MABACT0061

Transformer, 4:1
5 - 1200 MHz

Features
- 4:1 Impedance Ratio (unbalanced to unbalanced)
- Surface Mount Package
- Excellent Temperature Stability
- RoHS Compliant and Pb Free
- 260°C Reflow Compatible
- Available on Tape and Reel
- Suitable for all CATV, Broadband and FTTx Applications

Description
The MABACT0061 is a 4:1 auto transformer in a surface mount package.

Ideally suited for high volume CATV Broadband applications.

Electrical Specifications: Freq. = 5 - 1200 MHz, \( T_A = +25^\circ\text{C} \), \( Z_0 = 50 \, \Omega \), \( P_{IN} = 0 \, \text{dBm} \)

<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>4:1</td>
<td>—</td>
</tr>
<tr>
<td>Insertion Loss</td>
<td>5 - 600 600 - 1000 1000 - 1200</td>
<td>dB</td>
<td>—</td>
<td>1.2</td>
<td>1.5</td>
</tr>
<tr>
<td>Input Return Loss</td>
<td>5 - 20 20 - 120 120 - 1000 1000 - 1200</td>
<td>dB</td>
<td>9</td>
<td>11</td>
<td>—</td>
</tr>
</tbody>
</table>

Pin Configuration

<table>
<thead>
<tr>
<th>Pin #</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Secondary Dot (e.g. 200 Ohms)</td>
</tr>
<tr>
<td>2, 3</td>
<td>Not connected (ground)</td>
</tr>
<tr>
<td>4</td>
<td>Primary &amp; Secondary (ground)</td>
</tr>
<tr>
<td>5</td>
<td>Primary Dot (e.g. 50 Ohms)</td>
</tr>
</tbody>
</table>

Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>MABACT0061</td>
<td>2000 piece reel</td>
</tr>
</tbody>
</table>

Recommended Maximum Ratings

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF Input 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>
<tr>
<td>Storage Temperature</td>
<td>-55°C to +100°C</td>
</tr>
</tbody>
</table>

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Typical Performance Curves

*Insertion Loss (Pin 5 to Pin 1)*

-2.6
-2.0
-1.5
-1.0
-0.5
0.0
5 204 403 603 802 1001 1200
Frequency (MHz)

*Input Return Loss*

-16
-12
-8
-4
0
5 204 403 603 802 1001 1200
(dB)
Frequency (MHz)

Full temperature plots available on request.

**Recommended PCB Configuration**

![PCB Configuration Diagram]

**Outline Drawing (SM-22)**

![Outline Drawing Diagram]

Dimensions in inches [mm] Tolerance: .xx ± .02, .xxx ± .010

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