ADEX-10+

Surface Mount Frequency Mixer

Level 7 (LO Power +7 dBm) 10 to 1000 MHz

Features
- excellent L-R isolation, 60 dB typ.
- flat conversion loss, ±0.2 dB typ over entire band
- low conversion loss, 6.8 dB typ.
- good VSWR, 2:1 typ. for LO, 1.4:1 typ. for RF, 1:8 typ. for IF
- good performance to 1500 MHz
- aqueous washable
- protected by U.S. Patents 6,133,525 and 6,947,717

Applications
- cellular
- PCN

Maximum Ratings
- Operating Temperature: -40°C to 85°C
- Storage Temperature: -55°C to 100°C
- RF Power: 50mW
- IF Current: 40mA

Permanent damage may occur if any of these limits are exceeded.

Pin Connections
- LO: 6
- RF: 3
- IF: 2
- GROUND: 1,4,5

Outline Drawing

Outline Dimensions (inch / mm)
- A: 1.00 / 25.4
- B: 1.00 / 25.4
- C: 0.50 / 12.7
- D: 0.75 / 19.0
- E: 0.20 / 5.0
- F: 0.20 / 5.0
- G: 0.30 / 7.6
- H: 0.20 / 5.0
- J: 0.20 / 5.0
- K: 0.08 / 2.0
- L: 0.08 / 2.0

Demo Board MCL P/N: TB-03
Suggested PCB Layout (PL-052)

Electrical Specifications

<table>
<thead>
<tr>
<th>FREQUENCY (MHz)</th>
<th>CONVERSION LOSS (dB)</th>
<th>LO-RF ISOLATION (dB)</th>
<th>LO-IF ISOLATION (dB)</th>
<th>IP3 at center band (dBm)</th>
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</thead>
<tbody>
<tr>
<td>LO/RF</td>
<td>IF</td>
<td>L</td>
<td>M</td>
<td>U</td>
</tr>
<tr>
<td>LO/RF</td>
<td>LO</td>
<td>RF</td>
<td>IF</td>
<td></td>
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<tr>
<td>10-1000 DC-800</td>
<td>6.8</td>
<td>0.10</td>
<td>7.8</td>
<td>8.3*</td>
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<tr>
<td>80</td>
<td>55</td>
<td>60</td>
<td>47</td>
<td>37</td>
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<tr>
<td>40</td>
<td>26</td>
<td>33</td>
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<td>16</td>
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</tbody>
</table>

1 dB COMP.: +1 dBm typ.
L = low range \([f_L \text{ to } 10 f_L]\)
M = mid range \([10 f_L \text{ to } f_U/2]\)
U = upper range \([f_U/2 \text{ to } f_U]\)

Conversion loss increases 0.5 dB when IF is above 150 MHz

Electrical Schematic

Notes
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit’s applicable established test performance criteria and measurement instructions.
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