MABA-007748-CT1160

1:1 RF Transformer
5-1200MHz

Features
- Key Surface Mount
- 1:1 RF Transformer
- 260°C Reflow Compatible
- RoHS Compliant and Pb Free
- RoHS version of ETC1-1T-75
- Available on Tape and Reel

Description
M/A-COM's MABA-007748-CT1160 is a 1:1 RF Transformer in a low cost, surface mount package. Ideally suited for high volume CATV/Broadband applications.

Functional Schematic

Pin Configuration

<table>
<thead>
<tr>
<th>Pin No.</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Secondary (Dot)</td>
</tr>
<tr>
<td>2</td>
<td>Not connected</td>
</tr>
<tr>
<td>3</td>
<td>Secondary</td>
</tr>
<tr>
<td>4</td>
<td>Primary</td>
</tr>
<tr>
<td>5</td>
<td>Primary (Dot)</td>
</tr>
</tbody>
</table>

Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>MABA-007748-CT1160</td>
<td>2000 piece reel</td>
</tr>
<tr>
<td>MABA-007748-CT11TB</td>
<td>Sample Board</td>
</tr>
</tbody>
</table>

Case Style: SM-22

Dimensions in inches [mm] Tolerance: .xx ± .02, .xxx ± .010
1:1 RF Transformer
5-1200MHz

Electrical Specifications: Freq. = 5-1200MHz, \( T_A = +25^\circ \text{C}, Z_0 = 75\Omega \)

<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>Insertion Loss</td>
<td>5 - 40 MHz</td>
<td>dB</td>
<td>-</td>
<td>0.27</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td>40 - 600 MHz</td>
<td>dB</td>
<td>-</td>
<td>0.32</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>600 - 1000 MHz</td>
<td>dB</td>
<td>-</td>
<td>0.57</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>1000 - 1200 MHz</td>
<td>dB</td>
<td>-</td>
<td>1.62</td>
<td>3.0</td>
</tr>
<tr>
<td>Amplitude Balance</td>
<td>5 - 1200 MHz</td>
<td>dB</td>
<td>-</td>
<td>0.36</td>
<td>1.0</td>
</tr>
<tr>
<td>Phase Balance</td>
<td>5 - 1000 MHz</td>
<td>°</td>
<td>-</td>
<td>0.58</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>1000 - 1200 MHz</td>
<td>°</td>
<td>-</td>
<td>9.15</td>
<td>20</td>
</tr>
<tr>
<td>Input Return Loss</td>
<td>5 - 40 MHz</td>
<td>dB</td>
<td>17</td>
<td>27</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>40 - 200 MHz</td>
<td>dB</td>
<td>22</td>
<td>29</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>200 - 400 MHz</td>
<td>dB</td>
<td>15</td>
<td>22</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>400 - 600 MHz</td>
<td>dB</td>
<td>10</td>
<td>17</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>600 - 1200 MHz</td>
<td>dB</td>
<td>6</td>
<td>11</td>
<td>-</td>
</tr>
</tbody>
</table>

Absolute Maximum Ratings

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Absolute Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF 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>-40°C to +85°C</td>
</tr>
</tbody>
</table>

Recommended PCB Configuration
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For further information and support please visit: https://www.macom.com/support
1:1 RF Transformer
5-1200MHz

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