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 MNP0010 is a silicon NIP diode that features 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>150</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: ET47p</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>T54p</td>
<td></td>
<td></td>
<td>0.28</td>
<td>0.37</td>
<td></td>
</tr>
<tr>
<td>T55p</td>
<td></td>
<td></td>
<td>0.21</td>
<td>0.29</td>
<td></td>
</tr>
<tr>
<td>T89p</td>
<td></td>
<td></td>
<td>0.33</td>
<td>0.43</td>
<td></td>
</tr>
<tr>
<td>Series Resistance</td>
<td>$I_F = 10 , mA, , 500 , MHz$</td>
<td>$\Omega$</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>300</td>
<td>—</td>
</tr>
<tr>
<td>I Layer</td>
<td>—</td>
<td>$\mu m$</td>
<td>—</td>
<td>20</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>150 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.
Outline Drawings

C11/C12

Dimensions in mils [mm]

Top contact is Anode except for MSS20,000 and MSS36,000 series diodes

ET47

Dimensions in inches [mm]

1 = ANODE (ET47)
CATHODE (ET47P)
2 = ANODE (ET47)
CATHODE (ET47P)
Silicon NIP Diode

Outline Drawings

**T54 / T54p**

- **Cathode (T54)**
- **Anode (T54p)**
- **Ceramic Body**

---

**T55 / T55p**

- **Cathode (T55)**
- **Anode (T55p)**

---

**T89 / T89p**

- **Cathode (T89)**
- **Anode (T89p)**

Visit www.macom.com for additional data sheets and product information.

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