

# PFS

## SCHOTTKY BARRIER RECTIFIER

### 1N17 THRU 1N19

**VOLTAGE RANGE**  
**CURRENT**

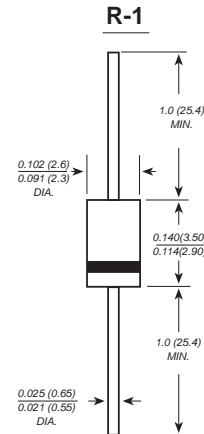
**20 to 40 Volts**  
**1.0 Ampere**

#### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- Guardring for overvoltage protection
- 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:  
250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

#### 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 : 0.007 ounce, 0.20 gramS



Dimensions in inches and (millimeters)

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified.
- Single phase half-wave 60Hz, resistive or inductive load, for current 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)	$I_{FSM}$	25.0			Amps
Maximum instantaneous forward voltage at 1.0A	$V_F$	0.450	0.550	0.600	Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	$I_R$	0.5 10.0			mA
Typical junction capacitance (NOTE 1)	$C_J$	110.0			pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	50.0			$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +125			$^\circ\text{C}$

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

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FIG. 1- FORWARD CURRENT DERATING CURVE

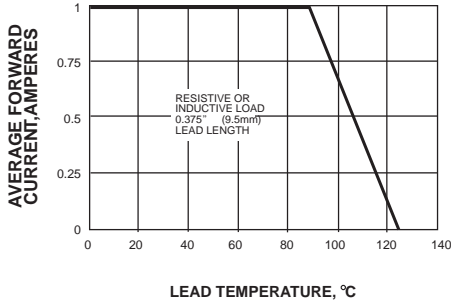


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

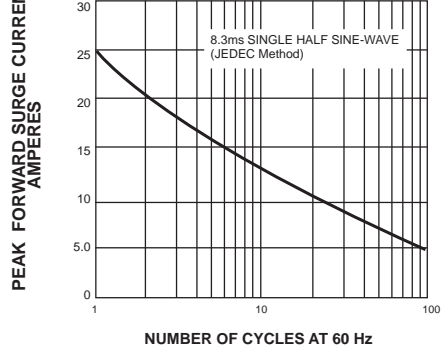


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

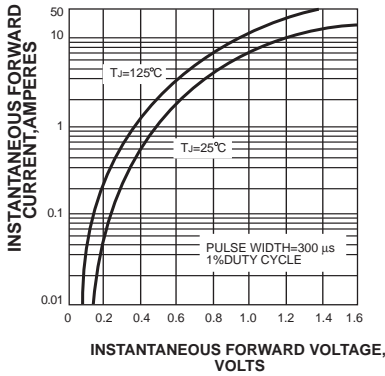


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

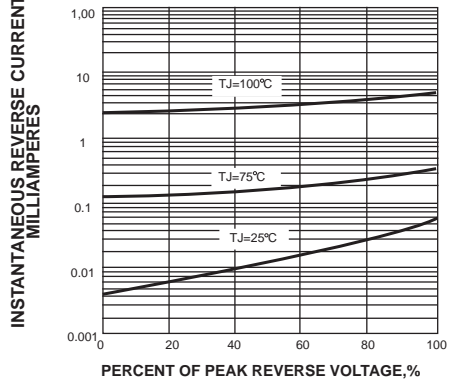


FIG. 5-TYPICAL JUNCTION CAPACITANCE

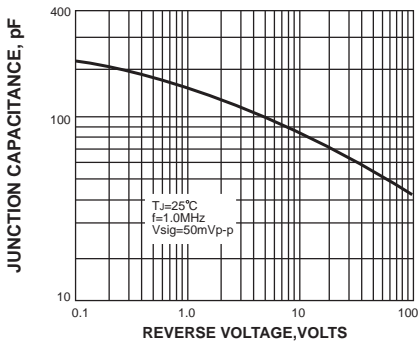


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

