MABA-010268-CT4160

1:4 Transmission Line Transformer
5 - 1200 MHz

Features
- 1:4 Impedance Ratio
- Surface Mount Package
- Excellent Temperature Stability
- Excellent Amplitude & Phase Balance
- Can Be Used In Both 50 Ω & 75 Ω Systems
- 260°C Reflow Compatible
- RoHS* Compliant & Lead Free
- Available on Tape & Reel

Description
The MABA-010268-CT4160 is a 1:4 RF transmission line transformer in a surface mount package.

Ideally suited for broadband CATV applications.

Electrical Specifications: \( T_A = 25°C \), \( Z_0 = 50 \Omega \), \( P_{IN} = 0 \) 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>
</table>
| Insertion Loss 1 (Pin 4 to Pin 1) | 5 - 50  
50 - 879  
879 - 1200 | dB | 0.5  
0.7  
1.2 | 0.7  
1.5  
2.0 | |
| Insertion Loss 2 (Pin 4 to Pin 3) | 5 - 50  
50 - 879  
879 - 1200 | dB | 0.5  
0.6  
0.8 | 0.7  
1.2  
1.6 | |
| Amplitude Balance (Nominal 0 dB) | 5 - 500  
500 - 1200 | dB | 0.05  
0.23 | ±0.6  
±2.1 | |
| Phase Balance (Nominal 180°) | 5 - 500  
500 - 1000  
1000 - 1200 | ° | 1.4  
2.8  
0.2 | ±6  
±8  
±22 | |
| Input Return Loss (Pin4) | 5 - 50  
50 - 500  
500 - 1200 | dB | 20  
15  
11 | 25  
23  
16 | — |

Ordering Information

<table>
<thead>
<tr>
<th>Part number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MABA-010268-CT4160</td>
<td>2000 piece reel</td>
</tr>
</tbody>
</table>

Recommended Maximum Ratings

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Power</td>
<td>&gt;28 dBm (631 mW)</td>
</tr>
<tr>
<td>DC Current, (tested @ 5 V)</td>
<td>&gt;600 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: $T_A = 25°C$, $Z_0 = 50 \, \Omega$, $P_{\text{IN}} = 0 \, \text{dBm}$

**Insertion Loss 1: (Pin 4 to 1)**

**Insertion Loss 2: (Pin 4 to 3)**

**Amplitude Balance**

**Phase Balance**

**Return Loss: Input (Pin 4)**
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5 - 1200 MHz

Application Circuit

Outline Drawing

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

Tape & Reel Information

<table>
<thead>
<tr>
<th>Item</th>
<th>Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ao</td>
<td>4.00 mm, +/-0.1 mm</td>
</tr>
<tr>
<td>Bo</td>
<td>4.30 mm, +/-0.1 mm</td>
</tr>
<tr>
<td>Ko</td>
<td>2.90 mm, +/-0.1 mm</td>
</tr>
<tr>
<td>W</td>
<td>12.0 mm, +/-0.3 mm</td>
</tr>
<tr>
<td>P1</td>
<td>8.00 mm, +/-0.1 mm</td>
</tr>
</tbody>
</table>