MABACT0063

1.5:1 Auto Transformer
5-1000MHz

Features
- Surface Mount
- 1.5:1 Impedance
- 260°C Reflow Compatible
- RoHS* Compliant
- Available on Tape and Reel.

Description
M/A-COM Technology Solutions MABACT0063 is a 1.5:1 Auto Transformer in a low cost, surface mount package. Ideally suited for high volume CATV/Broadband applications.

Schematic

Component Dimensions:

Dimensions in mm, Tolerance: .xx ± .2, .xxx ± .1
Drawing not to scale

Pin Configuration

<table>
<thead>
<tr>
<th>Pin No.</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Not Connected</td>
</tr>
<tr>
<td>2</td>
<td>Not Connected</td>
</tr>
<tr>
<td>3</td>
<td>Primary Dot (e.g. 75 Ohms)</td>
</tr>
<tr>
<td>4</td>
<td>Secondary Dot (e.g. 50 Ohms)</td>
</tr>
<tr>
<td>5</td>
<td>Primary and Secondary (Ground)</td>
</tr>
</tbody>
</table>


For further information and support please visit: https://www.macom.com/support
Electrical Specifications:  $T_A = 25^\circ\text{C}, Z_0 = 50\Omega$ \(^1\)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Test Conditions</th>
<th>Frequency</th>
<th>Units</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insertion Loss</td>
<td>-</td>
<td>5 - 1000 MHz</td>
<td>dB</td>
<td>-</td>
<td>0.5</td>
<td>1.0</td>
</tr>
<tr>
<td>Input Return Loss</td>
<td>-</td>
<td>5 - 500 MHz</td>
<td>dB</td>
<td>24</td>
<td>30</td>
<td>-</td>
</tr>
<tr>
<td>Input Return Loss</td>
<td>-</td>
<td>500 - 1000 MHz</td>
<td>dB</td>
<td>16</td>
<td>26</td>
<td>-</td>
</tr>
</tbody>
</table>

Recommended Maximum Ratings \(^{1,2}\)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Input Power</td>
<td>250mW</td>
</tr>
<tr>
<td>DC current</td>
<td>100mA</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>

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

Recommended PCB Configuration

Dimensions in mm, Tolerance: \(\pm .2, \pm .1\)
Drawing not to scale
Typical Performance Curves

**Insertion Loss: pin 4 to 3**

![Insertion Loss Graph]

**Input Return Loss: pin 4**

![Input Return Loss Graph]

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Tape Specification:

<table>
<thead>
<tr>
<th>Item</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ao</td>
<td>4.00mm +/-0.1mm</td>
</tr>
<tr>
<td>Bo</td>
<td>4.00mm +/-0.1mm</td>
</tr>
<tr>
<td>Ko</td>
<td>2.90mm +/-0.1mm</td>
</tr>
<tr>
<td>W</td>
<td>12.00mm +/-0.3mm</td>
</tr>
<tr>
<td>P1</td>
<td>8.00mm +/-0.1mm</td>
</tr>
</tbody>
</table>

Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>MABACT0063TR</td>
<td>2000 piece reel</td>
</tr>
</tbody>
</table>

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