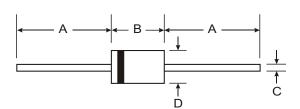


# 1N5817 - 1N5819

## 1.0A SCHOTTKY BARRIER RECTIFIER

### **Features**

- Schottky Barrier Chip
- 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
- Plastic Material: UL Flammability Classification Rating 94V-0



# 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

## **Mechanical Data**

Case: Molded Plastic

 Terminals: Plated Leads Solderable per MIL-STD-202, Method 208

Polarity: Cathode Band
 Weight: 0.2 grams (approximately)

Weight: 0.3 grams (approx)Mounting Position: AnyMarking: Type Number

## 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 (JEDEC Method)	I <sub>FSM</sub>	25			А
Forward Voltage (Note 2)		0.450 0.750	0.550 0.875	0.60 0.90	V
Peak Reverse Leakage Current @TA = 25°C at Rated DC Blocking Voltage (Note 2) @ TA = 100°C		1.0 10			mA
Typical Total Capacitance (Note 3)	C <sub>T</sub>	110			pF
Typical Thermal Resistance Junction to Lead (Note 4)	R <sub>0</sub> JL	15			°C/W
Typical Thermal Resistance Junction to Ambient	R <sub>θJA</sub>	50			
Operating and Storage Temperature Range	T <sub>j,</sub> T <sub>STG</sub>	-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.



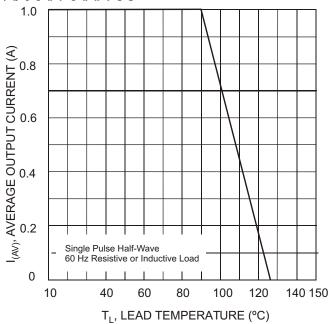


Fig. 1 Forward Current Derating Curve

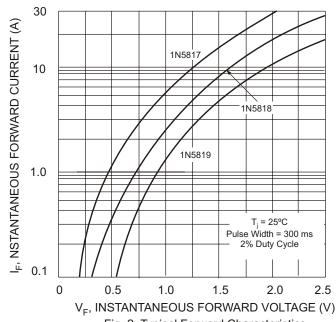
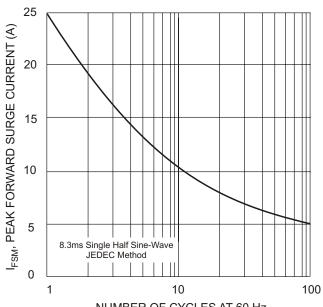


Fig. 2 Typical Forward Characteristics



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

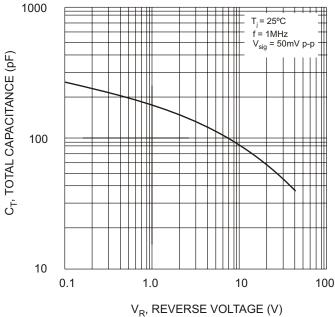


Fig. 4 Typical Total Capacitance

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