Coaxial Frequency Mixer

Level 7 (LO Power +7 dBm) 1 to 1000 MHz

Maximum Ratings
- Operating Temperature: -55°C to 100°C
- Storage Temperature: -55°C to 100°C
- RF Power: 50mW
- IF Current: 40mA

Coaxial Connections
- LO: 1
- RF: 2
- IF: 3

Features
- low conversion loss, 5.72 dB typ.
- good L-R isolation, 40 dB typ, L-I, 35 dB typ.
- wideband, 1 to 1000
- rugged shielded case

Applications
- VHF/UHF
- cellular
- instrumentation

Electrical Specifcations

<table>
<thead>
<tr>
<th>FREQUENCY (MHz)</th>
<th>CONVERSION LOSS (dB)</th>
<th>LO-RF ISOLATION (dB)</th>
<th>LO-IF ISOLATION (dB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LO/RF IF m Total Range Max.</td>
<td>L M U</td>
<td>L M U</td>
<td>L M U</td>
</tr>
<tr>
<td>LO/RF IF m Total Range Max.</td>
<td>L M U</td>
<td>L M U</td>
<td>L M U</td>
</tr>
<tr>
<td>1-1000 DC-1000</td>
<td>5.72 0.06 7.5 8.5</td>
<td>50 45 40 25 30 25</td>
<td>45 40 35 25 25 20</td>
</tr>
</tbody>
</table>

1 dB COMP.: +1 dBm typ.

- L = low range [f_L to 10 f_L]
- M = mid range [10 f_L to f_U/2]
- U = upper range [f_U/2 to f_U]
- m = mid band [2f_L to f_U/2]

Outline Dimensions (inch mm)

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.25</td>
<td>1.25</td>
<td>.75</td>
<td>.63</td>
<td>.38</td>
<td>1.00</td>
<td>.125</td>
<td>1.000</td>
</tr>
<tr>
<td>31.75</td>
<td>31.75</td>
<td>19.00</td>
<td>16.00</td>
<td>9.65</td>
<td>20.40</td>
<td>3.18</td>
<td>20.40</td>
</tr>
<tr>
<td>J</td>
<td>K</td>
<td>L</td>
<td>M</td>
<td>N</td>
<td>P</td>
<td>Q</td>
<td>wt</td>
</tr>
<tr>
<td>--</td>
<td>--</td>
<td>.125</td>
<td>1.688</td>
<td>2.18</td>
<td>.75</td>
<td>.07</td>
<td>grams</td>
</tr>
<tr>
<td>--</td>
<td>--</td>
<td>3.18</td>
<td>42.88</td>
<td>05.97</td>
<td>19.05</td>
<td>1.78</td>
<td>70.0</td>
</tr>
</tbody>
</table>

Electrical Schematic
**Performance Charts**

**ZFM-2+**

**ZFM-2**

**Conversion Loss**

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>LO=+4 dBm</th>
<th>LO=+7 dBm</th>
<th>LO=+10 dBm</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>400</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>600</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**L-R Isolation**

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>LO=+4 dBm</th>
<th>LO=+7 dBm</th>
<th>LO=+10 dBm</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>400</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>600</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**L-I Isolation**

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>LO=+4 dBm</th>
<th>LO=+7 dBm</th>
<th>LO=+10 dBm</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>400</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>600</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**LO VSWR**

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>LO=+4 dBm</th>
<th>LO=+7 dBm</th>
<th>LO=+10 dBm</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>400</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>600</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**RF VSWR**

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>LO=+4 dBm</th>
<th>LO=+7 dBm</th>
<th>LO=+10 dBm</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>400</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>600</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**IF VSWR**

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>LO=+4 dBm</th>
<th>LO=+7 dBm</th>
<th>LO=+10 dBm</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>200</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>400</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>600</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>