
B380C800M	WB151	E7
B380C800DM	DI110	E11
B40C1000M	WB151	E7
B40C1500DM	WB151	E7
B40C3700/2200	SB501	E21
B40C5000/3000	SB501	E21
B40C800M	WB151	E7
B40C800DM	WB151	E7
B80C1000M	WB152	E7
B80C1500M	WB152	E7
B80C3700/2200	SB502	E21
80C5000/3000	SB502	E21
B80C800M	WB152	E7
B80C800DM	DI102	E11
BR1505	DB1500P	E37
BR151	DB1501P	E37
BR1510	DB1510P	E37
BR152	DB1502P	E37
BR154	DB1504P	E37
BR156	DB1506P	E37
BR158	DB1508P	E37
BR2505	DB2500P	E41
BR252	DB2502P	E41
BR254	DB2504P	E41
BR256	DB2506P	E41
BR258	DB2508P	E41
BR3505	DB3500P	E45
BR351	DB3501P	E45
BR3510	DB3510P	E45
BR352	DB3502P	E45
BR354	DB3504P	E45
BR356	DB3506P	E45
BR358	DB3508P	E45
BR605	DB600	E25
BR61	DB601	E25
BR610	DB610	E25
BR62	DB602	E25
BR64	DB604	E25
BR66	DB606	E25
BR68	DB608	E25
BR805	SB200	E11
BR805D	FSB200	G5
BR81D	SB201	E11
BR81DF	FSB210	G5
BR81OD	SB210	E11
BR81ODF	FSB201	G5
BR82D	SB202	E11
BR82DF	FSB202	G5
BR84D	SB204	E11
BR84DF	FSB204	G5
BR86D	SB206	E11
BR86DF	FSB206	G5
BR88D	SB208	E11
BR88DF	FSB208	G5
BR84D	SB204	E11

INDUSTRY PART NO.	SUGGESTED DIOTEC REPLACEMENT PART NO.	PAGE NO.
BR84DF	FSB204	G5
BR86D	SB206	E11
BR86DF	FSB206	G5
BR88D	SB208	E11
BR88DF	FSB208	G5
DB101	DI100	E1
DB102	DI101	E1
DB103	DI102	E1
DB104	DI104	E1
DB105	DI106	E1
DF04	DI104	E1
DF06	DI106	E1
DF08	DI108	E1
DF10	DI110	E1
GBPC1005	DB300	E13
GBPC101	DB301	E13
GBPC102	DB302	E13
GBPC104	DB304	E13
GBPC106	DB306	E13
GBPC108	DB308	E13
GBPC110	DB310	E13
GBPC6005	DB600	E25
GBPC601	DB601	E25
GBPC602	DB602	E25
GBPC604	DB604	E25
GBPC606	DB606	E25
GBPC608	DB608	E25
GBPC610	DB610	E25
GBPC12005	DB1500P	E37
GBPC1201	DB1501P	E37
GBPC1202	DB1502P	E37
GBPC1204	DB1504P	E37
GBPC1206	DB1506P	E37
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GBPC1502	DB1502P	E37
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GBPC1506	DB1506P	E37
GBPC1508	DB1508P	E37
GBPC1510	DB1510P	E37
GBPC25005	DB2500P	E41
GBPC2501	DB2501P	E41
GBPC2502	DB2502P	E41
GBPC2504	DB2504P	E41
GBPC2506	DB2506P	E41
GBPC2508	DB2508P	E41
GBPC2510	DB2510P	E41
GBPC35005	DB3500P	E45
GBPC3501	DB3501P	E45
GBPC3502	DB3502P	E45
GBPC3504	DB3504P	E45
GBPC3506	DB3506P	E45
GBPC3508	DB3508P	E45
GBPC3510	DB3510P	E45
GBU4A	SBU4A	E19
GBU4B	SBU4B	E19
GBU4D	SBU4D	E19
GBU4G	SBU4G	E19
GBU4J	SBU4J	E19
GBU4K	SBU4K	E19
GBU4M	SBU4M	E19

INDUSTRY PART NO.	SUGGESTED DIOTEC REPLACEMENT PART NO.	PAGE NO.
GBU6A	SBU6A	E23
GBU6D	SBU6D	E23
GBU6G	SBU6G	E23
GBU6J	SBU6J	E23
GBU6K	SBU6K	E23
GBU6M	SBU6M	E23
GBU8A	SBU8A	E23
GBU8B	SBU8B	E29
GBU8D	SBU8D	E29
GBU8G	SBU8G	E29
GBU8J	SBU8J	E29
GBU8K	SBU8K	E29
GBU8M	SBU8M	E29
KBL005	SB400L	E15
KBL01	SB401L	E15
KBL02	SB402L	E15
KBL04	SB404L	E15
KBL06	SB406L	E15
KBL08	SB408L	E15
KBL10	SB410L	E15
KBP005M	SB200	E11
KBP01M	SB201	E11
KBP02M	SB202	E11
KBP04M	SB204	E11
KBP06M	SB206	E11
KBP08M	SB208	E11
KBP10M	SB210	E11
KBPC10-OO	DB1500P	E37
KBPC10-O1	DB1501P	E37
KBPC10-O2	DB1502P	E37
KBPC10-O4	DB1504P	E37
KBPC10-O6	DB1506P	E37
KBPC10-O8	DB1508P	E37
KBPC10-10	DB1510P	E37
KBPC25005	DB2500P	E41
KBPC2501	DB2501P	E41
KBPC2502	DB2502P	E41
KBPC2504	DB2504P	E41
KBPC2506	DB2506P	E41
KBPC2508	DB2508P	E41
KBPC2510	DB2510P	E41
KBPC35005	DB3500P	E45
KBPC3501	DB3501P	E45
KBPC3502	DB3502P	E45
KBPC3504	DB3504P	E45
KBPC3506	DB3506P	E45
KBPC3508	DB3508P	E45
KBPC3510	DB3510P	E45
KBPC6005	DB600	E25
KBPC601	DB601	E25
KBPC602	DB602	E25
KBPC604	DB604	E25
KBPC606	DB606	E25
KBPC608	DB608	E25
KBPC610	DB610	E25
KBPC8005	DB800	E31
KBPC801	DB801	E31
KBPC802	DB802	E31
KBPC804	DB804	E31
KBPC806	DB806	E31
KBPC808	DB808	E31
KBPC810	DB810	E31
KBU4A	SBU4A	E19

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INDUSTRY PART NO.	SUGGESTED DIOTEC REPLACEMENT PART NO.	PAGE NO.
KBU4B	SBU4B	E19
KBU4D	SBU4D	E19
KBU4G	SBU4G	E19
KBU4J	SBU4J	E19
KBU4K	SBU4K	E19
KBU4M	SBU4M	E19
KBU6A	SBU6A	E23
KBU6B	SBU6B	E23
KBU6D	SBU6D	E23
KBU6G	SBU6G	E23
KBU6J	SBU6J	E23
KBU6K	SBU6K	E23
KBU6M	SBU6M	E23
KBU8A	SBU8A	E29
KBU8B	SBU8B	E29
KBU8D	SBU8D	E29
KBU8G	SBU8G	E29
KBU8J	SBU8J	E29
KBU8K	SBU8K	E29
KBU8M	SBU8M	E29
MB1005	DB1000	E33
MB101	DB1001	E33
MB102	DB1002	E33
MB104	DB1004	E33
MB106	DB1006	E33
MB108	DB1008	E33
MB1505	DB1500P	E37
MB151	DB1501P	E37
MB152	DB1502P	E37
MB154	DB1504P	E37
MB156	DB1506P	E37
MB158	DB1508P	E37
MB2505	DB2500P	E41
MB251	DB2501P	E41
MB252	DB2502P	E41
MB254	DB2504P	E41
MB256	DB2506P	E41
MB258	DB2508P	E41
MB3505	DB3500P	E45
MB351	DB3501P	E45
MB352	DB3502P	E45
MB354	DB3504P	E45
MB356	DB3506P	E45
MB358	DB3508P	E45
MB805	DB1000	E33
MB81	DB1001	E33
MB82	DB1002	E33
MB84	DB1004	E33
MB86	DB1006	E33
MB88	DB1008	E33
MDA100A	SB200	E11
MDA101A	SB201	E11
MDA102A	SB202	E11
MDA104A	SB204	E11
MDA106A	SB206	E11
MDA108A	SB208	E11
MDA110A	SB210	E11
MDA200	SB200	E11
MDA201	SB201	E11
MDA202	SB202	E11
MDA204	SB202	E11
MDA206	SB206	E11
MDA208	SB208	E11

INDUSTRY PART NO.	SUGGESTED DIOTEC REPLACEMENT PART NO.	PAGE NO.
MDA210	SB210	E11
MDA2500	DB3500P	E45
MDA2501	DB3501P	E45
MDA2502	DB3502P	E45
MDA2504	DB3504P	E45
MDA2506	DB3506P	E45
MDA3500	DB3500P	E45
MDA3501	DB3501P	E45
MDA3502	DB3502P	E45
MDA3504	DB3504P	E45
MDA3506	DB3506P	E45
MDA3508	DB3508P	E45
MDA3510	DB3510P	E45
MDA970A1	SB400L	E15
MDA970A2	SB401L	E15
MDA970A3	SB402L	E15
MDA970A5	SB404L	E15
MDA970A6	SB406L	E15
MP1005	DB1000	E33
MP101	DB1001	E33
MP1010	DB1010	E33
MP102	DB1002	E33
MP104	DB1004	E33
MP106	DB1006	E33
MP108	DB1008	E33
MP605	DB600	E25
MP61	DB601	E25
MP610	DB610	E25
MP62	DB602	E25
MP64	DB604	E25
MP66	DB606	E25
MP68	DB608	E25
MP805	DB1000	E33
MP81	DB1001	E33
MP810	DB1010	E33
MP82	DB1002	E33
MP84	DB1004	E33
MP86	DB1006	E33
MP88	DB1008	E33
PB305	DB300	E13
PB305F	FDB300	G7
PB31	DB301	E13
PB31F	FDB301	G7
PB310	DB310	E13
PB310F	FDB310	G7
PB32	DB302	E13
PB32F	FDB302	G7
PB34	DB304	E13
PB34F	FDB304	G7
PB36	DB306	E13
PB36F	FDB306	G7
PB38	DB308	E13
PB38F	FDB308	G7
PB605	DB600	E25
PB605F	FDB600	G9
PB61`	DB601	E25
PB61F	FDB601	G9
PB610	DB610	E25
PB610F	FDB610	G9
PB62	DB602	E25
PB62F	FDB602	G9
PB64	DB604	E25
PB64F	FDB604	G9

INDUSTRY PART NO.	SUGGESTED DIOTEC REPLACEMENT PART NO.	PAGE NO.
PB66	DB606	E25
PB66F	FDB606	G9
PB68	DB608	E25
PB68F	FDB608	G9
PBDF101	DI100	E1
PBDF102	DI101	E1
PBDF103	DI102	E1
PBDF104	DI104	E1
PBDF105	DI106	E1
PBDF106	DI108	E1
PBDF107	DI110	E1
PBL301	SB400L	E15
PBL302	SB401L	E15
PBL303	SB402L	E15
PBL304	SB404L	E15
PBL305	SB406L	E15
PBL306	SB408L	E15
PBL307	SB410L	E15
PBL401	SB400L	E15
PBL402	SB401L	E15
PBL403	SB402L	E15
PBL404	SB404L	E15
PBL405	SB406L	E15
PBL406	SB408L	E15
PBL407	SB410L	E15
PBM101	WB150	E7
PBM102	WB151	E7
PBM103	WB152	E7
PBM104	WB154	E7
PBM105	WB156	E7
PBM106	WB108	E7
PBM107	WB1510	E7
PBM151	WB150	E7
PBM152	WB151	E7
PBM153	WB152	E7
PBM154	WB154	E7
PBM155	WB156	E7
PBM156	WB158	E7
PBM156	WB1510	E7
PBM201	WB200	E5
PBM202	WB201	E5
PBM203	WB202	E5
PBM204	WB204	E5
PBM205	WB206	E5
PBM206	WB208	E5
PBM207	WB210	E5
PBP151	SB200	E11
PBP152	SB201	E11
PBP153	SB202	E11
PBP154	SB204	E11
PBP155	SB206	E11
PBP156	SB208	E11
PBP157	SB210	E11
PBP201	SB200	E11
PBP202	SB201	E11
PBP203	SB202	E11
PBP204	SB204	E11
PBP205	SB206	E11
PBP206	SB208	E11
PBP207	SB210	E11
PBPC1001	DB1000	E33
PBPC1002	DB1001	E33
PBPC1003	DB1002	E33

INDUSTRY PART NO.	SUGGESTED DIOTEC REPLACEMENT PART NO.	PAGE NO.
PBPC1004	DB1004	E33
PBPC1005	DB1006	E33
PBPC1006	DB1008	E33
PBPC1007	DB1010	E33
PBPC301	DB300	E13
PBPC302	DB302	E13
PBPC303	DB304	E13
PBPC304	DB304	E13
PBPC305	DB306	E13
PBPC306	DB308	E13
PBPC307	DB310	E13
PBPC601	DB600	E25
PBPC602	DB601	E25
PBPC603	DB602	E25
PBPC604	DB604	E25
PBPC605	DB606	E25
PBPC606	DB608	E25
PBPC607	DB610	E25
PBPC801	DB800	E31
PBPC802	DB801	E31
PBPC803	DB802	E31
PBPC804	DB804	E31
PBPC805	DB806	E31
PBPC806	DB808	E31
PBPC807	DB810	E31
PBU1001	SBU8A	E29
PBU1002	SBU8B	E29
PBU1003	SBU8D	E29
PBU1004	SBU8G	E29
PBU1005	SBU8J	E29
PBU1006	SBU8K	E29
PBU1007	SBU8M	E29
PBU401	SBU4A	E19
PBU402	SBU4B	E19
PBU403	SBU4D	E19
PBU404	SBU4G	E19
PBU405	SBU4J	E19
PBU406	SBU4K	E19
PBU407	SBU4M	E19
PBU601	SBU6A	E23
PBU602	SBU6B	E23
PBU603	SBU6D	E23
PBU604	SBU6G	E23
PBU605	SBU6J	E23
PBU606	SBU6K	E23
PBU607	SBU6M	E23
PBU801	SBU8A	E29
PBU802	SBU8B	E29
PBU803	SBU8D	E29
PBU804	SBU8G	E29
PBU805	SBU8J	E29
PBU806	SBU8K	E29
PBU807	SBU8M	E29
RDF005M	FDI100	G1
RDF01M	FDI101	G1
RDF02M	FDI102	G1
RDF04M	FDI104	G1
RDF06M	FDI106	G1
RDF08M	FDI108	G1
RKBPC15005	FDB2500P	E41
RKBPC1501	FDB2501P	E41
RKBPC1502	FDB2502P	E41
RKBPC1504	FDB2504P	E41

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APPENDIX IV - STANDARD and FAST RECOVERY FULL WAVE BRIDGE RECTIFIER CROSS REFERENCE

INDUSTRY PART NO.	SUGGESTED DIOTEC REPLACEMENT PART NO.	PAGE NO.
RKBPC1506	FDB2506P	G15
RKBPC1508	FDB2508P	G15
RKBPC1510	FDB2510P	G15
RKBPC25005	FDB2500P	G15
RKBPC2501	FDB2501P	G15
RKBPC2502	FDB2502P	G15
RKBPC2504	FDB2504P	G15
RKBPC2506	FDB2506P	G15
RKBPC2508	FDB2508P	G15
RKBPC2510	FDB2510P	G15
RKBPC35005	FDB3500	G13
RKBPC3501	FDB3501	G13
RKBPC3502	FDB3502	G13
RKBPC3504	FDB3504	G13
RKBPC3506	FDB3506	G13
RKBPC3508	FDB3508	G13
RPBDF101	FDI100	G1
RPBDF102	FDI101	G1
RPBDF103	FDI102	G1
RPBDF104	FDI104	G1
RPBDF105	FDI106	G1
RPBDF106	FDI108	G1
RPBDF107	FDI104	G1
RPBPC301	FDB300	G7
RPBPC302	FDB301	G7
RPBPC303	FDB302	G7
RPBPC304	FDB304	G7
RPBPC305	FDB306	G7
RPBPC306	FDB308	G7
RPBPC307	FDB310	G7
RPBPC601	FDB600	G9
RPBPC602	FDB601	G9
RPBPC603	FDB602	G9
RPBPC604	FDB604	G9
RPBPC605	FDB606	G9
RPBPC606	FDB608	G9
RPBPC607	FDB610	G9
RS101	SB200	E11
RS102	SB201	E11
RS103	SB202	E11
RS104	SB204	E11
RS105	SB206	E11
RS106	SB208	E11
RS107	SB210	E11
RS201	SB200	E11
RS202	SB201	E11
RS203	SB202	E11
RS204	SB204	E11
RS205	SB206	E11
RS206	SB208	E11
RS207	SB210	E11
RS401S	SB400L	E15
RS402S	SB401L	E15
RS403S	SB402L	E15
RS404S	SB404L	E15
RS405S	SB406L	E15
RS406S	SB408L	E15
RS407S	SB410L	E15
RS401L	SB400L	E15
RS402L	SB401L	E15
RS403L	SB402L	E15
RS404L	SB404L	E15
RS405L	SB406L	E15

INDUSTRY PART NO.	SUGGESTED DIOTEC REPLACEMENT PART NO.	PAGE NO.
RS406L	SB408L	E15
RS407L	SB410L	E15
RS601	SBU6A	E23
RS602	SBU6B	E23
RS603	SBU6D	E23
RS604	SBU6G	E23
RS605	SBU6J	E23
RS606	SBU6K	E23
RS607	SBU6M	E23
SCB15005	DB1500P	E37
SCB1501	DB1501P	E37
SCB1502	DB1502P	E37
SCB1504	DB1504P	E37
SCB1506	DB1506P	E37
SCB1508	DB1508P	E37
SCB1510	DB1510P	E37
SCB25005	DB2500P	E41
SCB2501	DB2501P	E41
SCB2502	DB2502P	E41
SCB2504	DB2504P	E41
SCB2506	DB2506P	E41
SCB2508	DB2508P	E41
SCB2510	DB2510P	E41
SCB35005	DB3500P	E45
SCB3501	DB3501P	E45
SCB3502	DB3502P	E45
SCB3504	DB3504P	E45
SCB3506	DB3506P	E45
SCB3508	DB3508P	E45
SCB3510	DB35010P	E45
VE08	WB150	E7
VE08X	FWB150	G3
VE108	WB1510	E7
VE18	WB151	E7
VE18X	FWB151	G3
VE28	WB152	E7
VE28X	FWB152	G3
VE48	WB154	E7
VE48X	FWB154	G3
VE68	WB156	E7
VE68X	FWB156	G3
VE88	WB158	E7
VH048	DB600	E25
VH048X	FDB600	G9
VH1048	DB610	E25
VH1048X	FDB610	G9
VH148	DB601	E25
VH148X	FDB601	G9
VH247	ADB604	E25
VH248	DB602	E25
VH248X	FDB602	G9
VH447	ADB604	E25
VH448	DB604	E25
VH448X	FDB604	G9
VH647	ADB606	E25
VH648	DB606	E25
VH648X	FDB606	G9
VH847	ADB608	E25
VH848	DB608	E25
VJ048	DB1000	E33
VJ048X	Call DIOTEC	
VJ1048	DB1010	E33
VJ148	DB1001	E33

INDUSTRY PART NO.	SUGGESTED DIOTEC REPLACEMENT PART NO.	PAGE NO.
VJ148X	Call DIOTEC	
VJ247	ADB1004	E33
VJ248	DB1002	E33
VJ248X	Call DIOTEC	
VJ447	ADB1004	E33
VJ448	DB1004	E33
VJ647	ADB1006	E33
VJ648	DB1006	E33
VJ847	ADB1008	E33
VJ848	DB1008	E33
VK048	DB3500P	E45
VK048X	FDB3500P	G17
VK1048	DB3510P	E45
VK148	DB3501P	E45
VK148X	FDB3501P	G17
VK247	ADB3504P	E45
VK248	DB3502P	E45
VK248X	FDB3502P	G17
VK447	ADB3504P	E45
VK448	DB3504P	E45
VK448X	FDB3504P	G17
VK647	ADB3506P	E45
VK648	DB3506P	E45
VK648X	FDB3506P	G17
VK848	DB3508P	E45
VL048	DB1500P	E37
VL1048	DB1510P	E37
VL148	DB1501P	E37
VL247	ADB1504P	E37
VL248	DB1502P	E37
VL447	ADB1504P	E37
VL448	DB1504P	E37
VL647	ADB1506P	E37
VL648	DB1506P	E37
VL848	DB1508P	E37
VM08	DI100	E1
VM08X	FDI100	G1
VM108	DI110	E1
VM18	DI101	E1
VM18X	FDI101	G1
VM28	DI102	E1
VM28X	FDI102	G1
VM48	DI104	E1
VM48X	FDI104	G1
VM68	DI106	E1
VM68X	FDI106	G1
VM88	DI108	E1
VS048	DB300	E13
VS048X	FDB300	G7
VS1048	DB310	E13
VS148	DB301	E13
VS148X	FDB301	G7
VS247	ADB304	E13
VS248	DB302	E13
VS248X	FDB302	G7
VS447	ADB304	E13
VS448	DB304	E13
VS448X	FDB304	G7
VS647	ADB306	E13
VS648	DB306	E13
VS648X	FDB306	G7
VS847	ADB308	E13
VS848	DB308	E13

INDUSTRY PART NO.	SUGGESTED DIOTEC REPLACEMENT PART NO.	PAGE NO.
W005M	WB150	E7
W01M	WB151	E7
W02M	WB152	E7
W04M	WB154	E7
W06M	WB156	E7
W08M	WB158	E7
W10M	WB1510	E7
W10M	WB1510	E7

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APPENDIX V - GENERAL PURPOSE and FAST RECOVERY SILICON DIODE CROSS REFERENCE

INDUSTRY PART NO.	SUGGESTED DIOTEC REPLACEMENT PART NO.	PAGE NO.
1N4001	1N4001	H1
1N4001GP	1N4001G	H3
1N4002	1N4002	H1
1N4002GP	1N4002G	H3
1N4003	1N4003	H1
1N4003GP	1N4003G	H3
1N4004	1N4004	H1
1N4004GP	1N4004G	H3
1N4005	1N4005	H1
1N4005GP	1N4005G	H3
1N4006	1N4006	H1
1N4006GP	1N4006G	H3
1N4007	1N4007	H1
1N4007GP	1N4007G	H3
1N4933	1N4933	H21
1N4933GP	RGP100	H25
1N4934	1N4934	H21
1N4934GP	RGP101	H25
1N4935	1N4935	H21
1N4935GP	RGP102	H25
1N4936	1N4936	H21
1N4936GP	RGP104	H25
1N4937	1N4937	H21
1N4937GP	RGP106	H25
1N4942	RGP102	H25
1N4942GP	RGP102	H25
1N4944	RGP104	H25
1N4944GP	RGP104	H25
1N4946	RGP106	H25
1N4946GP	RGP106	H25
1N4947	RGP108	H25
1N4947GP	RGP108	H25
1N4948	RGP110	H25
1N4948GP	RGP110	H25
1N5059(GP)	RGP102	H25
1N5060(GP)	RGP104	H25
1N5061(GP)	RGP106	H25
1N5062(GP)	RGP108	H25
1N5391	1N5391	H7
1N5391GP	1N5391	H7
1N5392	1N5392	H7
1N5392GP	1N5392	H7
1N5393	1N5393	H7
1N5393GP	1N5393	H7
1N5394	1N5395	H7
1N5394GP	1N5395	H7
1N5395	1N5395	H7
1N5395GP	1N5395	H7
1N5396	1N5397	H7
1N5396GP	1N5397	H7
1N5397	1N5397	H7
1N5397GP	1N5397	H7
1N5398	1N5398	H7
1N5398GP	1N5398	H7
1N5399	1N5399	H7
1N5399GP	1N5399	H7
1N5400	1N5400	H11
1N5401	1N5401	H11
1N5402	1N5402	H11
1N5403	1N5404	H11
1N5404	1N5404	H11
1N5405	1N5406	H11
1N5406	1N5406	H11

INDUSTRY PART NO.	SUGGESTED DIOTEC REPLACEMENT PART NO.	PAGE NO.
1N5615(GP)	RGP102	H25
1N5616(GP)	RGP104	H25
1N5617(GP)	RGP104	H25
1N5618(GP)	RGP106	H25
1N5619(GP)	RGP106	H25
1N5620(GP)	RGP108	H25
1N5621(GP)	RGP108	H25
1N5622(GP)	RGP110	H25
1N5623(GP)	RGP110	H25
1N5624(GP)	RGP302	H31
1N5625(GP)	RGP304	H31
1N5626(GP)	RGP306	H31
1N5627(GP)	RGP308	H31
6A05	GP600	H17
6A05G	GP600	H17
6A1	GP601	H17
6A1G	GP601	H17
6A2	GP602	H17
6A2G	GP602	H17
6A4	GP604	H17
6A4G	GP604	H17
6A6	GP606	H17
6A6G	GP606	H17
6A8	GP608	H17
6A10	GP610	H17
BY214-50	GP600	H17
BY214-100	GP601	H17
BY214-200	GP602	H17
BY214-400	GP604	H17
BY214-600	GP606	H17
BY218-100	RGP301	H31
BY218-200	RGP302	H31
BY218-400	RGP304	H31
BY218-600	RGP306	H31
BY233-200A	RGP802	H35
BY233-400A	RGP804	H35
BY233-600A	RGP806	H35
BY251	GP402	H15
BY252	GP404	H15
BY253	GP406	H15
BY254	GP408	H15
BY254S	GP410	H15
BY255	GP410	H15
BY296	RGP301	H31
BY297	RGP302	H31
BY296	RGP304	H31
BY298	RGP306	H31
BY299	RGP308	H31
BY396	RGP301	H31
BY397	RGP302	H31
BY398	RGP304	H31
BY399	RGP308	H31
BYT13-600	RGP306	H31
BYT13-800	RGP308	H31
BYT71-100A	RGP801	H35
BYT71-400A	RGP804	H35
BYT71-600A	RGP806	H35
BYW32	RGP202	H27
BYW33	RGP204	H27
BYW34	RGP204	H27
BYW35	RGP206	H27
BYW36	RGP206	H27
BYW72	RGP302	H31

INDUSTRY PART NO.	SUGGESTED DIOTEC REPLACEMENT PART NO.	PAGE NO.
BYW73	RGP304	H31
BYW74	RGP304	H31
BYW75	RGP306	H31
BYW76	RGP306	H31
DI750	GP600	H17
DI751	GP601	H17
DI752	GP602	H17
DI754	GP604	H17
DIF810	RP100	H23
DIF811	RP101	H23
DIF812	RP102	H23
DIF814	RP104	H23
DIF816	RP106	H23
DIF817	RP108	H23
DIF818	RP110	H23
DIF910	RGP300	H31
DIF911	RGP301	H31
DIF912	RGP302	H31
DIF914	RGP304	H31
DIF916	RGP306	H31
DIF917	RGP308	H31
DIF918	RGP310	H31
DIR500	GP400	H15
DIR501	GP401	H15
DIR502	GP402	H15
DIR504	GP404	H15
DIR506	GP406	H15
DIR508	GP408	H15
DIR510	GP410	H15
ESM765-100A	RGP801	H35
ESM765-200A	RGP802	H35
ESM765-400A	RGP804	H35
ESM765-600A	RGP806	H35
FR101	RP100	H23
FR101G	RGP100	H25
FR102	RP101	H23
FR102G	RGP101	H25
FR103	RP102	H23
FR103G	RGP102	H25
FR104	RP104	H23
FR104G	RGP104	H25
FR105	RP106	H23
FR105G	RGP106	H25
FR106	RP108	H23
FR107	RP110	H25
FR151	RGP200	H27
FR151G	RGP200	H27
FR152	RGP201	H27
FR152G	RGP201	H27
FR153	RGP202	H27
FR153G	RGP202	H27
FR154	RGP204	H27
FR154G	RGP204	H27
FR155	RGP206	H27
FR155G	RGP206	H27
FR156	RGP206	H27
FR157	RGP208	H27
FR201	RGP200	H27
FR201G	RGP200	H27
FR202	RGP201	H27
FR202G	RGP201	H27
FR203	RGP202	H27
FR203G	RGP202	H27

INDUSTRY PART NO.	SUGGESTED DIOTEC REPLACEMENT PART NO.	PAGE NO.
FR204	RGP204	H27
FR204G	RGP204	H27
FR205	RGP206	H27
FR205G	RGP206	H27
FR206	RGP208	H27
FR207	RGP210	H27
FR301	RP300	H29
FR301G	RGP300	H31
FR302	RP301	H29
FR302G	RP301	H31
FR303	RP302	H29
FR303G	RGP302	H31
FR304	RP304	H29
FR304G	RGP304	H31
FR305	RP306	H29
FR305G	RGP306	H31
FR306	RP308	H29
FR307	RGP308	H31
FR501	RP600	H33
FR502	RP601	H33
FR503	RP602	H33
FR504	RP604	H33
FR505	RP606	H33
FR506	RP608	H33
FR507	RP601	H33
FR601	RP600	H33
FR601G	RP600	H33
FR602	RP601	H33
FR602G	RP601	H33
FR603	RP602	H33
FR603G	RP602	H33
FR604	RP604	H33
FR604G	RP604	H33
FR605	RP606	H33
FR605G	RP606	H33
FR606	RP608	H33
FR607	RP610	H33
FR801	RGP800	H35
FR802	RGP801	H35
FR803	RGP802	H35
FR804	RGP804	H35
FR805	RGP806	H35
GI750	GP600	H17
GI751	GP601	H17
GI752	GP602	H17
GI754	GP604	H17
GI756	GP606	H17
GI758	GP608	H17
GI810	RGP200	H27
GI811	RGP201	H27
GI812	RGP202	H27
GI814	RGP204	H27
GI816	RGP206	H27
GI817	RGP208	H27
GI818	RGP210	H27
GI820	RP600	H33
GI821	RP601	H33
GI822	RP602	H33
GI824	RP604	H33
GI826	RP606	H33
GP10A	GP100	H5
GP10B	GP101	H5
GP10D	GP102	H5

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APPENDIX V - GENERAL PURPOSE and FAST RECOVERY SILICON DIODE CROSS REFERENCE (Cont'd)

INDUSTRY PART NO.	*SUGGESTED DIOTEC REPLACEMENT PART NO.*	*PAGE NO.*
GP10G	GP104	H5
GP10J	GP106	H5
GP10K	GP108	H5
GP10M	GP110	H5
GP15A	GP200	H9
GP15B	GP201	H9
GP15D	GP202	H9
GP15G	GP204	H9
GP15J	GP206	H9
GP15K	GP208	H9
GP15M	GP210	H9
GP20A	GP200	H9
GP20B	GP201	H9
GP20D	GP202	H9
GP20G	GP204	H9
GP20J	GP206	H9
GP20K	GP208	H9
GP20M	GP210	H9
GP30A	GP400	H15
GP30B	GP401	H15
GP30D	GP402	H15
GP30G	GP404	H15
GP30J	GP406	H15
GP30K	GP408	H15
GP30M	GP410	H15
JO5	GP200	H9
JO5G	RGP200	H27
J1	GP201	H9
J1G	RGP201	H27
J2	GP202	H9
J2G	RGP202	H27
J4	GP204	H9
J4G	RGP204	H27
J6	GP206	H9
J6G	RGP206	H27
J8	GP208	H9
J10	GP210	H9
MR500	GP400	H15
MR501	GP401	H15
MR502	GP402	H15
MR504	GP404	H15
MR506	GP406	H15
MR508	GP408	H15
MR510	GP410	H15
MR750	GP400	H15
MR751	GP600	H17
MR752	GP601	H17
MR754	GP602	H17
MR756	GP604	H17
MR758	GP608	H17
MR760	GP610	H17
P300A	GP400	H15
P300B	GP401	H15
P300D	GP402	H15
P300G	GP404	H15
P300J	GP406	H15
P300K	GP408	H15
P300M	GP410	H15
P511	RGP1150	I3
P513	RGP1180	I3
P600A	GP600	H17
P600B	GP601	H17
P600D	GP602	H17
P600G	GP604	H17
P600J	GP606	H17
P600K	GP608	H17
P600M	GP610	H17
PF4HZ	GP404	H15
PF6HZ	GP406	H15
PF8HZ	GP408	H15
PFR850	RP300	H29
PFR851	RP301	H29
PFR852	RP302	H29
PFR854	RP304	H29
PFR856	RP306	H29
PL4HZ	1N4004G	H33
PL6HZ	1N4006G	H33
PL8HZ	1N4008G	H33
PLR810	RGP200	H27
PLR811	RGP201	H27
PLR812	RGP202	H27
PLR813	RGP204	H27
PLR814	RGP204	H27
PLR816	RGP206	H27
PLR817	RGP208	H27
PLR818	RGP210	H27
PR1001	RP100	H23
PR1002	RP101	H23
PR1003	RP102	H23
PR1004	RP104	H23
PR1005	RP106	H23
PR1006	RP108	H23
PR1007	RP110	H23
PR121	GP1120	I1
PR141	RGP1150	H27
PR1501	RGP200	H27
PR1502	RGP201	H27
PR1503	RGP202	H27
PR1504	RGP204	H27
PR1505	RGP206	H27
PR1506	RGP206	H27
PR1507	RGP208	H27
PR3001	RP300	H29
PR3002	RP301	H29
PR3003	RP302	H29
PR3004	RP304	H29
PR3005	RP306	H29
PR3006	RP308	H29
PR3007	RP308	H29
PR6001	RP600	H33
PR6002	RP601	H33
PR6003	RP602	H33
PR6004	RP604	H33
PR6005	RP606	H33
PR6006	RP608	H33
PR6007	RP610	H33
PX4A01	GP400	H15
PX4A02	GP401	H15
PX4A03	GP402	H15
PX4A04	GP404	H15
PX4A05	GP406	H15
PX4A06	GP408	H15
PX4A07	GP410	H15
PX6A01	RP600	H17
PX6A02	GP601	H17
PX6A03	GP602	H17
PX6A04	GP604	H17
PX6A05	GP606	H17
PX6A06	GP608	H17
PX6A07	GP610	H17
PY124	RGP202	H27
PY125	GP204	H9
PY126	GP206	H9
PY55-350	RGP204	H27
PY55-600	RGP206	H27
RG4A	RGP300	H31
RG4B	RGP301	H31
RG4D	RGP302	H31
RG4G	RGP304	H31
RG4J	RGP306	H31
RG4K	RGP308	H31
RG4M	RGP310	H31
RGP10A	RGP100	H25
RGP10B	RGP101	H25
RGP10D	RGP102	H25
RGP10G	RGP104	H25
RGP10J	RGP106	H25
RGP10K	RGP108	H25
RGP10M	RGP110	H25
RGP15A	RGP200	H27
RGP15B	RGP201	H27
RGP15D	RGP202	H27
RG1A	RGP100	H25
RG1B	RGP101	H25
RG1D	RGP102	H25
RG1G	RGP104	H25
RG1J	RGP106	H25
RG1K	RGP108	H25
RG1M	RGP110	H25
RG2A	RGP200	H27
RG2B	RGP201	H27
RG2D	RGP202	H27
RG2G	RGP204	H27
RG2J	RGP206	H27
RG2K	RGP208	H27
RG2M	RGP210	H27
RG3A	RGP300	H31
RG3B	RGP301	H31
RG3D	RGP302	H31
RG3G	RGP304	H31
RG3J	RGP306	H31
RG3K	RGP308	H31
RG3M	RGP310	H31
RGP15G	RGP204	H27
RGP15J	RGP206	H27
RGP15K	RGP208	H27
RGP15M	RGP210	H27
RGP20A	RGP200	H27
RGP20B	RGP201	H27
RGP20D	RGP202	H27
RGP20G	RGP204	H27
RGP20J	RGP206	H27
RGP20K	RGP208	H27
RGP20M	RGP210	H27
RGP25A	RGP300	H31
RGP25B	RGP301	H31
RGP25D	RGP302	H31
RGP25G	RGP304	H31
RGP25J	RGP306	H31
RGP25K	RGP308	H31
RGP25M	RGP310	H31
RGP30A	RGP300	H31
RGP30B	RGP301	H31
RGP30D	RGP302	H31
RGP30G	RGP304	H31
RGP30J	RGP306	H31
RGP30K	RGP308	H31
RGP30M	RGP310	H31
RL201	GP200	H9
RL201G	GP200	H9
RL202	GP201	H9
RL202G	GP201	H9
RL203	GP202	H9
RL203G	GP202	H9
RL204	GP204	H9
RL204G	GP204	H9
RL205	GP206	H9
RL205G	GP206	H9
RL206	GP208	H9
RL207	GP210	H9
RS8AT	RGP800	H35
RS8BT	RGP801	H35
RS8DT	RGP802	H35
RS8GT	RGP804	H35
RS8JT	RGP806	H35
V322	GP402	H15
V324	GP404	H15
V326	GP406	H15
V328	GP408	H15
V330	GP400	H15
V330X	RGP300	H31
V331	GP401	H15
V331X	RGP301	H31
V332	GP402	H15
V332X	RGP302	H31
V334	GP404	H15
V334X	RGP304	H31
V336	GP406	H15
V336X	RGP306	H31
V342	GP404	H15
V344	GP404	H15
V346	GP406	H15
V348	GP408	H15
V350	GP400	H15
V350X	RGP300	H31
V351	GP401	H15
V351X	RGP301	H31
V3510	GP410	H15
V352	GP402	H15
V352X	RGP302	H31
V354	GP404	H15
V354X	RGP304	H31
V356	GP406	H15
V356X	RGP306	H31
V358	GP408	H15

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APPENDIX VI - ACRONYMS, ABBREVIATIONS, and SYMBOLS

^{O}C ..... Degrees Centigrade
$^{O}C/W$ ..... Degrees Centigrade per Watt
Ω ..... Ohms
µA ..... Microamperes
µS or µSec ..... Microseconds
A ..... Amperes
AC ..... Alternating Current
C_J ..... Junction Capacitance
cm ..... Centimeter
DIA ..... Diameter
DC ..... Direct Current
DUT ..... Diode Under Test
EIA ..... Electronic Industries Alliance
Hz ..... Hertz
I_F ..... Forward Current
I_{FSM} ..... Peak Forward Surge Current
In-lb ..... Inch - Pounds
I_O ..... Average Forward Rectified Current
I_R ..... DC Reverse Current
I_{RM} ..... Maximum DC Reverse Current at Rated Blocking Voltage
I_{RR} ..... Repetitive Reverse Current
I_{RSM} ..... Maximum Non-Repetitive Surge Current
I^2t ..... Thermal Energy (Rating For Fusing)
JEDEC ..... Joint Electron Device Engineering Council (of The EIA)
Kgs ..... Kilograms
MHz ..... MegaHertz
mm ..... Millimeters
mS ..... Millisecond
nS ..... Nanosecond
pF ..... Picofarad
P_R ..... Continuous Power Dissipation in The $V_{(BR)}$ Region
P_{RM} ..... Maximum Power Dissipation in The $V_{(BR)}$ Region
RMS ..... Root Mean Square
$R_{\Theta CF}$ ..... Thermal Resistance - Case to Fin
$R_{\Theta JA}$ ..... Thermal Resistance - Junction to Ambient
$R_{\Theta JC}$ ..... Thermal Resistance - Junction to Case
$R_{\Theta JL}$ ..... Thermal Resistance - Junction to Lead
T_A ..... Ambient Temperature
T_C ..... Case Temperature
T_J ..... Junction Temperature
T_L ..... Lead Temperature
T_{RR} ..... Reverse Recovery Time
T_{STG} ..... Storage Temperature
U/L or UL ..... Underwriters Laboratories
$V_{(BR)}$ ..... Breakdown (Avalanche) Voltage
$V_{(BR)Max}$ ..... Breakdown (Avalanche) Voltage
$V_{(BR)Min}$ ..... Breakdown (Avalanche) Voltage
V_{DC} ..... D. C. Voltage
V_{FM} ..... Maximum Forward Voltage Drop
V_{ISO} ..... Minimum Insulation Breakdown Voltage
V_R ..... Reverse Voltage
V_{RM} ..... Maximum Reverse (Blocking) Voltage
V_{RSM} ..... Maximum Non-Recurrent Reverse Voltage
V_{RRM} ..... Maximum Recurrent Reverse Voltage
$V_{R(RMS)}$ ..... RMS Reverse Voltage
V_{RSM} ..... RMS Reverse Voltage
V_{RWM} ..... Working Peak Reverse Voltage

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APPENDIX VII - ALPHA-NUMERIC PRODUCT INDEX

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APPENDIX VIII - SAMPLE REQUEST FORM

THE SAMPLE REQUEST FORM IS ON THE REVERSE SIDE OF THIS PAGE

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DIOTEC ELECTRONICS CORPORATION

SAMPLE REQUEST FORM

TO EXPEDITE YOUR REQUEST FOR PRODUCT SAMPLES, PLEASE FILL OUT THIS FORM AND FAX IT TO US AT:

310-767-7958

NOTE: DIOTEC ELECTRONICS CORP. IS A LEADING MANUFACTURER OF HIGH QUALITY, HIGH RELIABILTY POWER DIODES AND RECTIFIERS. WE SERVE THE OEM COMMUNITY. RETAIL REQUESTS SHOULD BE DIRECTED TO NTE ELECTRONICS (WWW.NTEINC.COM) OR DIGI-KEY (WWW.DIGIKEY.COM).

COMPANY :
ENGINEERING CONTACT:
CONTACT PHONE NUMBER:
CONTACT FAX NUMBER:
ADDRESS:
CITY
STATE

DIOTEC PART NUMBER(S):
NUMBER OF SAMPLES:
ESTIMATED ANNUAL USAGE:
TARGET PRICE:

APPLICATION:
NEW PRODUCT?
REDESIGN?
NEED ALTERNATE SUPPLIER?
- **CURRENT SUPPLIER:**
- **CURRENT PART NUMBER**
- **CURRENT PRICE:**

COMMENTS:

APPENDIX IX - SOFT GLASS

Combining a unique passivation material and void free vacuum die soldering, the SOFT GLASS DIODE™ offers outstanding reliability under the harshest of operating conditions. The SOFT GLASS passivation material uniquely provides the diode with unmatched protect against the negative effects of aging, thermal/mechanical stress, and moisture. The features which clearly separate this material from the industry's standard glass or rubber passivation are shown in the table below.

STRUCTURE	*SOFT GLASS*	*RUBBER*	*STANDARD GLASS*
BOND ENERGY	**Similar to Standard Glass For Low/High Temperature Stability**	**Weak**	
TEMPERATURE RANGE	**-100 to +250° C**		
MECHANICAL INTEGRITY	**Relieves Thermal & Mechanical Stresses**	**Rigid at Low Temperatures Ages Quickly at High Temperatures**	**Rigid And Brittle**

Unlike the silicon rubber used in most low cost diodes, DIOTEC's SOFT GLASS is mostly inorganic. Similar to glass, the basic structure of SOFT GLASS consists of repeating Silicon-Oxygen (Si-O) segments The greater bond energy, and hence stability, of the Si-O linkages, as opposed to that of a Carbon-Carbon (C-C) bond, enables SOFT GLASS to retain its high resiliency at temperatures as low as -100° C and is remarkably stable (mechanically and electrically) at continuous temperatures as high as 250° C.

When compared to glass, which is rigid and brittle, SOFT GLASS is flexible within the diode's operational temperature range. Therefore, it releases internal stresses caused by differences in the thermal expansion coefficients of the different materials used to construct a diode. As a result, SOFT GLASS protects diodes from the negative effects of aging, thermal/mechanicalstresses, and moisture.

DIOTEC's SOFT GLASS DIODES are identified in the Super Efficient/Ultrafast Diode, General Purpose Diode, and Fast Recovery Diode Quick Selection Guides and applicable data sheets.

If you wish to try one or more of these diodes in your application, fill out the form in Appendix VIII or simply give us a call. Our phone number is at the bottom of the page.

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web site: www.diotec-usa.com e-mail: productsupport@diotec-usa.com

DIOTEC is thriving while its competitors, big and small are dropping out!!

The reasons?? Very simple:

(A) DIOTEC offers a very **comprehensive line** of diodes and rectifiers with excellent qualities.

(B) DIOTEC offers the **Best Services** in the business:

(1) Same Day Price Quotation (*)
(2) Samples delivered within three days (*)
(3) Orders delivered from stock (*)

(C) DIOTEC is able and more willing to go the extra distance to assist you with your special requirements

(D) DIOTEC offers the most competitive prices. Unlike its major competitors, DIOTEC runs the tightest ship and therefore has the lowest overhead in this business. This allows DIOTEC to keep its costs down and pass the savings on to its valued customers.

So discuss your diode and rectifier needs with DIOTEC now. Our knowledgeable sales and technical staffs are ready to help you.

THE ONLY QUALITY RECTIFIERS AND DIODES AT COMPETITIVE PRICES

(*) Except Specialty items