MABA-007327-CT1A40

1:1 Transmission Line Transformer
4.5 - 3000 MHz

Features
- 1:1 Impedance Ratio
- Surface Mount Package
- Available on Tape and Reel
- RoHS Compliant and Lead Free
- 260°C Reflow Compatible
- Excellent Temperature Stability
- Excellent Amplitude and Phase Balance
- Can be used in both 50 Ω & 75 Ω systems

Description
The MABA-007327-CT1A40 is a 1:1 RF transmission line transformer in a surface mount package.

Ideally suited for broadband CATV applications.

Electrical Specifications: $T_A = 25°C$, $Z_0 = 75 \, \Omega$, $P_{IN} = 0 \, \text{dBm}$

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Frequency</th>
<th>Units</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insertion Loss 1</td>
<td>4.5 - 1000 MHz</td>
<td>dB</td>
<td>—</td>
<td>0.8</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>1000 - 2000 MHz</td>
<td></td>
<td>1.6</td>
<td>2.0</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>2000 - 3000 MHz</td>
<td></td>
<td>2.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amplitude Balance</td>
<td>Nominal 0 dB, 4.5 - 3000 MHz</td>
<td>dB</td>
<td>—</td>
<td>±0.50</td>
<td>±1.0</td>
</tr>
<tr>
<td>Phase Balance</td>
<td>Nominal 180º, 4.5 - 3000 MHz</td>
<td></td>
<td>±10.0</td>
<td>±20.0</td>
<td></td>
</tr>
</tbody>
</table>

Ordering Information

<table>
<thead>
<tr>
<th>Part number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MABA-007327-CT1A40</td>
<td>2000 piece reel</td>
</tr>
<tr>
<td>MABA-007327-CT1ATB</td>
<td>Customer Test Board</td>
</tr>
</tbody>
</table>

Recommended Maximum Ratings\(^1,2\)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input power</td>
<td>250 mW</td>
</tr>
<tr>
<td>DC current</td>
<td>30 mA</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40°C to +85°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-55°C to +100°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.
MABA-007327-CT1A40

1:1 Transmission Line Transformer
4.5 - 3000 MHz

Rev. V3

Typical Performance Curves: $T_A = 25^\circ C$, $Z_0 = 75 \, \Omega$, $P_{IN} = 0 \, \text{dBm}$

Insertion Loss

Return Loss: Input

Amplitude Balance

Phase Balance

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Application Circuit

Outline Drawing

Reel Orientation

Tape & Reel Information

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