MAPDCT0027

2 Way 0° Power Divider
5 - 1000 MHz

Features
- SMT unit
- 2 Way 0 degree
- 260°C Reflow Compatible
- RoHS Compliant and Pb free
- Available on Tape and Reel

Description
The MAPDCT0027 is a 2 way 0 degree RF power divider in a low cost, surface mount package. An external 180 Ohm resistor is required between the two outputs ports. Ideally suited for high volume CATV/Broadband applications.

Functional Schematic

Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAPDCT0027</td>
<td>900 piece reel</td>
</tr>
</tbody>
</table>

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>

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Electrical Specifications:  \( T_A = 25^\circ \text{C}, \ Z_0 = 75 \ \Omega \)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Conditions</th>
<th>Units</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
</tr>
</thead>
</table>
| Insertion Loss                         | 5 - 500 MHz  
500 - 1000 MHz | dB    | —     | 0.4   | 0.7   |
|                                        | 5 - 500 MHz  
500 - 1000 MHz | dB    | —     | 0.28  | ±0.4  |
| Amplitude Unbalance (Nominal 0 dB)     | 5 - 500 MHz  
500 - 1000 MHz | dB    | —     | 0.32  | ±0.6  |
| Phase Unbalance (Nominal 180°)         | 5 - 1000 MHz               | °     | —     | 1.0   | ±3.0  |
| Input Return Loss                      | 5 - 700 MHz  
700 - 870 MHz  
870 - 1000 MHz | dB    | 25    | 33    | —     |
|                                        | 5 - 40 MHz  
40 - 1000 MHz | dB    | 15    | 24    | —     |
| Output Return Loss                     | 5 - 500 MHz  
500 - 1000 MHz | dB    | 20    | 27    | —     |
| Isolation (between outputs)            |                            | dB    | 15    | 20    | —     |

Recommended Maximum Ratings\(^1,2\)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Absolute Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input Power</td>
<td>1 W</td>
</tr>
<tr>
<td>DC Current</td>
<td>240 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>

1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. MACOM does not recommend sustained operation near these survivability limits.
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Typical Performance Curves: $T_A = 25°C$, $Z_0 = 75 \, \Omega$, $P_{in} = 0 \, \text{dBm}$

- **Insertion Loss**
- **Isolation**
- **Amplitude Unbalance**
- **Phase Unbalance**
- **Return Loss: Input**
- **Return Loss: Output**

Visit [www.macom.com](http://www.macom.com) for additional data sheets and product information.

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Outline Drawing

Dimensions in inches (mm).
Tolerance where not specified: .xx ± .02, .xxx ± .010.

Carrier Tape Orientation

Footprint for PCB
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