FDZ5013 / FDZ5013C
Frequency Doubler

Features
- Input 3 to 12 GHz
- Output 6 to 24 GHz
- Input Drive Level +13 dBm (nominal)
- Hermetically-Sealed Package

Description
The FDZ5013 is a passive bridge diode frequency doubler, designed for use in military, commercial and test equipment applications. The design utilizes Schottky bridge quad diodes and broadband soft dielectric and/or ferrite baluns to attain excellent performance. The use of high temperature solder assembly processes used internally makes it ideal for use in manual and semi-automated assembly. Environmental screening available to MIL-STD-883, MIL-STD-202, or MIL-DTL-28837, consult factory.

Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>FDZ5013</td>
<td>Versapac</td>
</tr>
<tr>
<td>FDZ5013C</td>
<td>SMA Connectorized</td>
</tr>
</tbody>
</table>

Electrical Specifications: $Z_0 = 50\,\Omega$  $P_{in} = +13\,\text{dBm}$


![Product Image](image-url)
Typical Performance Curves

**VSWR vs. Frequency**

- $P_{in} = +11$ dBm
- $P_{in} = +12$ dBm

**Conversion Loss vs. Frequency**

- $P_{in} = +11$ dBm
- $P_{in} = +12$ dBm

**Fundamental Suppression vs. Frequency**

- $P_{in} = +11$ dBm
- $P_{in} = +12$ dBm
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Absolute Maximum Ratings

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Absolute Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Temperature</td>
<td>-54°C to +100°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-65°C to +100°C</td>
</tr>
<tr>
<td>Peak Input Power</td>
<td>+23 dBm max @ +25°C</td>
</tr>
<tr>
<td></td>
<td>+20 dBm max @ +100°C</td>
</tr>
<tr>
<td>Peak Input Current</td>
<td>50 mA DC</td>
</tr>
</tbody>
</table>

3rd Harmonic Suppression vs. Frequency

Outline Drawing: Versapac *

Weight: 4 grams (0.14 oz.) max

Outline Drawing: SMA Connectorized *

Weight: 13 grams (0.46 oz.) max

* Dimensions are inches (millimeters) ±0.015 (0.38) unless otherwise specified.