MAPDCT0029

2 Way 0° Power Divider
5-1000MHz

Features
- Surface Mount
- 2 Way 0 degree
- 260°C Reflow Compatible
- RoHS* Compliant
- Available on Tape and Reel.

Description
M/A-COM’s MAPDCT0029 is 2 way 0 degree RF power divider in a low cost, surface mount package. A 160 Ohm resistor included on the component. Ideally suited for high volume CATV/Broadband applications.

Functional Block Diagram

Pin Configuration

<table>
<thead>
<tr>
<th>Pin No.</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ground</td>
</tr>
<tr>
<td>2</td>
<td>Not connected (ground)</td>
</tr>
<tr>
<td>3</td>
<td>Output 2</td>
</tr>
<tr>
<td>4</td>
<td>Output 1</td>
</tr>
<tr>
<td>5</td>
<td>Not connected (ground)</td>
</tr>
<tr>
<td>6</td>
<td>Input</td>
</tr>
</tbody>
</table>

Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAPDCT0029TR</td>
<td>900 piece reel</td>
</tr>
</tbody>
</table>

Reference Application Note M513 for reel size information.

Absolute Maximum Ratings

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Absolute Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Input Power</td>
<td>1W</td>
</tr>
<tr>
<td>DC current</td>
<td>240mA</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 does not recommend sustained operation near these survivability limits.

Electrical Specifications:  \( T_A = 25°C, \ Z_0 = 75\Omega \)

<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 - 500 MHz</td>
<td>dB</td>
<td>-</td>
<td>0.5</td>
<td>0.7</td>
</tr>
<tr>
<td>Insertion Loss</td>
<td>-</td>
<td>500 - 1000 MHz</td>
<td>dB</td>
<td>-</td>
<td>0.7</td>
<td>1.4</td>
</tr>
<tr>
<td>Amplitude Unbalance (Nominal 0dB)</td>
<td>-</td>
<td>5 - 1000 MHz</td>
<td>dB</td>
<td>-</td>
<td>±0.28</td>
<td>±0.55</td>
</tr>
<tr>
<td>Phase Unbalance (Nominal 0°)</td>
<td>-</td>
<td>5 - 1000 MHz</td>
<td>°</td>
<td>-</td>
<td>±1.0</td>
<td>±3.0</td>
</tr>
<tr>
<td>Return Loss: Input</td>
<td>-</td>
<td>5 - 50 MHz</td>
<td>dB</td>
<td>24</td>
<td>35</td>
<td>-</td>
</tr>
<tr>
<td>Return Loss: Input</td>
<td>-</td>
<td>50 - 870 MHz</td>
<td>dB</td>
<td>14</td>
<td>26</td>
<td>-</td>
</tr>
<tr>
<td>Return Loss: Input</td>
<td>-</td>
<td>870 - 1000 MHz</td>
<td>dB</td>
<td>11</td>
<td>16</td>
<td>-</td>
</tr>
<tr>
<td>Isolation (between outputs)</td>
<td>-</td>
<td>5 - 50 MHz</td>
<td>dB</td>
<td>20</td>
<td>26</td>
<td>-</td>
</tr>
<tr>
<td>Isolation (between outputs)</td>
<td>-</td>
<td>50 - 870 MHz</td>
<td>dB</td>
<td>14</td>
<td>22</td>
<td>-</td>
</tr>
<tr>
<td>Isolation (between outputs)</td>
<td>-</td>
<td>870 - 1000 MHz</td>
<td>dB</td>
<td>12</td>
<td>15</td>
<td>-</td>
</tr>
</tbody>
</table>

Case Style: SM-55

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[Notes]

1. Electrical Specifications:  \( T_A = 25°C, \ Z_0 = 75\Omega \)

For further information and support please visit [https://www.macom.com/support](https://www.macom.com/support)
2 Way 0° Power Divider
5-1000MHz

Typical Performance Curves: $T_A = 25^\circ C$, $Z_0 = 75\Omega$ \(^1\)

- **Insertion Loss**
  - Frequency (MHz):
  - DB

- **Isolation**
  - Frequency (MHz):
  - DB

- **Amplitude Unbalance**
  - Frequency (MHz):
  - DB

- **Phase Unbalance**
  - Frequency (MHz):
  - Degree

- **Return Loss: Input**
  - Frequency (MHz):
  - DB

- **Return Loss: Output**
  - Frequency (MHz):
  - DB
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