

## 1N5817 THRU 1N5819

1 AMPERE SCHOTTKY BARRIER RECTIFIERS  
VOLTAGE - 20 to 40 Volts CURRENT - 1.0 Ampere

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- 1 ampere operation at  $T_L = 90^\circ\text{C}$  with no thermal runaway.
- Exceeds environmental standards of MIL-S-19500/22B
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications

### MECHANICAL DATA

Case: Molded plastic. JEDEC DO-41

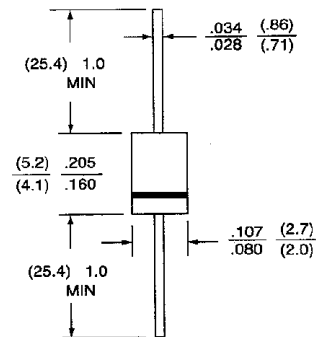
Terminals: Axial leads, solderable per MIL-STD-202, Method 208

Polarity: Color band denotes cathode

Mounting position: Any

Weight: 0.012 ounce, 0.3 gram

DO-41



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at  $25^\circ\text{C}$  ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.

	1N5817	1N5818	1N5819	UNITS
Maximum Recurrent Peak Reverse Voltage	20	30	40	V
Maximum RMS Voltage	14	21	28	V
Maximum DC Blocking Voltage	20	30	40	V
Maximum Average Forward Rectified Current 3/8" Lead Length $T_L = 90^\circ\text{C}$	1.0			A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) $T_L = 70^\circ\text{C}$	25			A
Maximum Forward Voltage at 1.0A DC	.45	.55	.60	V
Maximum Forward Voltage at 3.0A DC	.75	.875	.90	V
Maximum Average DC Reverse Current at Peak Reverse Voltage $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	0.5 10			mA mA
Typical Junction Capacitance (Note 1)	110			pF
Typical Thermal Resistance (Note 2)	80			$^\circ\text{C}/\text{W}$
Operating Temperature Range Storage Temperature Range	-50 to +125			$^\circ\text{C}$

#### NOTES:

- 1—Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
- 2—Thermal Resistance Junction to Ambient.

**RATING AND CHARACTERISTIC CURVES**  
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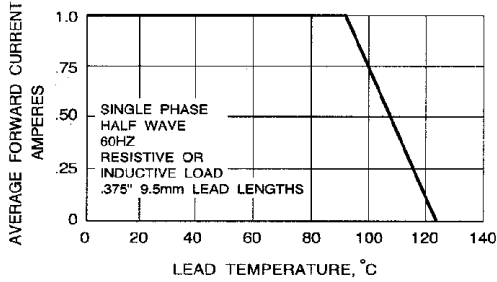


Fig. 1 - FORWARD CURRENT DERATING CURVE

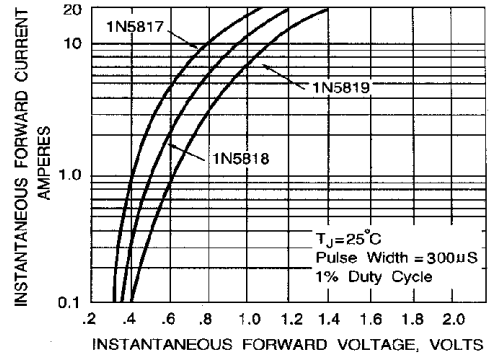


Fig. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

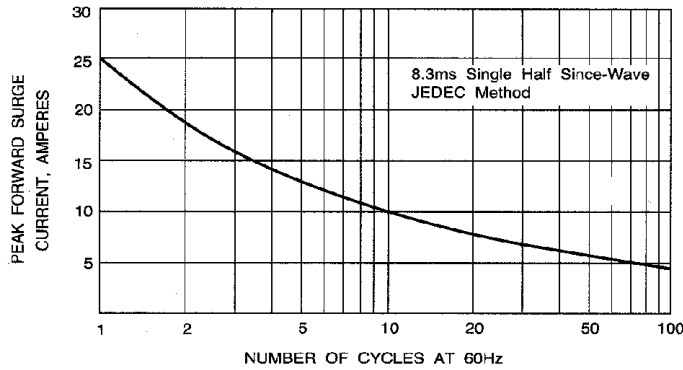


Fig. 3 - MAXIMUM NON-REPETITIVE SURGE CURRENT

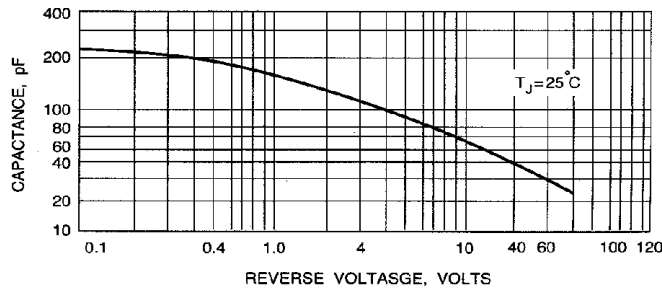


Fig. 4 - TYPICAL JUNCTION CAPACITANCE