BAT54 / BAT54A / BAT54C / BAT54S
Schottky Diodes

Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Top Mark</th>
<th>Package</th>
<th>Packing Method</th>
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<tbody>
<tr>
<td>BAT54</td>
<td>L4P</td>
<td>SOT-23 3L</td>
<td>Tape and Reel</td>
</tr>
<tr>
<td>BAT54_D87Z</td>
<td>L4P</td>
<td>SOT-23 3L</td>
<td>Tape and Reel</td>
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<td>BAT54A</td>
<td>L42</td>
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<td>BAT54C</td>
<td>L43</td>
<td>SOT-23 3L</td>
<td>Tape and Reel</td>
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<td>BAT54S</td>
<td>L44</td>
<td>SOT-23 3L</td>
<td>Tape and Reel</td>
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<td>L44</td>
<td>SOT-23 3L</td>
<td>Tape and Reel</td>
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Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at $T_A = 25°C$ unless otherwise noted.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Value</th>
<th>Unit</th>
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</thead>
<tbody>
<tr>
<td>$V_{RRM}$</td>
<td>Maximum Repetitive Reverse Voltage</td>
<td>30</td>
<td>V</td>
</tr>
<tr>
<td>$I_{F(AV)}$</td>
<td>Average Rectified Forward Current</td>
<td>200</td>
<td>mA</td>
</tr>
<tr>
<td>$I_{FSM}$</td>
<td>Non-Repetitive Peak Forward Surge Current</td>
<td>600</td>
<td>mA</td>
</tr>
<tr>
<td>$T_{STG}$</td>
<td>Storage Temperature Range</td>
<td>-55 to +150</td>
<td>°C</td>
</tr>
<tr>
<td>$T_J$</td>
<td>Operating Junction Temperature</td>
<td>-55 to +150</td>
<td>°C</td>
</tr>
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</table>
## Thermal Characteristics

Values are at $T_A = 25^\circ C$ unless otherwise noted.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$P_D$</td>
<td>Power Dissipation</td>
<td>290</td>
<td>mW</td>
</tr>
<tr>
<td>$R_{thJA}$</td>
<td>Thermal Resistance, Junction-to-Ambient</td>
<td>430</td>
<td>°C/W</td>
</tr>
</tbody>
</table>

## Electrical Characteristics

Values are at $T_A = 25^\circ C$ unless otherwise noted.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Conditions</th>
<th>Min.</th>
<th>Max.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_R$</td>
<td>Breakdown Voltage</td>
<td>$I_R = 10 \mu A$</td>
<td>30</td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>$V_F$</td>
<td>Forward Voltage</td>
<td>$I_F = 0.1 \ mA$</td>
<td>240</td>
<td></td>
<td>mV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$I_F = 1 \ mA$</td>
<td>320</td>
<td></td>
<td>mV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$I_F = 10 \ mA$</td>
<td>400</td>
<td></td>
<td>mV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$I_F = 30 \ mA$</td>
<td>500</td>
<td></td>
<td>mV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$I_F = 100 \ mA$</td>
<td>0.8</td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>$I_R$</td>
<td>Reverse Leakage</td>
<td>$V_R = 25 \ V$</td>
<td>2</td>
<td></td>
<td>\mu A</td>
</tr>
<tr>
<td>$C_T$</td>
<td>Total Capacitance</td>
<td>$V_R = 1 \ V, f = 1.0 \ MHz$</td>
<td>10</td>
<td></td>
<td>pF</td>
</tr>
<tr>
<td>$t_{rr}$</td>
<td>Reverse Recovery Time</td>
<td>$I_F = I_R = 10 \ mA, I_{RR} = 1.0 \ mA, R_L = 100 \Omega$</td>
<td>5.0</td>
<td></td>
<td>ns</td>
</tr>
</tbody>
</table>
Typical Performance Characteristics

**Figure 1. Forward Current vs. Forward Voltage**

**Figure 2. Reverse Current vs. Reverse Voltage**

**Figure 3. Total Capacitance vs. Reverse Voltage**
1.20 MAX

GAGE PLANE

0.23
0.08

0.20 MIN

(0.55)

SEATING PLANE

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<th>Product Status</th>
<th>Definition</th>
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<td>Advance Information</td>
<td>Formative / In Design</td>
<td>Datasheet contains the design specifications for product development. Specifying may change in any manner without notice.</td>
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<tr>
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