MADS-003000-1292 Series

Surface Mount Schottky Dual Crossover Quad

Features
- Designed for High Volume Applications
- Dual Crossover Quad Configuration
- Lead Free and RoHS* Compliant with 260°C Reflow Capability
- 100% Matte Tin Plating
- Available in SOT-26 (ODS-1292)
- Tape and Reel Deliverable

Description
M/A-COM’s MADS-003000-1292LT and MADS-003000-1292HT are high performance silicon Schottky dual crossover quads. These parts are usable for a variety of mixer applications. The closely matched junctions minimize variation in capacitance, forward voltage and dynamic resistance within the four diodes in the quad. These diodes are available in a small profile surface mount package SOT-26 (ODS-1292). They are available in tape and reel for automatic pick and place assembly.

Associated Application Note
M538 - Surface Mount Instructions

Ordering Information

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>MADS-003000-1292LT</td>
<td>Tape and Reel</td>
</tr>
<tr>
<td>MADS-003000-1292HT</td>
<td>Tape and Reel</td>
</tr>
</tbody>
</table>


ADVANCED: Data Sheets contain information regarding a product M/A-COM is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

PRELIMINARY: Data Sheets contain information regarding a product M/A-COM has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

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• Europe Tel: 44.1908.574.200 / Fax: 44.1908.574.300
• Asia/Pacific Tel: 81.44.844.8296 / Fax: 81.44.844.8298
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**Surface Mount Schottky Dual Crossover Quad**

**M/A-COM Products**

**Rev. V3**

**MADS-003000-1292 Series**

**Electrical Specifications @ +25°C**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Forward Voltage 1</th>
<th>Junction Capacitance 2</th>
<th>Dynamic Resistance 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$V_f$ Min. (mV)</td>
<td>$V_f$ Max. (mV)</td>
<td>$C_j$ Typical (pF)</td>
</tr>
<tr>
<td>MADS-003000-1292HT</td>
<td>515</td>
<td>600</td>
<td>.5</td>
</tr>
<tr>
<td>MADS-003000-1292LT</td>
<td>200</td>
<td>245</td>
<td>.5</td>
</tr>
</tbody>
</table>

1. Forward voltage is measured at $I_f = 1$ mA.
2. $C_j$ is measured at $V_r = 0$ volts and $f = 1$ MHz.
3. $R_d$ is measured @ $I_f = 9.5 - 10.5$ mA.

**Absolute Maximum Ratings @ 25°C 4,5**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Absolute Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature</td>
<td>-65°C to +125°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-65°C to +125°C</td>
</tr>
<tr>
<td>Junction Temperature</td>
<td>+150°C</td>
</tr>
<tr>
<td>RF Incident Power (CW)</td>
<td>75 mW</td>
</tr>
<tr>
<td>Soldering Temperature</td>
<td>+260°C</td>
</tr>
</tbody>
</table>

4. Exceeding these limits may cause permanent damage.
5. ESD Precautions - Schottky diodes are ESD sensitive and can be damaged by static electricity. Proper ESD techniques must be used when handling these devices.
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