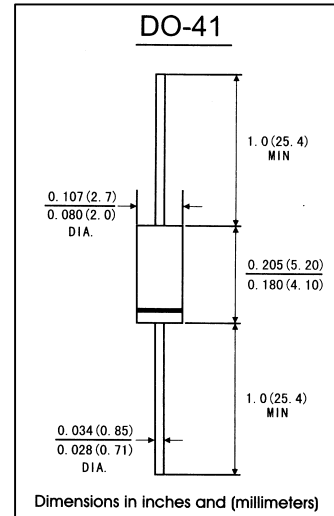


### FEATURES

- . Plastic package has Underwriters Laboratory Flammability Classification 94-0
- . 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,
- . 375"(9.5mm)lead length,5lbs.(2.3kg)tension

### MECHANICAL DATA

- . **Case:** JEDEC MELG 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:** 0.012 ounce, 0.33 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	1N5817	1N5818	1N5819	Units
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 TL=90°C	I(AV)	1.0			Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) at TL=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)	TA=25°C	0.5			mA
	TA=100°C	10.0			
Typeical junction capacitance(Note 3)	C <sub>J</sub>	110.0			pF
Typeical thermal resistance (Note 2)	R $\theta$ <sub>JA</sub>	50.0			°C/W
	R $\theta$ <sub>JL</sub>	15.0			
Operating junction and storage temperature range	T <sub>J</sub> /T <sub>STG</sub>	-65 to +125			°C

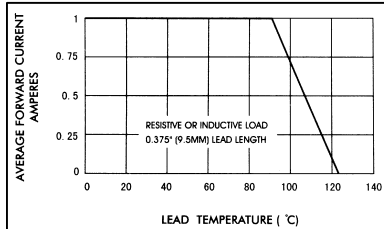
**Notes:** 1. Pulse test: 300  $\mu$ s pulse width,1% duty cycle

2.Thermal resistance (from junction to ambient)Vertical P.C.B. Mounted, with 1.5X1.5"(38X38mm)copper pads

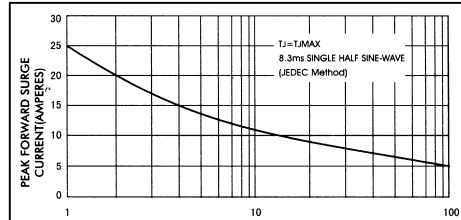
3.Measured at 1.0MHz and reverse voltage of 4.0 volts

**RATINGS AND CHARACTERISTIC CURVES 1N5817 THRU 1N5819**

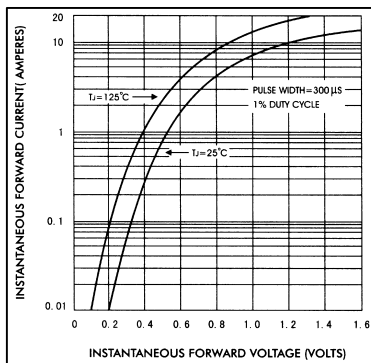
**FIG.1-FORWARD CURRENT DERATING CURVE**



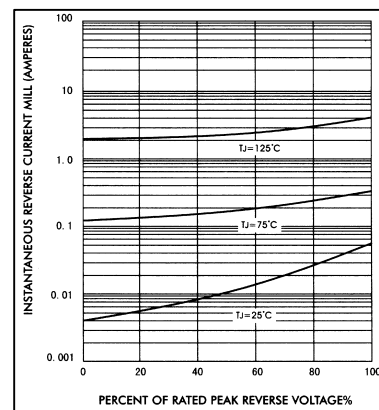
**FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



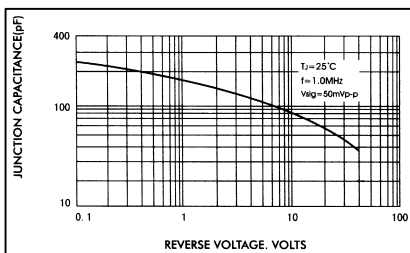
**FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.4-TYPICAL REVERSE CHARACTERISTICS**



**FIG.5-TYPICAL JUNCTION CAPACITANCE**



**FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE**

