**566 Series**  
**Cross Guide Directional Couplers**

### Description
Mi-Wave’s 566 Series Cross Guide Coupler Consists of two waveguides at right angles to each other, joined by small coupling slots whose size, location, and orientation determine the coupling and directivity of the unit. All ports are available for sampling or injecting energy and are clearly marked to indicate the coupling direction.

### Applications
The 566 Series Cross Guide Directional Couplers provide an efficient means for sampling power or injecting a signal into a waveguide transmission line.

#### Dimensional Specifications

<table>
<thead>
<tr>
<th>Model No.</th>
<th>A (in.)</th>
<th>B (in.)</th>
<th>C (in.)</th>
<th>D (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>566K</td>
<td>1.00</td>
<td>2.00</td>
<td>50.8</td>
<td>4.74</td>
</tr>
<tr>
<td>566A</td>
<td>0.75</td>
<td>1.50</td>
<td>38.1</td>
<td>4.09</td>
</tr>
<tr>
<td>566B</td>
<td>0.75</td>
<td>1.50</td>
<td>38.1</td>
<td>3.22</td>
</tr>
<tr>
<td>566U</td>
<td>0.75</td>
<td>1.50</td>
<td>38.1</td>
<td>2.80</td>
</tr>
<tr>
<td>566V</td>
<td>0.75</td>
<td>1.50</td>
<td>38.1</td>
<td>2.29</td>
</tr>
</tbody>
</table>

#### Other Waveguide Bands Available:
- WR-90
- WR-75
- WR-51
- WR-34
- WR-62

#### Technical Specifications (typical)

<table>
<thead>
<tr>
<th>Model No.</th>
<th>566K Frequency (GHz)</th>
<th>566A Frequency (GHz)</th>
<th>566B Frequency (GHz)</th>
<th>566U Frequency (GHz)</th>
<th>566V Frequency (GHz)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>18.0–26.5</td>
<td>26.5–40.0</td>
<td>33.0–50.0</td>
<td>40.0–60.0</td>
<td>50.0–75.0</td>
</tr>
<tr>
<td>Standard Coupling Values (dB) Nom.</td>
<td>20, 30, 40, 50</td>
<td>20, 30, 40, 50</td>
<td>20, 30, 40, 50</td>
<td>20, 30, 40, 50</td>
<td>20, 30, 40, 50</td>
</tr>
<tr>
<td>Directivity (dB) Typical</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>VSWR Max.</td>
<td>1.15</td>
<td>1.15</td>
<td>1.15</td>
<td>1.15</td>
<td>1.20</td>
</tr>
<tr>
<td>Weight (oz)</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>3.0</td>
<td>2.0</td>
</tr>
</tbody>
</table>

1. Any coupling values are available upon request.
2. Nominal ± 2.0 dB coupling variation cover over the waveguide band when set for coupling value at the band center.

#### Ordering Information

566  
Specify Flange  
(See Appendix A)  
Specify Coupling Value  
Specify RF Band Designator