Features
- Rugged Construction
- Fully Passivated
- Low Leakage
- Available in Both Chip and Package Styles
- Screening per MIL-PRF-19500 and MIL-PRF-38534 Available

Description
The MNP0008 Series are silicon NIP diodes that features a fully passivated mesa construction for low leakage and reliability.

Electrical Specifications: \( T_C = +25°C \)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Test Conditions</th>
<th>Units</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voltage Breakdown</td>
<td>( I_R = 10 \mu A )</td>
<td>V</td>
<td>100</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Junction Capacitance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DIE Package (C12p)</td>
<td>( V_R = 10 \text{ V}, 1 \text{ MHz} )</td>
<td>pF</td>
<td>—</td>
<td>0.08</td>
<td>0.12</td>
</tr>
<tr>
<td>Total Capacitance Package Style</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ET47p</td>
<td></td>
<td></td>
<td></td>
<td>0.48</td>
<td>0.60</td>
</tr>
<tr>
<td>T54p</td>
<td></td>
<td></td>
<td></td>
<td>0.28</td>
<td>0.37</td>
</tr>
<tr>
<td>T55p</td>
<td></td>
<td></td>
<td></td>
<td>0.21</td>
<td>0.29</td>
</tr>
<tr>
<td>T89p</td>
<td></td>
<td></td>
<td></td>
<td>0.33</td>
<td>0.43</td>
</tr>
<tr>
<td>Series Resistance</td>
<td>( I_F = 10 \text{ mA}, 500 \text{ MHz} )</td>
<td>( \Omega )</td>
<td>—</td>
<td>2.0</td>
<td>2.5</td>
</tr>
<tr>
<td>Lifetime</td>
<td>( I_F = 10 \text{ mA}, I_R = 6 \text{ mA}, 50% )</td>
<td>ns</td>
<td>—</td>
<td>150</td>
<td>—</td>
</tr>
<tr>
<td>I Layer</td>
<td></td>
<td>( \mu m )</td>
<td>—</td>
<td>10</td>
<td>—</td>
</tr>
</tbody>
</table>

Absolute Maximum Ratings\(^1,2\)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Absolute Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reverse Voltage</td>
<td>100 V</td>
</tr>
<tr>
<td>Thermal Resistance</td>
<td>+50°C/W</td>
</tr>
<tr>
<td>Operating &amp; Storage Temperature</td>
<td>-65°C to +150°C</td>
</tr>
</tbody>
</table>

1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. MACOM does not recommend sustained operation near these survivability limits.
Silicon NIP Diode

Outline Drawings

**T54 / T54p**

- 86 [2.184] Dia.
- 78 [1.981]
- 44 [1.118]
- 34 [0.864]
- 48 [1.219]

- 12 [0.395]
- 10 [0.254]

Cathode (T54)
Anode (T54p)

**T55 / T55p**

- 0.045 [1.397]
- 0.055 [1.143]

**T89 / T89p**

- 124 [3.150]
- 110 [3.023]
- 27 [0.886] max.
- 80 [2.032] dia. nom.
- 11 [0.279] max.

- 212 [5.385]
- 138 [3.525]
- 126 [3.200]

Cathode (T89)
Anode (T89p)

- 3–48 UNC–2A

mils (mm)
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