FREQUENCY DOUBLERS

Features

- Input 5.0 to 15.0 GHz
- Output 10.0 to 30.0 GHz
- 10 dB Typical Conversion Loss
- 30 dBc Typical 3rd Harmonic Isolation
- Two Input Levels Available
- Multi-Octave Band Input

Electrical Specifications - Specifications guaranteed from -55 to +100°C, measured in a 50-Ohm system

<table>
<thead>
<tr>
<th>Parameter</th>
<th>INPUT (GHz)</th>
<th>OUTPUT (GHz)</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Diode Option LO drive level (dBm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conversion Loss (dB)</td>
<td>F(in)</td>
<td>5.0-15.0</td>
<td>10</td>
<td>13.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2F(out)</td>
<td>10.0-30.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suppressions (dBc)</td>
<td>F(in)</td>
<td>5.0-15.0</td>
<td>15</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fundamental</td>
<td>15.0-25.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3F(out)</td>
<td>15.0-30.0</td>
<td>20</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input Level (dBm)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>L (+10 to +13)</td>
</tr>
</tbody>
</table>

Part Number Options

Please specify diode level and package style by adding to model number.

<table>
<thead>
<tr>
<th>Package Style(s)¹</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>D-0515 L S</td>
</tr>
</tbody>
</table>

¹Connectorized test fixtures available for most carrier and surface mount packages. Consult factory.

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FREQUENCY DOUBLERS

D-0515

Input 5.0 to 15.0 GHz
Output 10.0 to 30.0 GHz

Typical Performance

Doubled Loss - dB

Input VSWR

Output VSWR

Third Harmonic Suppression - dBC

Fundamental Suppression - dBC

DATA SHEET NOTES:

1. Doubled Loss typically degrades less than 0.5 dB at +100°C and improves less than 0.5 dB at -55°C.
2. Maximum input power is +23 dBm at +25°C, derated linearly to +20 dBm at +100°C.
3. Specifications are subject to change without notice. Contact Marki Microwave for the most recent specifications and data sheets.
4. Catalog doubler circuits are continually improved. Configuration control requires custom model numbers and specifications.

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