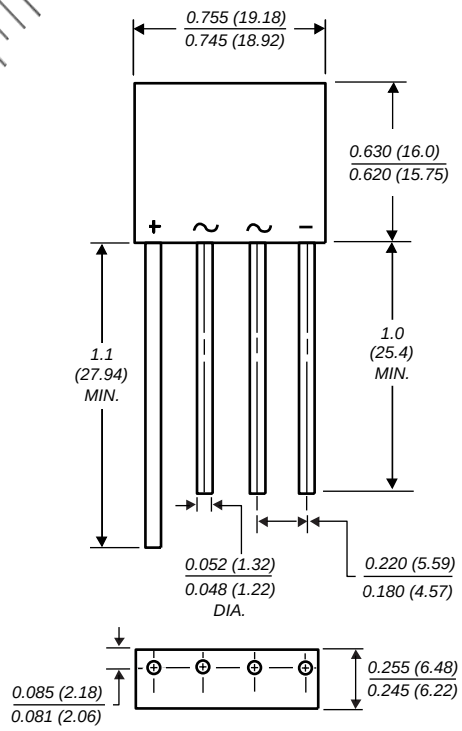
GENERAL SEMICONDUCTOR®

KBL005 thru KBL10

Single-Phase Bridge Rectifier

Reverse Voltage 50 and 1000 V
Forward Current 4.0 A

Case Style KBL



Dimensions in inches and (millimeters)

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- This series is UL listed under the Recognized Component Index, file number E54214
- High case dielectric strength of 1500 V_{RMS}
- Ideal for printed circuit boards
- High forward surge current capability
- High surge current capability
- High temperature soldering guaranteed: 260°C/10 seconds, 0.375 (9.5mm) lead length, 5lbs. (2.3kg) tension

Mechanical Data

Case: Molded plastic body
Terminals: Plated leads solderable per MIL-STD-750, Method 2026
Mounting Position: Any
Weight: 0.2 ounce, 5.6 grams

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	KBL 005	KBL 01	KBL 02	KBL 04	KBL 06	KBL 08	KBL 10	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward output current at T_A=50°C	$I_{F(AV)}$	4.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) T_J=150°C	I_{FSM}	200							A
Typical thermal resistance per leg (NOTE 1) (NOTE 2)	$R_{\Theta JA}$ $R_{\Theta JL}$	19 2.4							°C/W
Operating junction storage and temperature range	T_J, T_{STG}	-50 to +150							°C

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	KBL 005	KBL 01	KBL 02	KBL 04	KBL 06	KBL 08	KBL 10	UNITS
Maximum instantaneous forward drop per leg at 4.0 A	V_F	1.1							V
Maximum DC reverse current at rated DC blocking voltage per leg T_A= 25°C T_A=125°C	I_R	5.0 1.0							µA mA

Notes:
(1) Thermal resistance from junction to ambient with units mounted on 3.0 x 3.0 x 0.11" thick (7.5 x 7.5 x 0.3cm) Al. plate
(2) Thermal resistance from junction to lead with units mounted on P.C.B. at 0.375" (9.5mm) lead length and 0.5 x 0.5" (12 x 12mm) copper pads

Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

FIG. 1 - DERATING CURVE OUTPUT RECTIFIED CURRENT

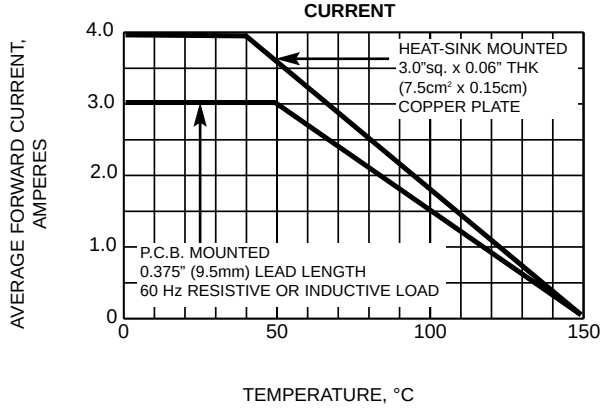


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

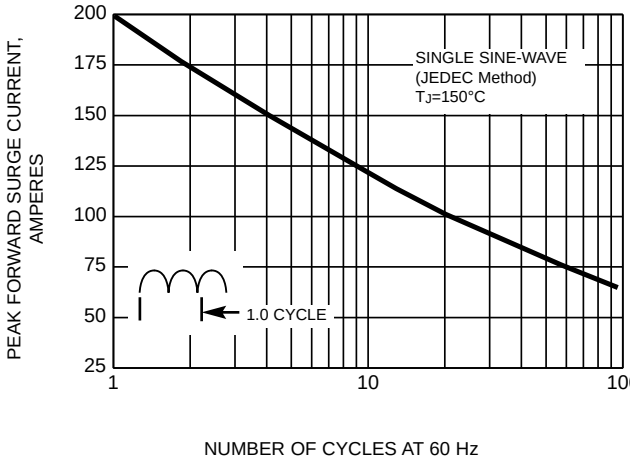


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

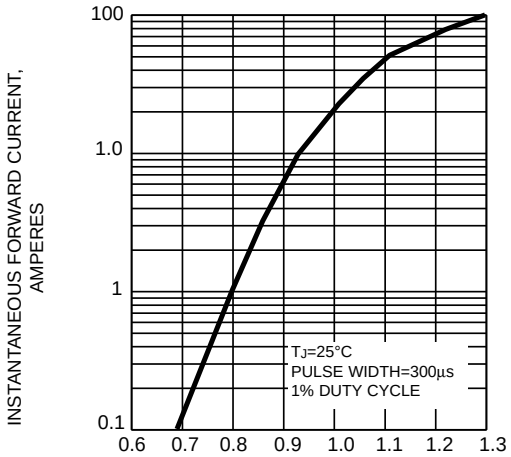


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS PER LEG

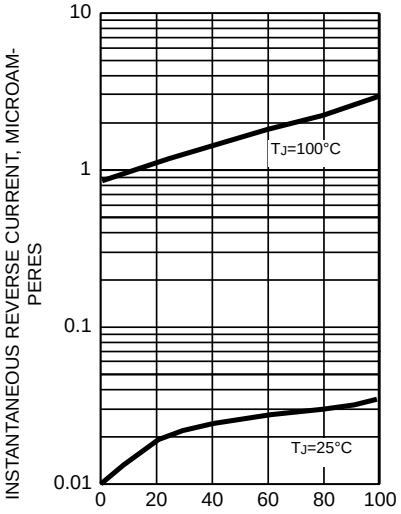


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG