MABA-010463-CA2A40

1:1.77 Transmission Line Transformer
20 - 1000 MHz

Features
- 1:1.77 Impedance Ratio
- Surface Mount Package
- Excellent Temperature Stability
- Can Be Used on 50 Ω & 75 Ω Systems
- Suitable for all CATV, Broadband and FTTx Applications
- RoHS Compliant & Lead Free
- 260°C Reflow Compatible
- Available on Tape & Reel

Description
The MABA-010463-CA2A40 is a 1:1.77 transmission line transformer in a surface mount package.

Ideally suited for all CATV Broadband and FTTx applications.

Electrical Specifications: Freq. = 20 - 1000 MHz, T_A = 25°C, Z_0 = 75 Ω, P_IN = 0 dBm

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Frequency (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>dB</td>
<td>—</td>
<td>1:1.77</td>
<td>—</td>
</tr>
<tr>
<td>Insertion Loss (pin 4 - 3)</td>
<td>20 - 500</td>
<td>dB</td>
<td>0.6</td>
<td>1.1</td>
<td>0.8</td>
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<tr>
<td></td>
<td>500 - 1000</td>
<td></td>
<td>1.1</td>
<td>1.2</td>
<td>—</td>
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<tr>
<td>Input Return Loss (pin 4)</td>
<td>20 - 150</td>
<td>dB</td>
<td>20</td>
<td>22</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>150 - 500</td>
<td></td>
<td>12</td>
<td>13</td>
<td>—</td>
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<tr>
<td></td>
<td>500 - 1000</td>
<td></td>
<td>8</td>
<td>9</td>
<td>—</td>
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</table>

Ordering Information

<table>
<thead>
<tr>
<th>Part #</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>MABA-010463-CA2A40</td>
<td>2000 piece reel</td>
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</table>

Recommended Maximum Ratings

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Input Power</td>
<td>250 mW</td>
</tr>
<tr>
<td>DC Current</td>
<td>200 mA</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40°C to +85°C</td>
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<tr>
<td>Storage Temperature</td>
<td>-55°C to +125°C</td>
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</tbody>
</table>
Typical Performance Curves: $T_A = 25^\circ C$, $Z_0 = 75$ Ω, $P_{IN} = 0$ dBm

**Insertion Loss: (Pin 4 to 3)**

![Insertion Loss Graph]

**Return Loss: (Pin 4)**

![Return Loss Graph]
MABA-010463-CA2A40

1:1.77 Transmission Line Transformer
20 - 1000 MHz

Application Circuit

PCB Layout

Outline Drawing

Tape & Reel Information

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Qty per reel</td>
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<td>2000</td>
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<tr>
<td>Reel Size</td>
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<td>Tape Width</td>
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<td>12.0</td>
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<tr>
<td>Pitch</td>
<td>mm</td>
<td>8.0</td>
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<tr>
<td>Ao</td>
<td>mm</td>
<td>4.0</td>
</tr>
<tr>
<td>Bo</td>
<td>mm</td>
<td>4.0</td>
</tr>
<tr>
<td>Ko</td>
<td>mm</td>
<td>2.9</td>
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<tr>
<td>Orientation</td>
<td>-</td>
<td>F5</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 printed on reel.
4. Plating finish: ENIG