Flatpack Three-Way Power Divider
25-1000 MHz

Features
- Insertion Loss: 0.4 dB Typical Midband
- Isolation: 35 dB Typical Midband
- Input VSWR: 1.2:1 Typical
- Impedance: 50 Ohms Nominal
- Maximum Power Rating or Input Power: 1 Watt Max.
- Internal Load Dissipation: 0.05 Watts Max.
- MIL-STD-202 Screening Available

Description
A Power Divider is ideally a lossless reciprocal device which can also perform vector summation of two or more signals and thus is sometimes called a power combiner or summer.

Pin Configuration

<table>
<thead>
<tr>
<th>Pin No.</th>
<th>Function</th>
<th>Pin No.</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>GND</td>
<td>6</td>
<td>Output</td>
</tr>
<tr>
<td>2</td>
<td>GND</td>
<td>7</td>
<td>GND</td>
</tr>
<tr>
<td>3</td>
<td>Input</td>
<td>8</td>
<td>Output</td>
</tr>
<tr>
<td>4</td>
<td>GND</td>
<td>9</td>
<td>GND</td>
</tr>
<tr>
<td>5</td>
<td>GND</td>
<td>10</td>
<td>Output</td>
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</table>

Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Package</th>
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<tbody>
<tr>
<td>DS-323 PIN</td>
<td>FP-3</td>
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</tbody>
</table>

Visit www.macom.com for additional data sheets and product information.

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https://www.macom.com/support
## Electrical Specifications

Flatpack Three-Way Power Divider

25-1000 MHz

**T<sub>A</sub> = -55°C to +85°C**

<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>Less Coupling</td>
<td>25 - 200 MHz</td>
<td>dB</td>
<td>—</td>
<td>—</td>
<td>0.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>200 - 1000 MHz</td>
<td>dB</td>
<td>—</td>
<td>—</td>
<td>1.0</td>
</tr>
<tr>
<td>Isolation</td>
<td>—</td>
<td>25 - 50 MHz</td>
<td>dB</td>
<td>15</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50 - 200 MHz</td>
<td>dB</td>
<td>22</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td></td>
<td>200 - 1000 MHz</td>
<td>dB</td>
<td>24</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Amplitude Balance</td>
<td>—</td>
<td>25 - 200 MHz</td>
<td>dB</td>
<td>—</td>
<td>—</td>
<td>0.25</td>
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<tr>
<td></td>
<td></td>
<td>200 - 1000 MHz</td>
<td>dB</td>
<td>—</td>
<td>—</td>
<td>0.4</td>
</tr>
<tr>
<td>Phase Balance</td>
<td>—</td>
<td>25 - 200 MHz</td>
<td>°</td>
<td>—</td>
<td>—</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>200 - 1000 MHz</td>
<td>°</td>
<td>—</td>
<td>—</td>
<td>4</td>
</tr>
<tr>
<td>VSWR</td>
<td>Input</td>
<td>25 - 1000 MHz</td>
<td>Ratio</td>
<td>—</td>
<td>—</td>
<td>1.4:1</td>
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<tr>
<td></td>
<td>Output</td>
<td>25 - 50 MHz</td>
<td>Ratio</td>
<td>—</td>
<td>—</td>
<td>1.9:1</td>
</tr>
<tr>
<td></td>
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<td>50 - 200 MHz</td>
<td>Ratio</td>
<td>—</td>
<td>—</td>
<td>1.7:1</td>
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<tr>
<td></td>
<td></td>
<td>200 - 1000 MHz</td>
<td>Ratio</td>
<td>—</td>
<td>—</td>
<td>1.5:1</td>
</tr>
</tbody>
</table>

1. All specifications apply with 50 ohm source and load impedance.
   This product contains elements protected by United States Patent Number 3,428,920.
Typical Performance Curves

**Insertion Loss**

```
Frequency (MHz) | Insertion Loss (dB)
----------------|------------------
10              | 0.00             
30              | 0.25             
50              | 0.50             
100             | 0.75             
200             | 1.00             
500             | 1.50             
1000            | 5.00             
1500            | 10.00            
```

**Isolation**

```
Frequency (MHz) | Isolation (dB)
----------------|-------------
10              | 10.00        
30              | 30.00        
100             | 40.00        
500             | 50.00        
1000            | 50.00        
1500            | 50.00        
```

**VSWR**

```
Frequency (MHz) | VSWR
----------------|-----
10              | 1.00
30              | 1.30
100             | 1.50
500             | 1.60
1000            | 1.70
1500            | 1.80
```

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