

# 1N17 THRU 1N19

## SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 40 Volts

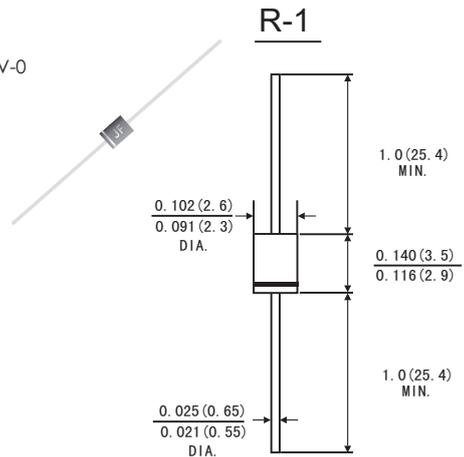
Forward Current - 1.0Ampere

### 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
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

### 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
- *Mounting Position*: Any
- *Weight*: 0.007ounce,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 ,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 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 1.0 A(note 1 )	$V_F$	0.450	0.550	0.600	Volts
Maximum instantaneous forward voltage at 3.0 A(note 1 )	$V_F$	0.750	0.875	0.900	
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	$I_R$	$T_A=25^\circ\text{C}$	0.2		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			°C/W
	$R_{\theta JL}$	15.0			
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +150			°C

Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle

2.Thermal resistance (from junction to ambient)Vertical P.C.B. mounted , 0.5"(12.7mm)lead length

3.Measured at 1.0MHz and reverse voltage of 4.0 volts

# RATINGS AND CHARACTERISTIC CURVES 1N17 THRU 1N19

FIG.1-FORWARD CURRENT DERATING CURVE

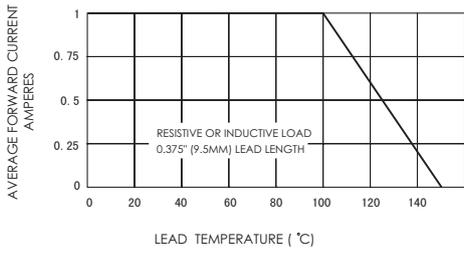


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

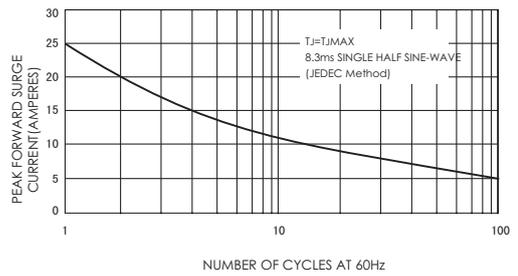


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

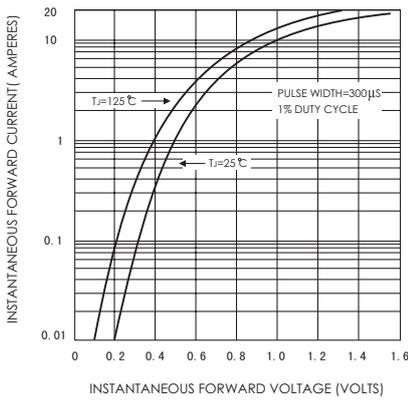


FIG.4-TYPICAL REVERSE CHARACTERISTICS

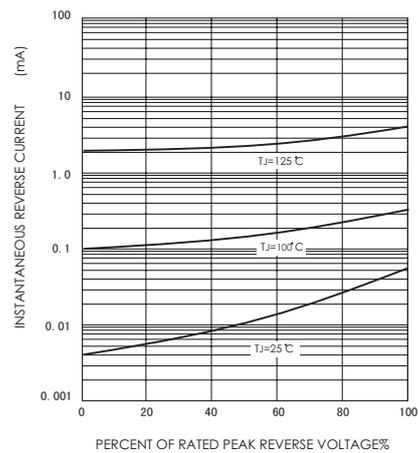


FIG.5-TYPICAL JUNCTION CAPACITANCE

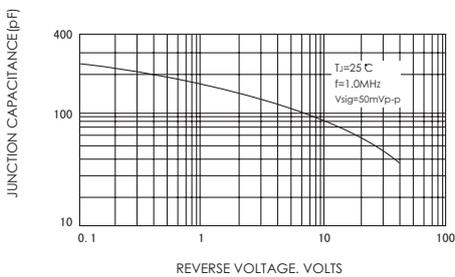


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

