

## SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE: 20--- 40 V    CURRENT: 1.0 A

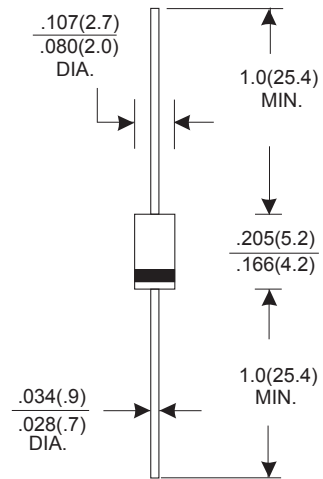
### FEATURES

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

### MECHANICAL DATA

- Case:DO-41 molded plastic body
- Terminals:Lead solderable per MIL-STD-750,method 2026
- Polarity:Color band denotes cathode end
- Mounting Position:Any

### DO-41



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate by 20%.

| TYPE NUMBER   | SYMBOL          | 1N5817     | 1N5818 | 1N5819 | UNITS              |
|---|-----------------|------------|--------|--------|--------------------|
| Maximum Recurrent Peak Reverse Voltage  | $V_{RRM}$       | 20         | 30     | 40     | V                  |
| Maximum RMS Voltage   | $V_{RMS}$       | 14         | 21     | 28     | V                  |
| Maximum DC Blocking Voltage   | $V_{DC}$        | 20         | 30     | 40     | V                  |
| Maximum Average Forward Rectified Current<br>.375"(9.5mm) Lead Length at $T_a=90^\circ\text{C}$                 | $I_{(AV)}$      | 1.0        |        |        | A                  |
| Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)              | $I_{FSM}$       | 25         |        |        | A                  |
| Maximum Instantaneous Forward Voltage at 1.0A   | $V_F$           | 0.45       | 0.55   | 0.60   | V                  |
| Maximum DC Reverse Current<br>$T_a=25^\circ\text{C}$<br>at Rated DC Blocking Voltage<br>$T_a=100^\circ\text{C}$ | $I_R$           | 0.5<br>10  |        |        | mA                 |
| Typical Junction Capacitance (Note1)  | $C_J$           | 110        |        |        | pF                 |
| Typical Thermal Resistance $R_{\theta JA}$ (Note 2)   | $R_{\theta JC}$ | 80         |        |        | $^\circ\text{C/W}$ |
| Operating Temperature Range   | $T_J$           | -65 — +125 |        |        | $^\circ\text{C}$   |
| Storage Temperature Range   | $T_S$           | -65 — +150 |        |        | $^\circ\text{C}$   |

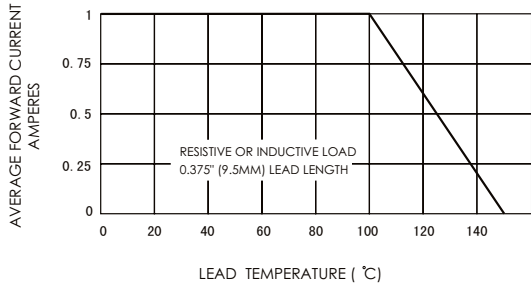
### NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Ambient Vertical PC Board Mounting 0.5"(12.7mm) Lead Length.

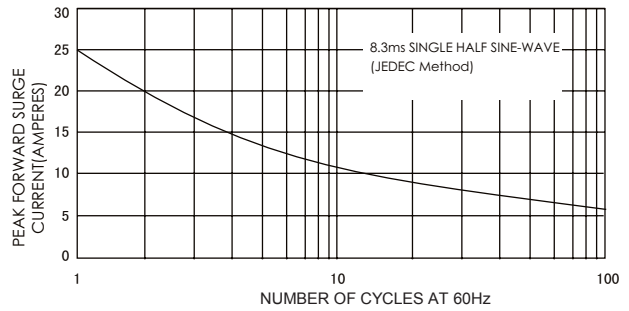


# RATINGS AND CHARACTERISTIC CURVES

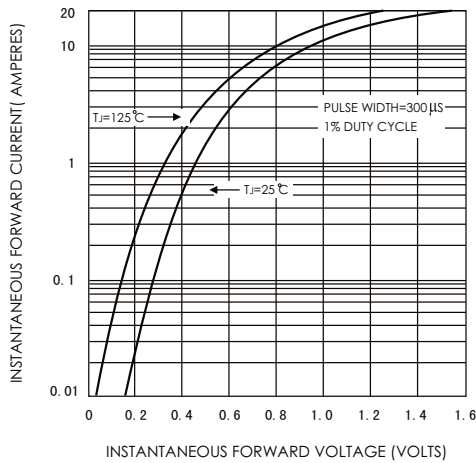
**FIG.1-FORWARD CURRENT DERATING CURVE**



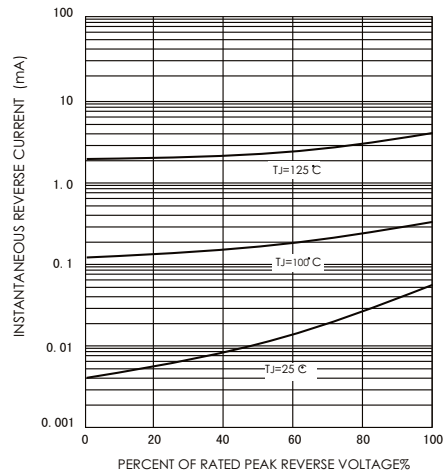
**FIG.2-MAXIMUM NON-REPETITIVE SURGE**



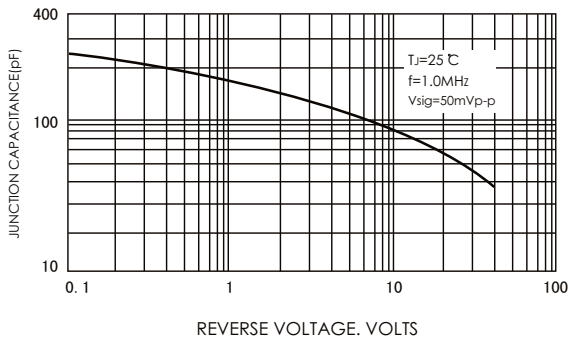
**FIG.3-TYPICAL REVERSE CHARACTERISTICS**



**FIG.4-TYPICAL FORWARD CHARACTERISTICS**



**FIG.5-TYPICAL JUNCTION CAPACITANCE INSTANTANEOUS**



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

