

# 1N5817 THRU 1N5819

## 1.0 AMP. SCHOTTKY BARRIER RECTIFIERS

Voltage Range  
20 to 40 Volts  
Current  
1.0 Amperes

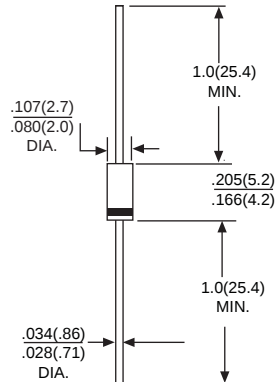
### Features

- \*Low forward voltage drop
- \*High current capability
- \*High reliability
- \*High surge current capability

### Mechanical Data

- \*Cases: Molded plastic DO-41
- \*Epoxy: UL 94V-O rate flame retardant
- \*Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- \*Polarity: Color band denotes cathode end
- \*High temperature soldering guaranteed:  
250°C/10 seconds/.375" (9.5mm) lead  
lengths at 5 lbs. (2.3kg) tension
- \*Weight: 0.33 gram

### DO-41



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

| Type Number                                                                                              |                      | 1N5817      | 1N5818 | 1N5819 | UNITS    |
|----------------------------------------------------------------------------------------------------------|----------------------|-------------|--------|--------|----------|
| Maximum Repetitive 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 @ $T_L = 90^\circ C$              | $I_{F(AV)}$          | 1.0         |        |        | A        |
| Peak Forward Surge Current, 8.3 ms Single<br>Half Sine-wave Superimposed on Rated Load<br>(JEDEC method) | $I_{FSM}$            | 25          |        |        | A        |
| Maximum Instantaneous Forward Voltage<br>@ 1.0A                                                          | $V_F$                | 0.45        | 0.550  | 0.600  | V        |
| Maximum Instantaneous Forward Voltage<br>@ 3.0A                                                          | $V_F$                | 0.750       | 0.875  | 0.900  | V        |
| Maximum DC Reverse Current @ $T_A = 25^\circ C$<br>at Rated DC Blocking Voltage @ $T_A = 100^\circ C$    | $I_R$                | 1.0<br>10   |        |        | mA<br>mA |
| Typical Thermal Resistance                                                                               | $R_{JA}$<br>$R_{JC}$ | 50<br>12    |        |        | °C/W     |
| Typical Junction Capacitance (Note 2)                                                                    | $C_J$                | 110         |        |        | pF       |
| Operating Temperature Range                                                                              | $T_J$                | -55 to +125 |        |        | °C       |
| Storage Temperature Range                                                                                | $T_{STG}$            | -55 to +150 |        |        | °C       |

NOTES: 1. Thermal Resistance from Junction to Ambient Vertical PC Board Mounting, 0.375" (9.5mm) Lead Length.  
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

# RATING AND CHARACTERISTIC CURVES

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FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

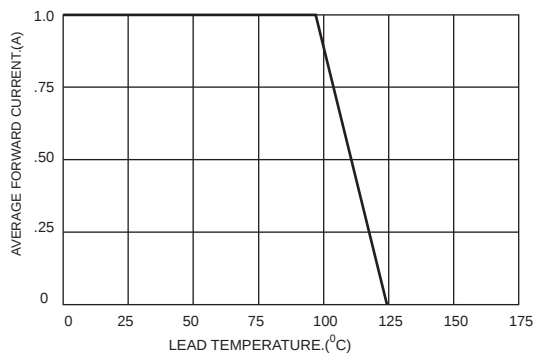


FIG.2-TYPICAL JUNCTION CAPACITANCE

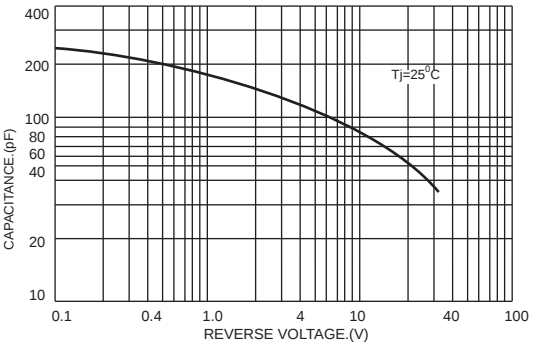


FIG.3-TYPICAL FORWARD CHARACTERISTICS

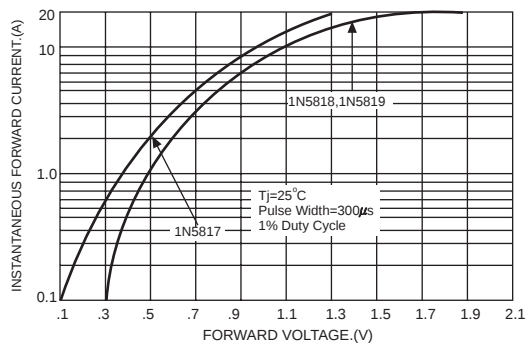


FIG.4- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

