

# JF

## 1N5817 THRU 1N5819

### SCHOTTKY BARRIER RECTIFIER

Reverse Voltage 20 to 40 Volts  
Forward Current - 1.0Ampere

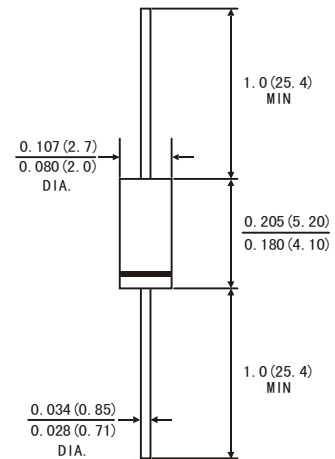
### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring 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 at terminals, 0.375"(9.5mm)lead length,5lbs.(2.3kg)tension

### MECHANICAL DATA

- *Case:* JEDEC DO-41 molded plastic body
- *Terminals:* Plated axial leads, solderable per MIL-STD-750,method 2026
- *Polarity:* color band denotes cathode end
- *Mounting Position:* Any
- *Weight:* 0.012ounce, 0.33 gram

### DO-41



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%.)

	<i>Symbols</i>	<i>1N5817</i>	<i>1N5818</i>	<i>1N5819</i>	<i>Units</i>
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	Volts
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	Volts
Maximum non-repetitive peak reverse voltage	V <sub>RSM</sub>	24	36	48	Volts
Maximum average forward rectified current 0.375"(9.5mm)lead length at T <sub>L</sub> =90°C	I(AV)	1.0			Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) at T <sub>L</sub> =70°C	I <sub>FSM</sub>	25.0			Amps
Maximum instantaneous forward voltage at 1.0 A(note 1 )	V <sub>F</sub>	0.450	0.550	0.600	Volts
Maximum instantaneous forward voltage at 3.1 A(note 1 )	V <sub>F</sub>	0.750	0.875	0.900	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	I <sub>R</sub>	0.5			mA
		10.0			
Typical junction capacitance(Note 3)	C <sub>J</sub>	110.0			pF
Typical thermal resistance(Note 2)	R <sub>θJA</sub>	50.0			°C/W
	R <sub>θJL</sub>	15.0			
Operating junction and storage temperature range	T <sub>J</sub> T <sub>STG</sub>	-65 to +125			°C

- Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle  
 2.Thermal resistance (from junction to ambient)Vertical PC.B. mounted , with 1.5X1.5"(38X38mm)copper pads  
 3.Measured at 1.0MHz and reverse voltage of 4.0 volts

# RATINGS AND CHARACTERISTIC CURVES 1N5817 THRU 1N5819

FIG.1-FORWARD CURRENT DERATING CURVE

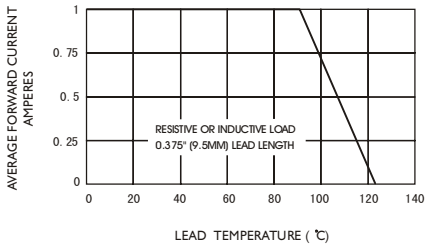


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

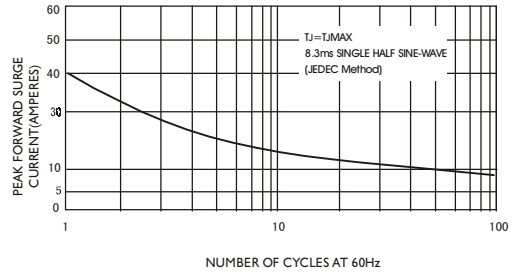


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

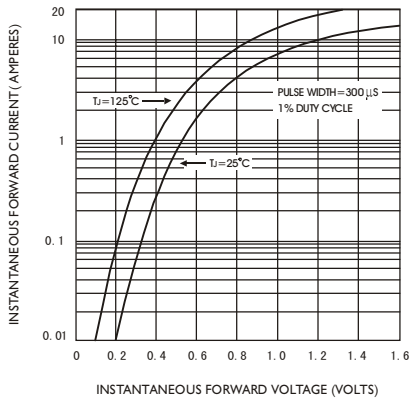


FIG.4-TYPICAL REVERSE CHARACTERISTICS

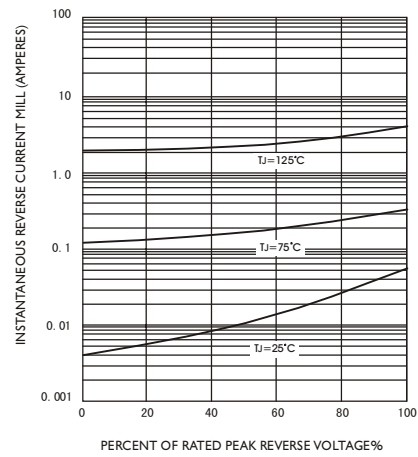


FIG.5-TYPICAL JUNCTION CAPACITANCE

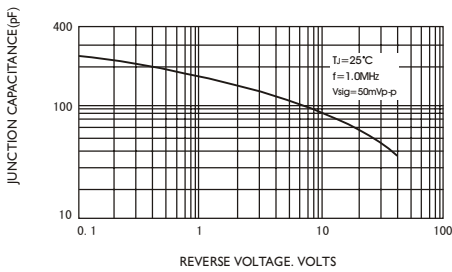


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

