MABA-009250-CT0068

1:2 Step Up Flux Coupled Balun Transformer
3 - 300 MHz

Features
- 1:2 Impedance
- Surface Mount
- Available on Tape & Reel
- 260° Reflow Compatible
- RoHS Compliant and Pb Free

Description
MABA-009250-CT0068 is a RoHS compliant 1:2 RF transformer in a low cost, surface mount package. Typical applications include single to balanced mode conversion and impedance matching.

The MABA-009250-CT0068 is available in a SM-22 surface mount package and is designed to be utilized in both RoHS and standard reflow profiles. Parts are packaged in tape & reel.

Electrical Specifications: Freq. = 3 - 300 MHz, T_A = 25°C, Z_0 = 50 Ω, P_IN = 0 dBm

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impedance Ratio</td>
<td>ratio</td>
<td>—</td>
<td>2:1</td>
<td>—</td>
</tr>
<tr>
<td>Insertion Loss</td>
<td>dB</td>
<td>—</td>
<td>0.7</td>
<td>1.6</td>
</tr>
<tr>
<td>Amplitude Balance</td>
<td>dB</td>
<td>—</td>
<td>0.4</td>
<td>±1.2</td>
</tr>
<tr>
<td>Phase Balance</td>
<td>°</td>
<td>—</td>
<td>—</td>
<td>±2.0</td>
</tr>
</tbody>
</table>

Pin Configuration

<table>
<thead>
<tr>
<th>Pin #</th>
<th>Function</th>
<th>Pin #</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Secondary Dot</td>
<td>4</td>
<td>Primary</td>
</tr>
<tr>
<td>2</td>
<td>Centre Tap</td>
<td>5</td>
<td>Primary Dot</td>
</tr>
<tr>
<td>3</td>
<td>Secondary</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MABA-009250-CT0068</td>
<td>Tape &amp; Reel</td>
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</tbody>
</table>

Absolute Maximum Ratings

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Absolute Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input RF Power</td>
<td>250 mW</td>
</tr>
<tr>
<td>DC Current</td>
<td>240 mA</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40°C to +85°C</td>
</tr>
</tbody>
</table>

1. Reference Application Note M513 for reel size information.
2. Exceeding any one or combination of these limits may cause permanent damage to this device.
3. MACOM does not recommend sustained operation near these survivability limits.
Typical Performance Curves

4. Full temperature plots available on request
Application Schematic

Outline Drawing

Recommended Footprint

Carrier Tape Orientation

Tape & Reel Information

5. Dimensions in mm
6. Tolerance: ±0.2 mm unless otherwise noted
7. Model number and lot code are printed on the reel
8. Plating finish: ENIG

Parameter | Units | Value
--- | --- | ---
Qty per reel | - | 2000
Reel Size | mm | 330
Tape Width | mm | 12.00
Pitch | mm | 8.00
Ao | mm | 4.00
Bo | mm | 4.00
Ko | mm | 2.90
Orientation | - | F5

Reference Application Note ANI-019 for orientation
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