BI-DIRECTIONAL COUPLER
SYNSTRIP® MODEL: SCS1701650-20

WIDE BANDWIDTH

1.7 - 15 GHz

FEATURES:
- SYNSTRIP® Technology
- Small Size, Surface Mount
- Optimum Performance

SPECIFICATIONS (Rev. D 11/14/14)

<table>
<thead>
<tr>
<th>Frequency</th>
<th>1700 - 15000 MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coupling</td>
<td>21 dB ±1.5 dB (Nom.)</td>
</tr>
<tr>
<td>Coupling Flatness</td>
<td>±2.5 dB (Max.)</td>
</tr>
<tr>
<td>Mainline Loss</td>
<td>1.3 dB (Max.)</td>
</tr>
<tr>
<td>Directivity (dB)</td>
<td>10 dB (Typ.) / 7 dB (Min.)</td>
</tr>
<tr>
<td>Input Power Rating</td>
<td>25 Watts (Ave.)</td>
</tr>
<tr>
<td>Impedance</td>
<td>50 Ohms (Nom.)</td>
</tr>
<tr>
<td>VSWR</td>
<td>1.35:1 (Typ.)</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-40 to +85 °C</td>
</tr>
</tbody>
</table>
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**PORT CONFIGURATION**

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Coupled</td>
<td>Thru</td>
<td>Iso</td>
<td>Coupled</td>
</tr>
<tr>
<td>2</td>
<td>Coupled</td>
<td>Iso</td>
<td>Thru</td>
<td></td>
</tr>
<tr>
<td>3</td>
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</tr>
<tr>
<td>4</td>
<td>Iso</td>
<td>Thru</td>
<td>Coupled</td>
<td></td>
</tr>
</tbody>
</table>

* For directional coupler operation, connect 50 Ohms load from isolated port to ground.

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**PACKAGE MOUNTING:** SEE APPLICATION NOTE AN7200

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**RECOMMENDED PCB LAYOUT**

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**ADDITIONAL INFORMATION**

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**SYNERGY MICROWAVE CORPORATION**

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PERFORMANCE PLOTS

Return Loss (dB) vs. Frequency (MHz)

Mainline Loss (dB) vs. Frequency (MHz)

S11, S22, S33, S44

S31, S24
BI-DIRECTIONAL COUPLER
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PERFORMANCE PLOTS

Directivity (dB) vs Frequency (MHz)
- S41
- S23