MNP0008

Silicon NIP Diode

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 feature a fully passivated mesa construction for low leakage and reliability.

Electrical Specifications: $T_C = +25^\circ$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 DIE Package (C12p)</td>
<td>$V_R = 10 V, 1 MHz$</td>
<td>pF</td>
<td>—</td>
<td>0.08</td>
<td>0.12</td>
</tr>
<tr>
<td>Total Capacitance Package Style:</td>
<td>$V_R = 10 V, 1 MHz$</td>
<td>pF</td>
<td>—</td>
<td>0.48</td>
<td>0.60</td>
</tr>
<tr>
<td>ET47p</td>
<td></td>
<td></td>
<td>0.28</td>
<td>0.37</td>
<td></td>
</tr>
<tr>
<td>T54p</td>
<td></td>
<td></td>
<td>0.21</td>
<td>0.29</td>
<td></td>
</tr>
<tr>
<td>T55p</td>
<td></td>
<td></td>
<td>0.33</td>
<td>0.43</td>
<td></td>
</tr>
<tr>
<td>T89p</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Series Resistance</td>
<td>$I_F = 10 mA, 500 MHz$</td>
<td>Ω</td>
<td>—</td>
<td>2.0</td>
<td>2.5</td>
</tr>
<tr>
<td>Lifetime</td>
<td>$I_F = 10 mA, I_R = 6 mA, 50%$</td>
<td>ns</td>
<td>—</td>
<td>150</td>
<td>—</td>
</tr>
<tr>
<td>I Layer</td>
<td>—</td>
<td>µm</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.

MACOM Technology Solutions Inc. (MACOM) and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice. Visit www.macom.com for additional data sheets and product information.

For further information and support please visit: https://www.macom.com/support

DC-0014084
Outline Drawings

**C11/C12**

Top contact is Anode except for MSS20,000 and MSS36,000 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]
- Ceramic Body: 44 [1.118]
- Anode (T54p): 34 [0.864]

**T55 / T55p**
- Diameter: 0.045 [1.397], 0.055 [1.143]
- Ceramic Body: 0.045 [1.397], 0.055 [1.295]

**T89 / T89p**
- Diameter: 124 [3.150], 110 [3.023]
- Diameter Nom.: 80 [2.032]
- Anode (T89p): 11 [0.279] max.
- Cathode (T89): 138 [3.525], 126 [3.200]
- 3-48 UNC-2A

MACOM Technology Solutions Inc. (MACOM) and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice.
Visit www.macom.com for additional data sheets and product information.

For further information and support please visit:
https://www.macom.com/support

DC-0014084