MABA-010726-CT1007

1:1 Transformer, Transmission Line with Tertiary Winding
45 - 1200 MHz

Features
- 1:1 Impedance Ratio
- Surface Mount Package
- Excellent Temperature Stability
- Can be Used on both 50 Ω & 75 Ω Systems
- RoHS Compliant and Pb Free
- 260°C Reflow Compatible
- Available on Tape and Reel
- Suitable for all CATV, Broadband and FTTx Applications

Description
The MABA-010726 is a 1:1 transformer with tertiary winding in a surface mount package.

Ideally suited for CATV Broadband applications.

Electrical Specifications: Freq. = 45 - 1200 MHz, T_A = +25°C, Z_0 = 75 Ω, P_IN = 0 dBm

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Frequency Test Conditions (MHz)</th>
<th>Units</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impedance Ratio</td>
<td>—</td>
<td>ratio</td>
<td>—</td>
<td>1:1</td>
<td>—</td>
</tr>
<tr>
<td>Insertion Loss (pin 1 - pin 4)</td>
<td>45 - 100, 100 - 600, 600 - 1200</td>
<td>dB</td>
<td>—</td>
<td>0.50</td>
<td>0.8</td>
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<tr>
<td>Insertion Loss (pin 1 - pin 3)</td>
<td>45 - 100, 100 - 600, 600 - 1200</td>
<td>dB</td>
<td>—</td>
<td>0.70</td>
<td>0.7</td>
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<tr>
<td>Amplitude Balance</td>
<td>45 - 600, 600 - 1200</td>
<td>dB</td>
<td>0.2</td>
<td>±0.8</td>
<td>±0.8</td>
</tr>
<tr>
<td>Phase Balance</td>
<td>45 - 600, 600 - 1200</td>
<td>°</td>
<td>3</td>
<td>±8</td>
<td></td>
</tr>
<tr>
<td>Input Return Loss (pin 1)</td>
<td>45 - 150, 150 - 600, 600 - 1200</td>
<td>dB</td>
<td>20</td>
<td>33</td>
<td></td>
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</tbody>
</table>

Ordering Information
- MABA-010726-CT1007 2000 piece reel
- MABA-010726-CT10TB Customer Test Board

Recommended Maximum Ratings
- Input RF Power: 250 mW
- DC Current: 200 mA
- Operating Temperature: -40°C to +85°C
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Typical Performance Curves

MABA-010726-CT1007 insertion_loss_pin_1_4

MABA-010726-CT1007 insertion_loss_pin_1_3

MABA-010726-CT1007 amplitude_balance

MABA-010726-CT1007 phase_balance

MABA-010726-CT1007 input_return_loss_pin_1

Full temperature plots available on request

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DC-0001517
1:1 Transformer, Transmission Line with Tertiary Winding
45 - 1200 MHz

Application Circuit

Recommended Footprint

Outline Drawing

Tape & Reel Information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qty per reel</td>
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<td>2000</td>
</tr>
<tr>
<td>Reel size</td>
<td>mm</td>
<td>330</td>
</tr>
<tr>
<td>Tape width (W)</td>
<td>mm</td>
<td>12.00</td>
</tr>
<tr>
<td>Pitch (P1)</td>
<td>mm</td>
<td>8.00</td>
</tr>
<tr>
<td>A₀</td>
<td>mm</td>
<td>3.5</td>
</tr>
<tr>
<td>B₀</td>
<td>mm</td>
<td>4.3</td>
</tr>
<tr>
<td>K₀</td>
<td>mm</td>
<td>4.2</td>
</tr>
<tr>
<td>Orientation</td>
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<td>F48</td>
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</table>

Reference Application note ANI-019 for orientation

1. Dimensions in mm.
2. Tolerance: ±0.2 mm unless otherwise noted.
3. Model number and lot code are printed on the reel.
4. Plating finish: CuSn6
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