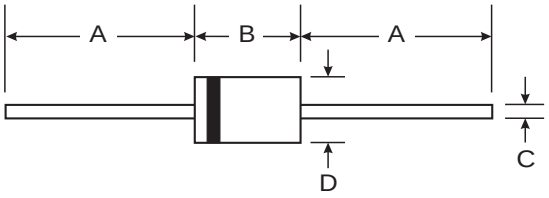
1N5817 - 1N5819

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**
A	25.40	—
B	4.06	5.21
C	0.71	0.864
D	2.00	2.72
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @ T_A = 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_{RRM} V_{RWM} V_R	20	30	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	V
Average Rectified Output Current (Note 1) @ T_L = 90°C	I_O	1.0			A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	25			A
Forward Voltage (Note 2) @ I_F = 1.0A @ I_F = 3.0A	V_{FM}	0.450 0.750	0.550 0.875	0.60 0.90	V
Peak Reverse Leakage Current @ T_A = 25°C at Rated DC Blocking Voltage (Note 2) @ T_A = 100°C	I_{RM}	1.0 10			mA
Typical Total Capacitance (Note 3)	C_T	110			pF
Typical Thermal Resistance Junction to Lead (Note 4)	$R_{\theta JL}$	15			°C/W
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	50			
Operating and Storage Temperature Range	T_j, T_{STG}	-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.*

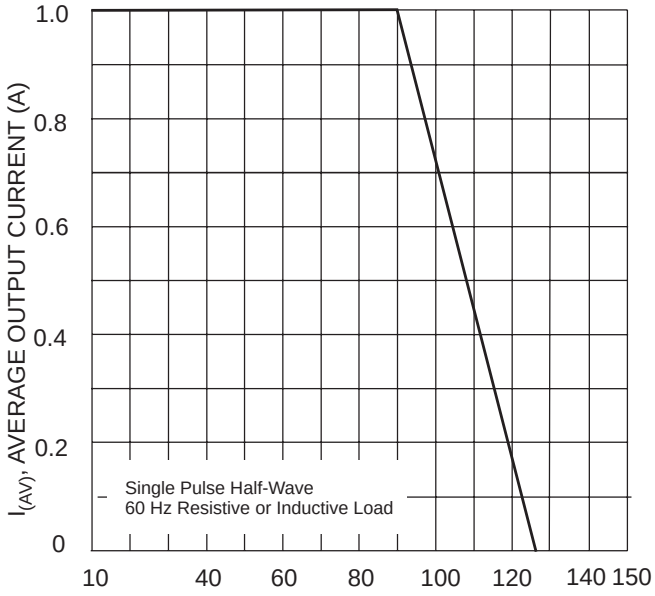


Fig. 1 Forward Current Derating Curve

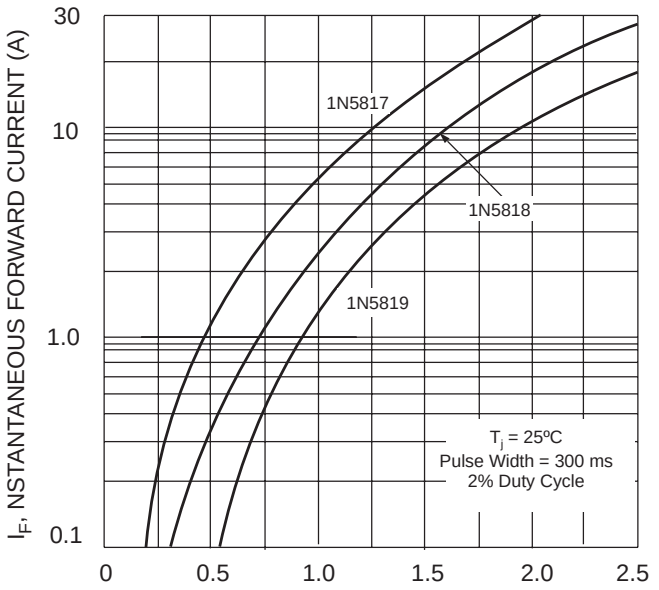


Fig. 2 Typical Forward Characteristics

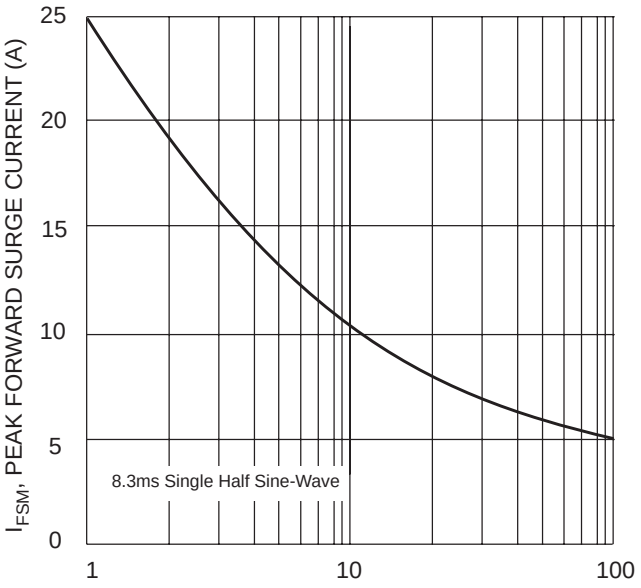


Fig. 3 Maximum Non-Repetitive Peak Fwd Surge Current

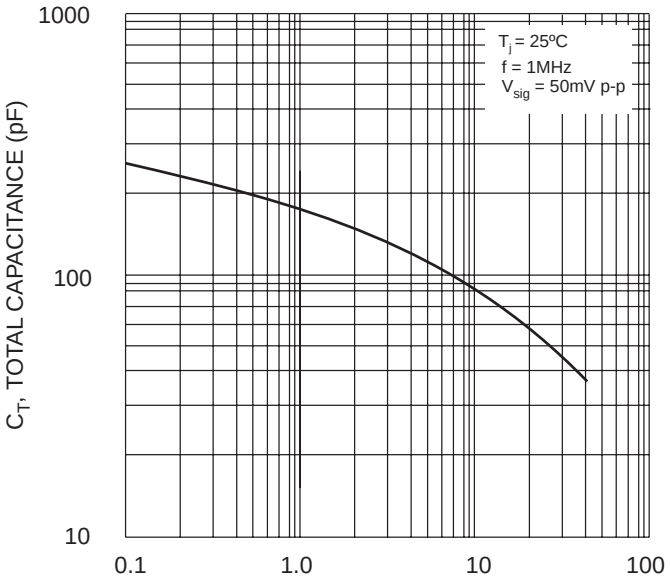


Fig. 4 Typical Total Capacitance

Ordering Information (Note 6)

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

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

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