

1N17 THRU 1N19

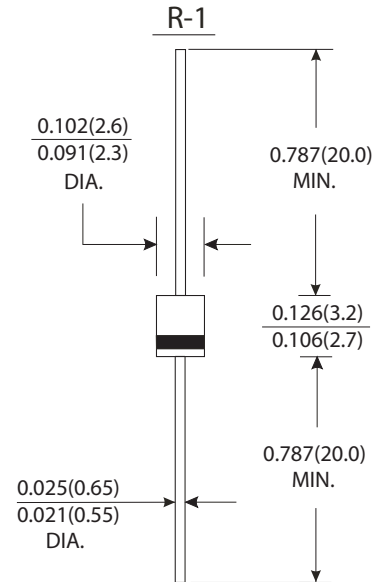
CURRENT 1.0Ampere
VOLTAGE 20 to 40 Volts

Features

- Plastic Package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- High current capability, Low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

Mechanical Data

- Case : R-1 molded plastic body
- Terminals : Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes cathode end
- Weight : 0.007 ounce, 0.20 gram



Maximum Ratings and Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified, single phase, half wave, resistive or inductive load. For capacitive load, derate by 20%)

	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 non-repetitive peak reverse voltage	V_{RSM}	24	36	48	Volts
Maximum average forward rectified current 0.375"(9.5mm) lead length at $T_L=90^\circ\text{C}$	$I_{(AV)}$	1.0			Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) at $T_L=70^\circ\text{C}$	I_{FSM}	25.0			Amps
Maximum instantaneous forward voltage at 1.0A (Note 1)	V_F	0.450	0.550	0.600	Volts
Maximum instantaneous forward voltage at 3.1A (Note 2)	V_F	0.750	0.875	0.900	
Maximum instantaneous reverse current at rated DC blocking voltage (Note1)	$T_A=25^\circ\text{C}$	0.5			mA
	$T_A=100^\circ\text{C}$	10.0			
Typical junction capacitance (Note 3)	C_J	110.0			pF
Typical thermal resistance (Note 2)	$R_{\theta JA}$	50.0			$^\circ\text{C}/\text{W}$
	$R_{\theta JL}$	15.0			
Operating junction temperature range	T_J, T_{STG}	-65 to +125			$^\circ\text{C}$

Notes:

- (1) Pulse test: 300 μs pulse width, 1% duty cycle
- (2) Thermal resistance from junction to ambient P.C.B. mounted, 0.5"(12.7mm) lead length
- (3) Measured 1.0MHz and reverse voltage of 4.0 volts



RATINGS AND CHARACTERISTIC CURVES 1N17 THRU 1N19

FIG.1-FORWARD CURRENT DERATING CURVE

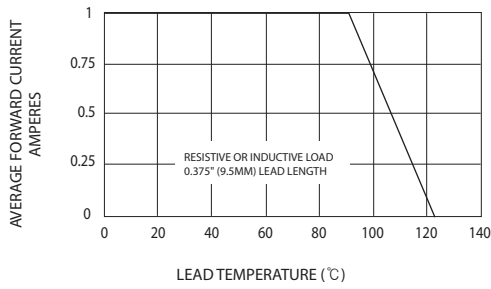


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

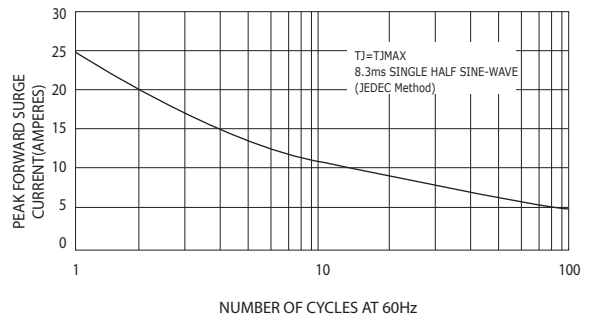


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

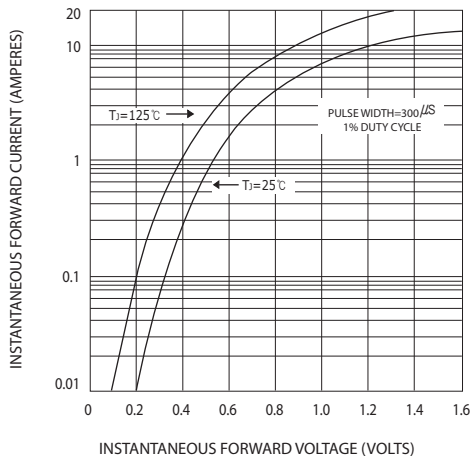


FIG.4-TYPICAL REVERSE CHARACTERISTICS

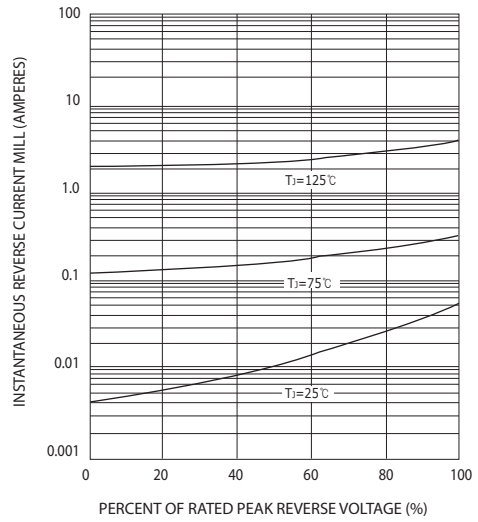


FIG.5-TYPICAL JUNCTION CAPACITANCE

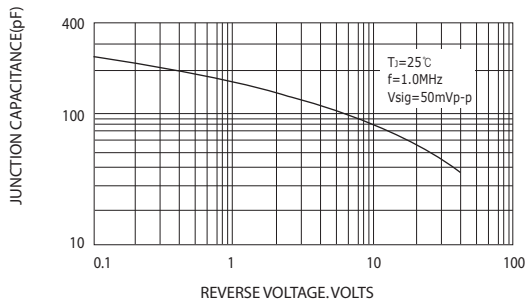


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

