1N17 THRU 1N19

MINIATURE SCHOTTKY BARRIER RECTIFIER

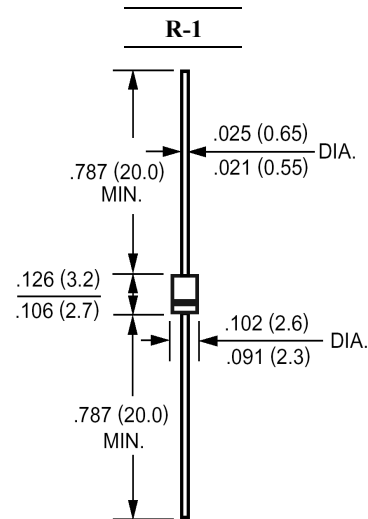|		
REVERSE VOLTAGE:	**20 to 40 VOLTS**	
FORWARD CURRENT:	**1.0 AMPERE**	

FEATURES

· High current capability

· Low power loss, high efficiency

· Low leakage

· Low forward voltage

· High speed switching

· High surge capability

· High reliability

MECHANICAL DATA

Case: Molded plastic, R-1

Epoxy: UL 94V-O rate flame retardant

Lead: Axial leads, solderable per MIL-STD-202,

method 208 guaranteed

Polarity: Color band denotes cathode end

Mounting position: Any

Weight: 0.0064ounce, 0.181gram

R-1

.025 (0.65)
.021 (0.55) DIA.

.787 (20.0) MIN.

.126 (3.2)
.106 (2.7)

.102 (2.6)
.091 (2.3) DIA.

.787 (20.0) MIN.

Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25 ambient temperature unless otherwise specified.

Single phase, half wave, $60H_Z$, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	*1N17*	*1N18*	*1N19*	Units
Maximum Recurrent 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 .375"(9.5mm) Lead Length at T_L=90	$I_{(AV)}$	1.0			**Amp**
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	20			**Amp**
Maximum Forward Voltage at 1.0A DC	V_F	0.45	0.55	0.60	**Volts**
Maximum Forward Voltage at 3.0A DC		0.75	0.875	0.90	
Maximum Reverse Current at T_A=25	I_R	1.0			**mAmp**
at Rated DC Blocking Voltage T_A=100		10			
Typical Junction Capacitance (Note 1)	C_J	110			**pF**
Typical Thermal Resistance (Note 2)	R_{0JA}	80			**/W**
Operating and Storage Temperature Range	T_J Tstg	-55 to +125			

NOTES:

1- Measured at 1 MH_Z and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance From Junction to Ambient 0.5"(12.7mm) lead length P.C.B. Mounted.

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RATINGS AND CHARACTERISTIC CURVES

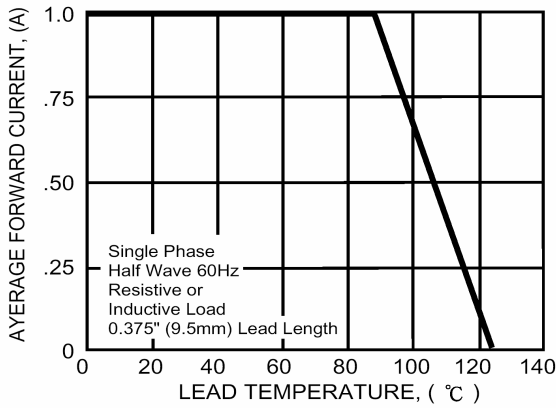FIG. 1 -- TYPICAL FORWARD CURRENT DERATING CURVE

Single Phase
Half Wave 60Hz
Resistive or
Inductive Load
0.375" (9.5mm) Lead Length

AVERAGE FORWARD CURRENT, (A)
LEAD TEMPERATURE, (℃)

FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARCTERISTICS

1N17
1N19
1N18

$T_J = 25℃$
Pulse Width = 300uS
1% Duty Cycle

INSTANTANEOUS FORWARD CURRENT, (A)
INSTANTANEOUS FORWARD VOLTAGE, (V)
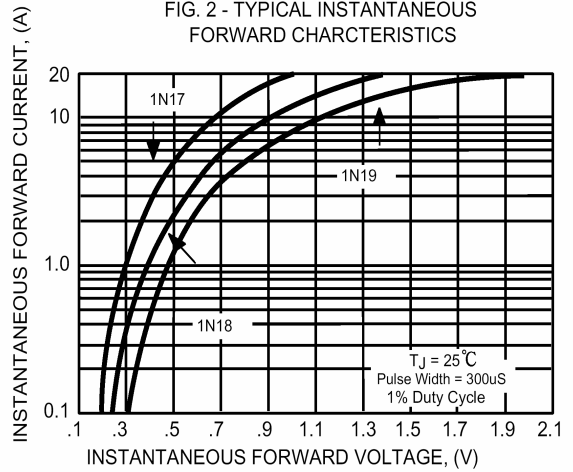
FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

$T_J = 125℃$
$T_J = 75℃$
$T_J = 25℃$

INSTANTANEOUS REVERSE CURRENT (mA)
PERCENT OF RATED PEAK REVERSE VOLTAGE, (%)
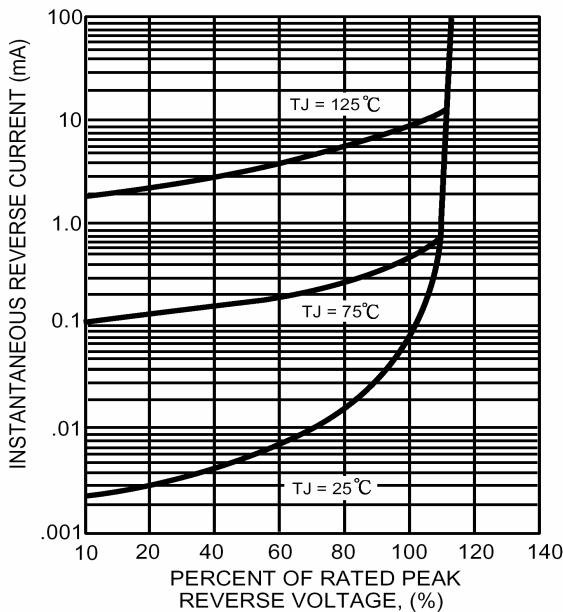
FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

8.3ms Single Half Sine-Wave
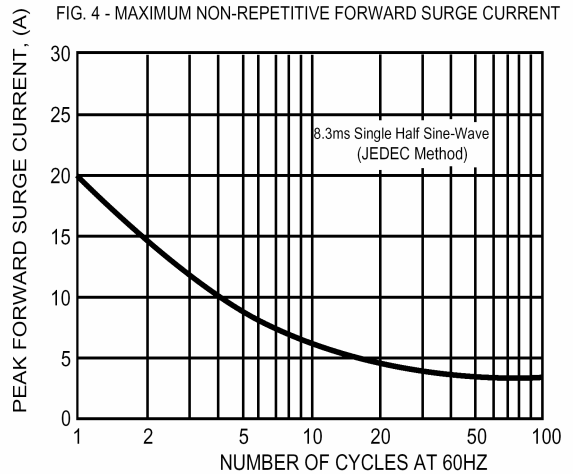(JEDEC Method)

PEAK FORWARD SURGE CURRENT, (A)
NUMBER OF CYCLES AT 60HZ

FIG. 5 - TYPICAL JUNCTION CAPACITANCE

$T_J = 25℃$

JUNCTION CAPACITANCE, (pF)
REVERSE VOLTAGE, (V)