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: $T_C = +25^\circ\text{C}$

<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>$V_R = 10 \text{ V}, 1 \text{ MHz}$</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>$V_R = 10 \text{ V}, 1 \text{ MHz}$</td>
<td>pF</td>
<td>0.48</td>
<td>0.28</td>
<td>0.60</td>
</tr>
<tr>
<td>T54p</td>
<td></td>
<td></td>
<td>0.21</td>
<td>0.29</td>
<td>0.37</td>
</tr>
<tr>
<td>T55p</td>
<td></td>
<td></td>
<td>0.33</td>
<td>0.29</td>
<td>0.43</td>
</tr>
<tr>
<td>T89p</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></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>$+50^\circ\text{C}/\text{W}$</td>
</tr>
<tr>
<td>Operating &amp; Storage Temperature</td>
<td>$-65^\circ\text{C} \text{ to } +150^\circ\text{C}$</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.
Outline Drawings

C11/C12

Top contact is Anode except for MSS20,000 and MSS30,000 series diodes

ET47

1 = ANODE (ET47)
CATHODE (ET47P)
2 = ANODE (ET47)
CATHODE (ET47P)
Outline Drawings

**T54 / T54p**

- Diameter: 86 [2.184] Dia, 78 [1.981] mils (mm)
- Body: 44 [1.118], 34 [0.864]
- Cathode (T54), Anode (T54p)

**T55 / T55p**

- Diameter: 0.045 [1.397], 0.055 [1.143]

**T89 / T89p**

- Max: 27 [0.886], 11 [0.279]
- Body: 138 [3.525], 126 [3.200]
- Thread: 3-48 UNC-2A

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