### Features
- Input 4.0 to 20.0 GHz
- Output 8.0 to 40.0 GHz
- 10 dB Typical Conversion Loss
- 15 dBc Typical Fundamental Suppression
- 2.92 Connectors
- Available with 2.40 mm Connectors

### 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>LO drive level (dBm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conversion Loss (dB)</td>
<td>5.0-17.5</td>
<td>10.0-35.0</td>
<td>10.0</td>
<td>15.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>F(in)</td>
<td>4.0-20.0</td>
<td>8.0-40.0</td>
<td>10.0</td>
<td>16.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2F(out)</td>
<td>10.0-35.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3F(out)</td>
<td>12.0-40.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fundamental Suppressions (dBc)</td>
<td></td>
<td></td>
<td>12</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Third Harmonic Suppressions (dBc)</td>
<td></td>
<td></td>
<td>15</td>
<td>25</td>
<td></td>
<td></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>ES, N, NKV, NSV, NVV</td>
<td>D-0840 LN</td>
</tr>
</tbody>
</table>

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

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**FREQUENCY DOUBLERS**

**D-0840**

Input 4.0 to 20.0 GHz
Output 8.0 to 40.0 GHz

**Typical Performance**

**Doubled Loss - dB**

- 7.0 dB
- 12.0 dB
- 17.0 dB

**Input VSWR**

- 1:1
- 2:1
- 3:1

**Fundamental Suppression - dBC**

- 0 dB
- 10 dB
- 20 dB

**Third Harmonic Suppression - dBC**

- 0 dB
- 10 dB
- 20 dB

**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.