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>

MADS-003000-1292 Series

Surface Mount Schottky Dual Crossover Quad

Electrical Specifications @ +25°C

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Forward Voltage</th>
<th>Junction Capacitance</th>
<th>Dynamic Resistance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$V_f$ Min. (mV)</td>
<td>$V_f$ Max. (mV)</td>
<td>Delta $V_f$ Max. (mV)</td>
</tr>
<tr>
<td>MADS-003000-1292HT</td>
<td>515</td>
<td>600</td>
<td>10</td>
</tr>
<tr>
<td>MADS-003000-1292LT</td>
<td>200</td>
<td>245</td>
<td>10</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

<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.
### MADS-003000-1292 Series

**Surface Mount Schottky Dual Crossover Quad**

**M/A-COM Products**

**Rev. V3**

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**Package Outline (SOT-26)**

**ODS-1292**

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### Package Outline (SOT-26)

**ODS-1292**

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**Notes:**

1. Reference JEDEC No. 174 AB for additional dimensional and tolerance information.
3. All dimensions shown in inches/1000.

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

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