MABA-007493-CF4160

4:1 Flux Coupled Step-up Transformer
1-350MHz

Features
- Surface Mount
- 4:1 Impedance
- 260°C Reflow Compatible
- RoHS* Compliant
- RoHS version of ETC4-1 and MABACT0011.
- Available on Tape and Reel. Reel quantity 2000

Description
MABA-007493-CF4160 is a 4:1 flux coupled step-up transformer in a low cost, surface mount package. Ideally suited for high volume CATV/Broadband applications.

Pin Configuration

<table>
<thead>
<tr>
<th>Pin No.</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Secondary</td>
</tr>
<tr>
<td>2</td>
<td>Secondary CT</td>
</tr>
<tr>
<td>3</td>
<td>Secondary Dot</td>
</tr>
<tr>
<td>4</td>
<td>Primary</td>
</tr>
<tr>
<td>5</td>
<td>Primary Dot</td>
</tr>
</tbody>
</table>

Schematic

Case Style: SM-22

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

Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>MABA-007493-CF4160TR</td>
<td>2000 piece reel</td>
</tr>
<tr>
<td>MABA-007493-CF411TB</td>
<td>Customer test board</td>
</tr>
</tbody>
</table>

Note: Reference Application Note M513 for reel size information.

MABA-007493-CF4160

4:1 Flux Coupled Step-up Transformer
1-350MHz

Rev. V2

Electrical Specifications: $T_A = 25^\circ C$, $Z_0 = 50\Omega$

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Test Conditions</th>
<th>Units</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Mean (x)</th>
<th>Sigma (x)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insertion Loss 1</td>
<td>5 - 100 MHz</td>
<td>dB</td>
<td>-</td>
<td>0.8</td>
<td>1.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>2 - 300 MHz</td>
<td>dB</td>
<td>-</td>
<td>1.6</td>
<td>2.0</td>
<td>1.21</td>
<td>0.032</td>
</tr>
<tr>
<td></td>
<td>1 - 350 MHz</td>
<td>dB</td>
<td>-</td>
<td>2.0</td>
<td>3.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Amplitude Unbalance</td>
<td>5 - 100 MHz</td>
<td>dB</td>
<td>-</td>
<td>-</td>
<td>±0.1</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>1 - 350 MHz</td>
<td>db</td>
<td>-</td>
<td>-</td>
<td>±0.5</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Phase Unbalance</td>
<td>5 - 100 MHz</td>
<td>°</td>
<td>-</td>
<td>-</td>
<td>±1.0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>1 - 350 MHz</td>
<td>°</td>
<td>-</td>
<td>-</td>
<td>±5.0</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Absolute Maximum Ratings $^{1,2}$

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Absolute Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF Power</td>
<td>250mW</td>
</tr>
<tr>
<td>DC current</td>
<td>30mA</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>

1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. M/A-COM does not recommend sustained operation near these survivability limits.

Recommended PCB Configuration
4:1 Flux Coupled Step-up Transformer
1-350MHz

Typical Performance Curves: $T_A = 25^\circ C$, $Z_0 = 50\Omega$

Insertion Loss

Amplitude Unbalance

Phase Balance

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