DSS-333

Surface Mount Two-Way Power Divider,
10 - 500 MHz

Rev. V3

Features

- Fully Hermetic Package
- Phase Balance: 0.5° Typical
- Isolation: 40 dB Typical Midband
- VSWR: 1.05:1 Typical Midband
- 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>Σ IN</td>
<td>3</td>
<td>GND</td>
</tr>
<tr>
<td>2</td>
<td>Output C</td>
<td>4</td>
<td>Output D</td>
</tr>
</tbody>
</table>

Electrical Specifications\(^1\): \(T_A = -55°C\) 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>10 - 500 MHz</td>
<td>dB</td>
<td>—</td>
<td>—</td>
<td>0.6</td>
</tr>
<tr>
<td>Isolation</td>
<td></td>
<td>10 - 500 MHz</td>
<td>dB</td>
<td>25</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Amplitude Balance</td>
<td></td>
<td>10 - 500 MHz</td>
<td>dB</td>
<td>—</td>
<td>—</td>
<td>0.15</td>
</tr>
<tr>
<td>Phase Balance</td>
<td></td>
<td>10 - 500 MHz</td>
<td>°</td>
<td>—</td>
<td>—</td>
<td>2</td>
</tr>
<tr>
<td>VSWR</td>
<td>All Ports</td>
<td>10 - 500 MHz</td>
<td>Ratio</td>
<td>—</td>
<td>—</td>
<td>1.4:1</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.
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10 - 500 MHz

Typical Performance Curves

### Insertion Loss

**Insertion Loss**

- **Frequency (MHz)**
- **Insertion Loss (dB)**

### Isolation

**Isolation**

- **Frequency (MHz)**
- **Isolation (dB)**

### VSWR

**VSWR**

- **Frequency (MHz)**
- **VSWR**

#### Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSS-333 PIN</td>
<td>SF-1</td>
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</table>
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