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1N5817 - 1N5819
Schottky Barrier Rectifier

Features
• 1.0 ampere operation at $T_A = 90\,^\circ C$ with no thermal runaway.
• For use in low voltage, high frequency inverters free wheeling, and polarity protection applications.

Absolute Maximum Ratings*  $T_A = 25\,^\circ C$ unless otherwise noted

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_{RRM}$</td>
<td>Maximum Repetitive Reverse Voltage</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>$I_{F(AV)}$</td>
<td>Average Rectified Forward Current 0.375&quot; lead length @ $T_A = 90,^\circ C$</td>
<td>1.0</td>
<td>A</td>
</tr>
<tr>
<td>$I_{FSM}$</td>
<td>Non-repetitive Peak Surge Current 8.3 ms Single Half-Sine Wave</td>
<td>25</td>
<td>A</td>
</tr>
<tr>
<td>$T_J, T_{STG}$</td>
<td>Operating Junction and Storage Temperature</td>
<td>-65 to +125</td>
<td>°C</td>
</tr>
</tbody>
</table>

* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>$P_D$</td>
<td>Power Dissipation</td>
<td>1.25</td>
<td>W</td>
</tr>
<tr>
<td>$R_{JUA}$</td>
<td>Maximum Thermal Resistance, Junction to Ambient</td>
<td>100</td>
<td>°C/W</td>
</tr>
<tr>
<td>$R_{JUC}$</td>
<td>Maximum Thermal Resistance, Junction to Case</td>
<td>45</td>
<td>°C/W</td>
</tr>
</tbody>
</table>

* Mounted on Cu-pad Size 5mm x 5mm on PCB

Electrical Characteristics (per diode)

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_F$</td>
<td>Forward Voltage @ 1.0 A</td>
<td>450</td>
<td>550</td>
</tr>
<tr>
<td></td>
<td></td>
<td>750</td>
<td>875</td>
</tr>
<tr>
<td>$I_R$</td>
<td>Reverse Current @ rated $V_R$ $T_C = 25,^\circ C$ $T_C = 100,^\circ C$</td>
<td>0.5</td>
<td>10</td>
</tr>
<tr>
<td>$C_T$</td>
<td>Total Capacitance $V_R = 4.0, V$, $f = 1.0, MHz$</td>
<td>110</td>
<td>pF</td>
</tr>
</tbody>
</table>

* Pulse Test: Pulse Width=300μs, Duty Cycle=2%
Typical Performance Characteristics

Figure 1. Forward Current Derating Curve

Figure 2. Forward Voltage Characteristics

Figure 3. Non-Repetitive Surge Current

Figure 4. Total Capacitance

1N5817 - 1N5819 — Schottky Barrier Rectifier
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<th>Definition</th>
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