

# 1N5817 - 1N5819

#### **Features**

- 1.0 ampere operation at T<sub>A</sub> = 90°C with no thermal runaway.
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications.



# 1.0 Ampere Schottky Barrier Rectifiers

### Absolute Maximum Ratings\*

 $T_A = 25$ °C unless otherwise noted

| Symbol             | Parameter  | Value        | Units      |
|--------------------|--|--------------|------------|
| I <sub>F(AV)</sub> | Average Rectified Current .375 " lead length @ T <sub>A</sub> = 90°C   | 1.0          | Α          |
| I <sub>FSM</sub>   | Non-repetitive Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method) | 25           | А          |
| P <sub>D</sub>     | Total Device Dissipation Derate above 25°C   | 1.25<br>12.5 | W<br>mW/°C |
| $R_{\theta JA}$    | Thermal Resistance, Junction to Ambient  | 80           | °C/W       |
| T <sub>stg</sub>   | Storage Temperature Range  | -65 to +125  | °C         |
| TJ                 | Operating Junction Temperature   | -65 to +125  | °C         |

<sup>\*</sup>These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

### Electrical Characteristics 1

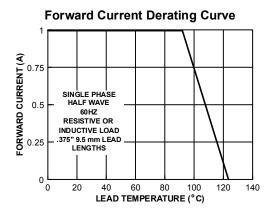
T<sub>A</sub> = 25°C unless otherwise noted

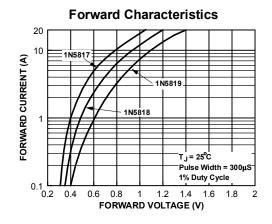
| Symbol           | Parameter  |            | Device     |            |          |
|------------------|--|------------|------------|------------|----------|
|                  |  | 1N5817     | 1N5818     | 1N5819     |          |
| $V_{RRM}$        | Maximum Peak Repetitive Reverse Voltage  |            | 30         | 40         | V        |
| V <sub>RMS</sub> | Maximum RMS Voltage  |            | 21         | 28         | V        |
| V <sub>R</sub>   | DC Reverse Voltage (Rated V <sub>R</sub> )   |            | 30         | 40         | V        |
| I <sub>RM</sub>  | Maximum Instantaneous Reverse Current $T_A = 25^{\circ}C$ 0.5<br>@ rated $V_R$ $T_A = 100^{\circ}C$ 10 |            | mA<br>mA   |            |          |
| V <sub>FM</sub>  | Maximum Instantaneous Forward Voltage @ 1.0 A @ 3.0 A  | 450<br>750 | 550<br>875 | 600<br>900 | mV<br>mV |
| С                | Typical Junction Capacitance $V_R = 4.0 \text{ V}, f = 1.0 \text{ MHz}$                                |            |            | pF         |          |

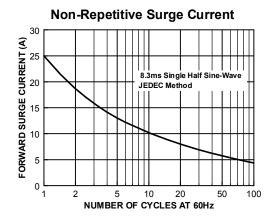
### **Schottky Barrier Rectifiers**

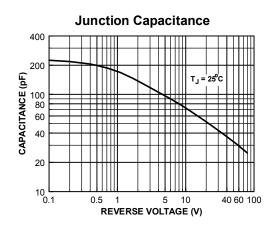
(continued)

## **Typical Characteristics**









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|--------------------------|---------------------------|---|
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