

# 1N5817 - 1N5819

## SCHOTTKY BARRIER RECTIFIER DIODES

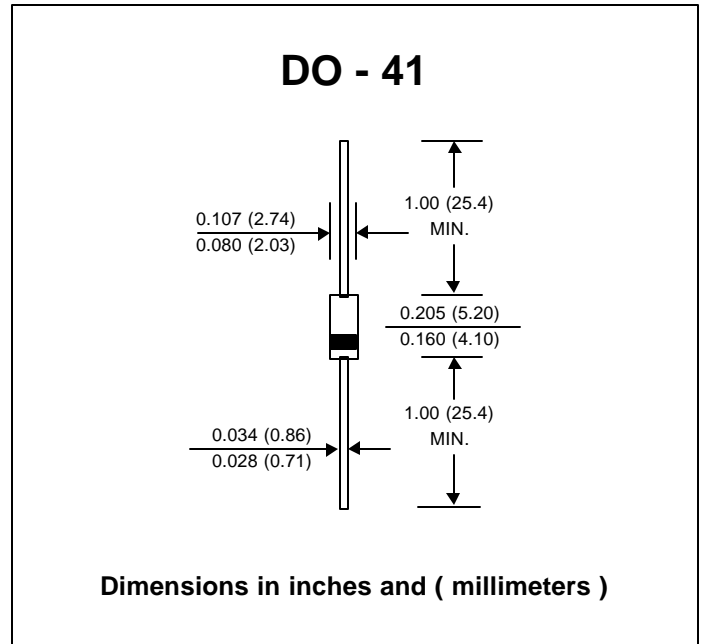
**PRV : 20 - 40 Volts**  
**I<sub>o</sub> : 1.0 Ampere**

### FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* High efficiency
- \* Low power loss
- \* Low cost
- \* Low forward voltage drop

### MECHANICAL DATA :

- \* Case : DO-41 Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.339 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| RATING  | SYMBOL             | 1N5817        | 1N5818 | 1N5819 | UNIT  |
|---|--------------------|---------------|--------|--------|-------|
| Maximum Recurrent 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 Average Forward Current<br>0.375", 9.5mm Lead Length at T <sub>L</sub> = 90 °C                                      | I <sub>F(AV)</sub> | 1.0           |        |        | Amp.  |
| Peak Forward Surge Current, 8.3ms single half sine wave<br>Superimposed on rated load (JEDEC Method) T <sub>L</sub> = 70 °C | I <sub>FSM</sub>   | 25            |        |        | Amps. |
| Maximum Forward Voltage at I <sub>F</sub> = 1.0 Amp.  | V <sub>F</sub>     | 0.45          | 0.55   | 0.6    | Volt. |
| Maximum Reverse Current      T <sub>a</sub> = 25 °C<br>at Rated DC Blocking Voltage (Note 1)      T <sub>a</sub> = 100 °C   | I <sub>R</sub>     | 1.0           |        |        | mA    |
|   | I <sub>R(H)</sub>  | 10            |        |        | mA    |
| Typical Thermal Resistance (Note 2)   | R <sub>θJL</sub>   | 15            |        |        | °C/W  |
| Typical Junction Capacitance (Note 3)   | C <sub>J</sub>     | 110           |        |        | pF    |
| Junction Temperature Range  | T <sub>J</sub>     | - 65 to + 125 |        |        | °C    |
| Storage Temperature Range   | T <sub>STG</sub>   | - 65 to + 125 |        |        | °C    |

### Notes :

- (1) Pulse Test : Pulse Width = 300 μs, Duty Cycle = 2%.
- (2) Thermal Resistance from junction to lead, PC board Mounting with 0.375" (9.5mm) Lead Lengths and 1.5 in<sup>2</sup> (38.1mm<sup>2</sup>) copper pads.
- (3) Measured at 1 MHz and applied reverse voltage of 4.0 volts.

## RATING AND CHARACTERISTIC CURVES ( 1N5817 - 1N5819 )

FIG.1 - FORWARD CURRENT DERATING CURVE

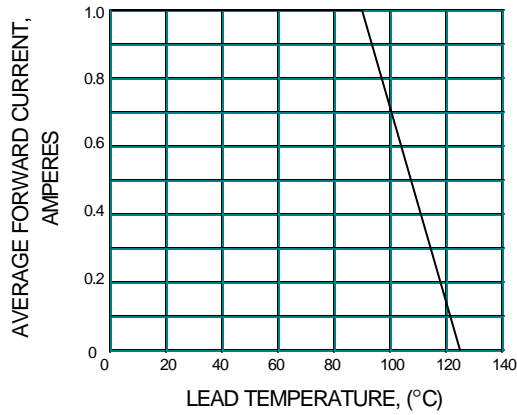


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

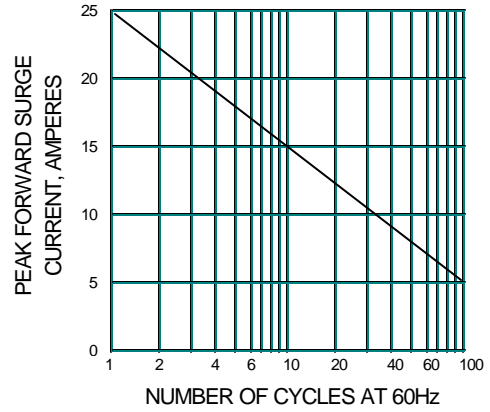


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

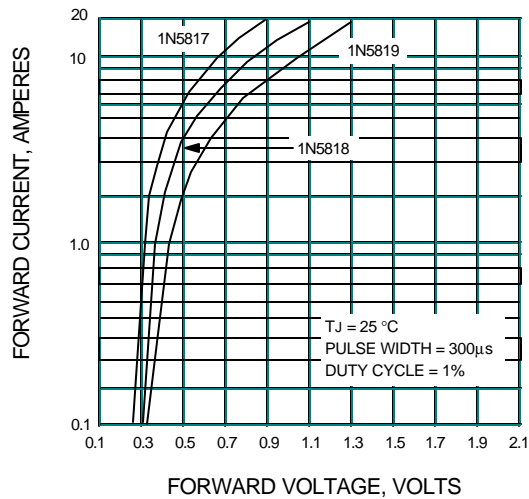


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

