

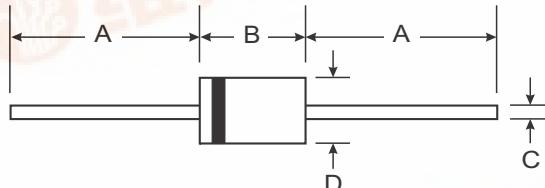


1N5817 - 1N5819

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

@ $T_A = 25^\circ\text{C}$ 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	$V_{R(\text{RMS})}$	14	21	28	V
Average Rectified Output Current (Note 1) @ $T_L = 90^\circ\text{C}$	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) @ $I_F = 1.0\text{A}$ @ $I_F = 3.0\text{A}$	V_{FM}	0.450 0.750	0.550 0.875	0.60 0.90	V
Peak Reverse Leakage Current at Rated DC Blocking Voltage (Note 2) @ $T_A = 25^\circ\text{C}$ @ $T_A = 100^\circ\text{C}$	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		$^\circ\text{C/W}$
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$		50		
Operating and Storage Temperature Range	T_j, T_{STG}		-65 to +125		$^\circ\text{C}$

Notes:

- Measured at ambient temperature at a distance of 9.5mm from the case.
- Short duration test pulse used to minimize self-heating effect.
- Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
- 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.

6. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 5 and 7.

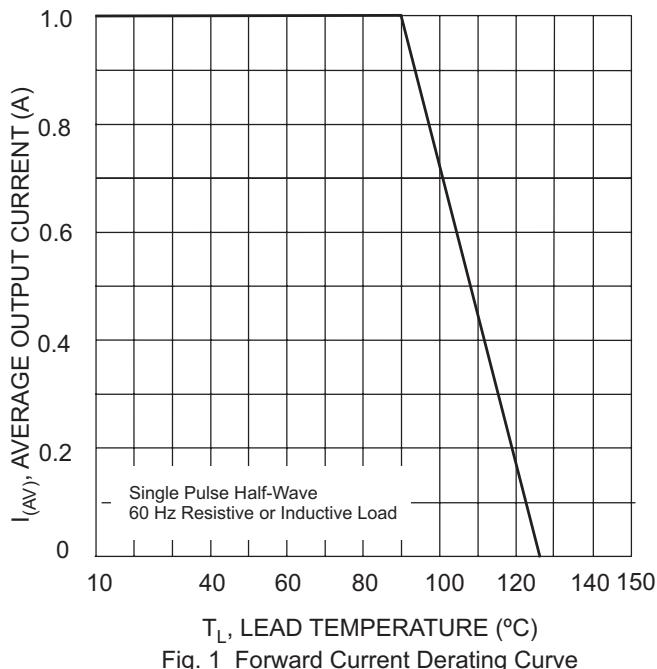


Fig. 1 Forward Current Derating Curve

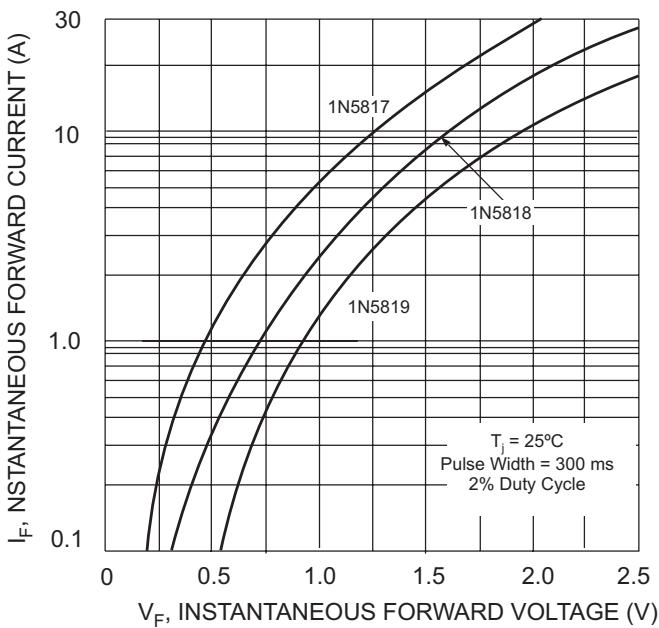


Fig. 2 Typical Forward Characteristics

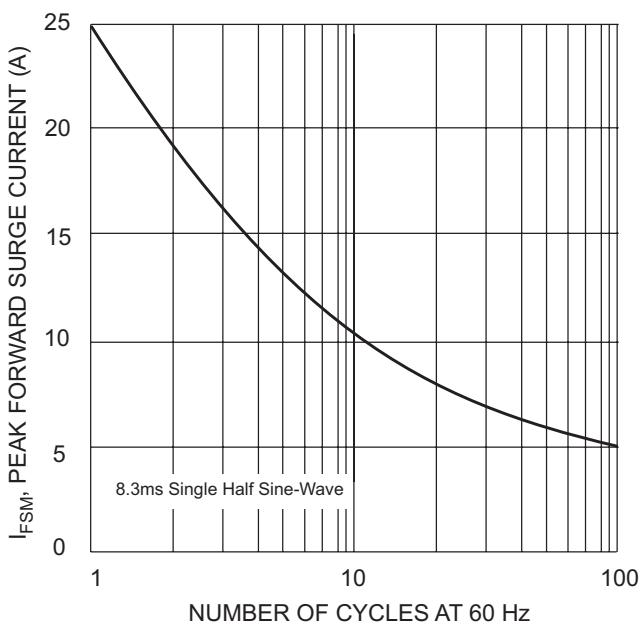


Fig. 3 Maximum Non-Repetitive Peak Fwd Surge Current

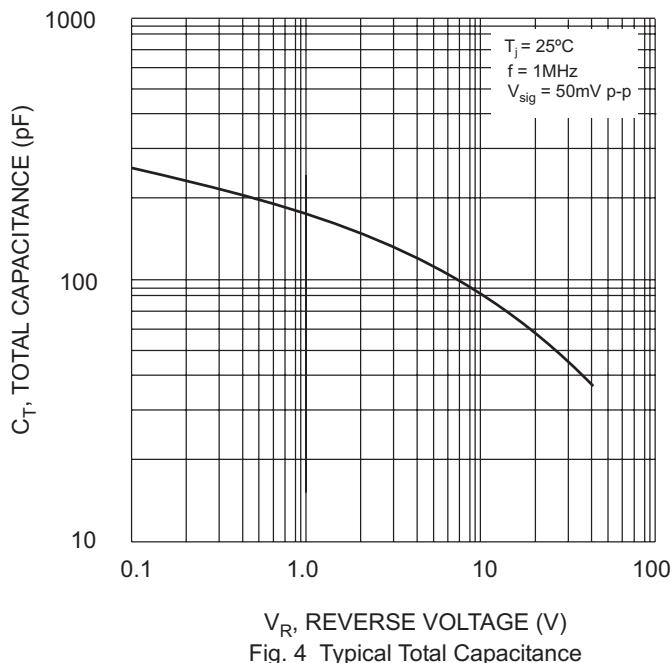


Fig. 4 Typical Total Capacitance

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



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