MABACT0068

1:2 Flux Coupled Transformer
5 - 200 MHz

Features
- Surface Mount
- 1:2 Impedance
- Excellent amplitude and phase Balance
- Available on Tape and Reel
- RoHS Compliant and Pb Free
- 260°C Reflow Compatible

Description
The MABACT0068 is a 1:2 RF Flux coupled balun transformer in a low cost surface mount package. Ideally suited for all CATV Broadband and FTTx applications. Suitable for use in 50 and 75 Ohm systems.

Electrical Specifications: Freq. = 5 - 200 MHz, $T_A = 25°C$, $Z_0 = 75$ Ω, $P_{in} = 0$ dBm

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Conditions</th>
<th>Units</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impedance Ratio</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1:2</td>
<td>—</td>
</tr>
<tr>
<td>Insertion Loss</td>
<td>5 - 65 MHz, 65 - 200 MHz</td>
<td>dB</td>
<td>0.3</td>
<td>0.4</td>
<td>0.5</td>
</tr>
<tr>
<td>Amplitude Balance</td>
<td>5 - 65 MHz</td>
<td>dB</td>
<td>—</td>
<td>0.02</td>
<td>±0.15</td>
</tr>
<tr>
<td>Phase Balance (ref value 180°)</td>
<td>5 - 50 MHz</td>
<td>dB</td>
<td>—</td>
<td>0.0</td>
<td>±2.0</td>
</tr>
<tr>
<td>Input Return Loss</td>
<td>5 - 200 MHz</td>
<td>dB</td>
<td>18</td>
<td>22</td>
<td>—</td>
</tr>
</tbody>
</table>

Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MABACT0068</td>
<td>2000 piece reel</td>
</tr>
</tbody>
</table>

1. All sample boards include 5 loose parts.

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>
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For further information and support please visit: https://www.macom.com/support
Typical Performance Curves: $T_A = 25^\circ C$, $Z_0 = 75 \, \Omega$, $P_{IN} = 0 \, \text{dBm}$

- **Insertion Loss 1 (through pin 5 to pin 1)**
- **Insertion Loss 2 (coupled pin 5 to pin 3)**
- **Amplitude Unbalance**
- **Phase Balance**
- **Input Return Loss (Pin5)**

Full temperature plots available on request
1:2 Flux Coupled Transformer
5 - 200 MHz

Part Outline Drawing

PCB layout

Application Schematics

Carrier Tape Orientation

Tape & Reel Information

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