Bi-Directional Couplers, 10 - 500 MHz

Features
- Constant Coupling - within ±0.5 dB max.
- MIL-STD-202 Screening Available

Description
Bi-Directional couplers offer the ability to couple the power in two directions while maintaining directivity.

FP-2 (CH-134)

Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH-134-PIN</td>
<td>FP-2 (flat pack)</td>
</tr>
<tr>
<td>CHS-134-PIN</td>
<td>SF-1 (surface mount)</td>
</tr>
</tbody>
</table>
Bi-Directional Couplers,
10 - 500 MHz

Electrical Specifications\(^1\): \(T_A = -55^\circ C \text{ to } +85^\circ C\)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Test Conditions</th>
<th>Units</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
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</thead>
<tbody>
<tr>
<td>Coupling</td>
<td>Input to Output</td>
<td>dB</td>
<td>10.1</td>
<td>10.8</td>
<td>11.5</td>
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<tr>
<td>Coupling Flatness</td>
<td>—</td>
<td>dB</td>
<td>—</td>
<td>—</td>
<td>±0.5</td>
</tr>
<tr>
<td>VSWR</td>
<td>All Ports</td>
<td>Ratio</td>
<td>—</td>
<td>—</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>10 - 500 MHz</td>
<td></td>
<td>—</td>
<td>—</td>
<td>1.8:1</td>
</tr>
<tr>
<td></td>
<td>25 - 200 MHz</td>
<td></td>
<td>—</td>
<td>—</td>
<td>1.5:1</td>
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<tr>
<td>Directivity</td>
<td>Both Directions</td>
<td>dB</td>
<td>20</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Main Line Loss(^2)</td>
<td>—</td>
<td>dB</td>
<td>—</td>
<td>—</td>
<td>1.6</td>
</tr>
<tr>
<td>Input Power</td>
<td>—</td>
<td>W</td>
<td>—</td>
<td>—</td>
<td>1.0</td>
</tr>
</tbody>
</table>

1. All specifications apply with 50 ohm source and load impedance.
2. Includes theoretical power split.
This product contains elements protected by United States Patent number 3,426,298.

Functional Diagram (CH-134)

Case P2, P3, P6 and P7 Ground

Case Ground

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Typical Performance Curves

**Main Line Loss**

![Main Line Loss Graph]

**Directivity**

![Directivity Graph]

**VSWR**

![VSWR Graph]

**Coupling**

![Coupling Graph]
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