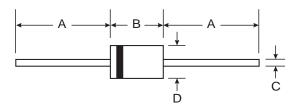


# 1N5817 - 1N5819

# 1.0A SCHOTTKY BARRIER RECTIFIER

## **Features**

- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability and Low Forward Voltage Drop
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application
- Lead Free Finish, RoHS Compliant (Note 5)



### **Mechanical Data**

- Case: DO-41
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish Tin. Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Ordering Information: See Page 2
  Marking: Type Number and Date Code
- Weight: 0.3 grams (approximate)

DO-41 Plastic					
Dim	Min	Max			
Α	25.40	_			
В	4.06	5.21			
С	0.71	0.864			
D	2.00	2.72			
All Dimensions in mm					

# Maximum Ratings and Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

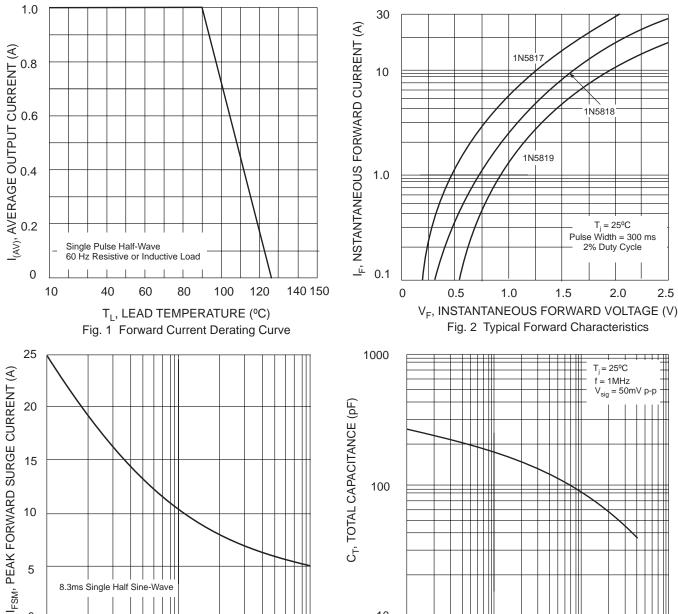
Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	1N5817	1N5818	1N5819	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	20	30	40	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	14	21	28	V
Average Rectified Output Current (Note 1)	Io		1.0		А
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>		25		А
Forward Voltage (Note 2)	V <sub>FM</sub>	0.450 0.750	0.550 0.875	0.60 0.90	٧
Peak Reverse Leakage Current		1.0 10		•	mA
Typical Total Capacitance (Note 3)		110			pF
Typical Thermal Resistance Junction to Lead (Note 4)		15			0000
Typical Thermal Resistance Junction to Ambient		50			°C/W
Operating and Storage Temperature Range		-65 to +125			°C

Notes

- 1. Measured at ambient temperature at a distance of 9.5mm from the case.
- 2. Short duration test pulse used to minimize self-heating effect.
- 3. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
- 4. Thermal resistance from junction to lead vertical P.C.B. mounted, 0.375" (9.5mm) lead length with 1.5 x 1.5" (38 x 38mm) copper pads.
- 5. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 5 and 7.





10 NUMBER OF CYCLES AT 60 Hz Fig. 3 Maximum Non-Repetitive Peak Fwd Surge Current

 $V_R$ , REVERSE VOLTAGE (V) Fig. 4 Typical Total Capacitance

100

1.0

# Ordering Information (Note 6)

8.3ms Single Half Sine-Wave

5

Device	Packaging	Shipping	
1N5817-B	DO-41	1K/Bulk	
1N5817-T	DO-41	5K/Tape & Reel, 13-inch	
1N5818-B	DO-41	1K/Bulk	
1N5818-T	DO-41	5K/Tape & Reel, 13-inch	
1N5819-B	DO-41	1K/Bulk	
1N5819-T	DO-41	5K/Tape & Reel, 13-inch	

100

10

0.1

Notes: 6. For packaging details, visit our website at http://www.diodes.com/datasheets/ap02008.pdf



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