



1N17 thru 1N19

Reverse Voltage 20 to 40 Volts Schottky Barrier Rectifiers
 Forward Current 1.0 Ampere

Features

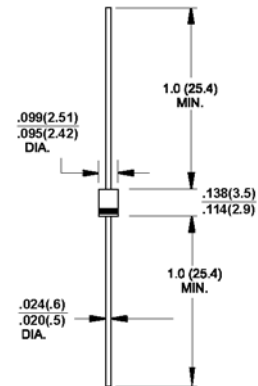
- ◆ Low power loss, high efficiency
- ◆ Low leakage
- ◆ Low forward voltage
- ◆ High current capability
- ◆ High speed switching
- ◆ High surge capability
- ◆ High reliability



R-1

Mechanical Data

- ◆ Case: Molded plastic
- ◆ Epoxy: UL 94V-O rate flame retardant
- ◆ Lead: MIL-STD-202E method 208C guaranteed
- ◆ Mounting position: Any
- ◆ Weight: 0.007 ounce, 0.20 gram



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Parameter	Symbols	1N17	1N18	1N19	Units
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	Volts
Maximum RMS voltage	V_{RMS}	14	21	28	Volts
Maximum DC blocking voltage	V_{DC}	20	30	40	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A = 90^\circ\text{C}$	I_{AV}	1.0			Amp
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	20.0			Amps
Maximum instantaneous forward voltage at 1.0A DC	V_F	0.450	0.550	0.600	Volts
Maximum instantaneous forward voltage at 3.1A DC	V_F	0.750	0.875	0.900	Volts
Maximum average reverse current @ $T_A = 25^\circ\text{C}$ at peak reverse voltage @ $T_A = 100^\circ\text{C}$	I_R	1.0 10.0			mA
Typical thermal resistance (Note 1)	$R_{\theta JA}$	80			$^\circ\text{C}/\text{W}$
Typical junction capacitance (Note 2)	C_J	110			pF
Operating junction temperature range	T_J	-55 to +125			$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150			$^\circ\text{C}$

- Notes:**
1. Thermal Resistance (Junction to Ambient): Vertical PC Board Mounting, 0.5" (12.7mm) Lead Length.
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

RATINGS AND CHARACTERISTIC CURVES

FIG. 1 -- TYPICAL FORWARD CURRENT DERATING CURVE

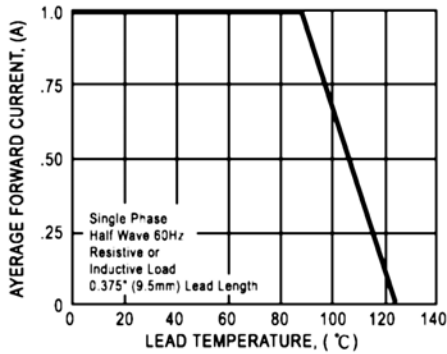


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

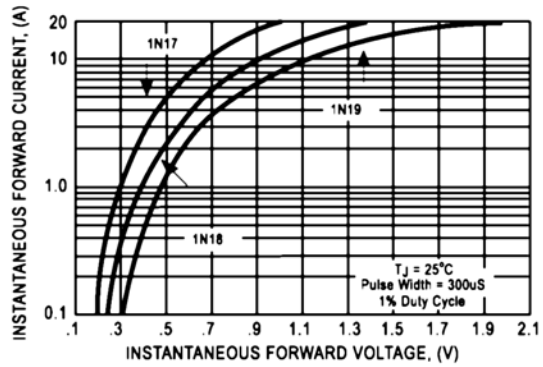


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

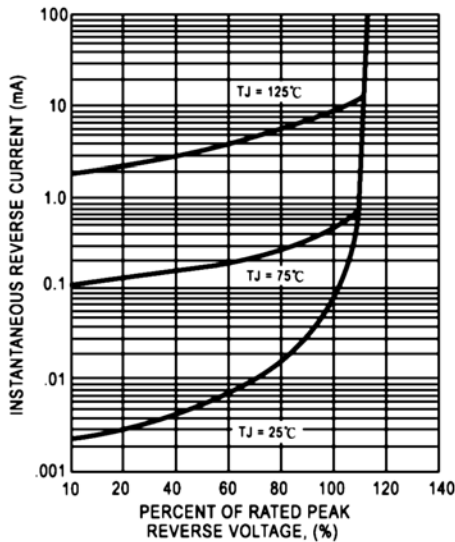


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

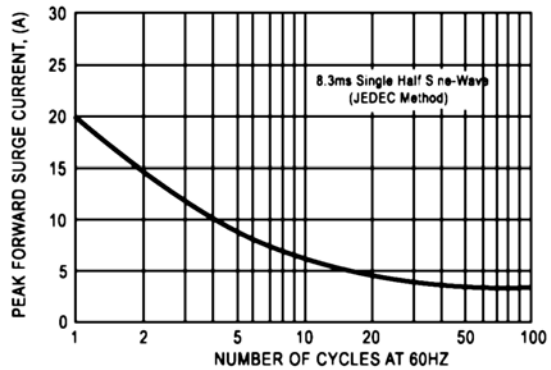


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

