Voltage-Controlled Oscillator
Surface Mount Module

Applications
Digital Radio
Satellite Communications

Application Notes
AN-101: Mounting and Grounding
AN-102: Output Loading
AN-107: Manual Soldering

Performance Specifications

<table>
<thead>
<tr>
<th>Performance Specification</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oscillation Frequency Range</td>
<td>820</td>
<td>1170</td>
<td>MHz</td>
<td></td>
</tr>
<tr>
<td>Phase Noise @ 10 kHz offset (1 Hz BW)</td>
<td>-109</td>
<td></td>
<td></td>
<td>dBC/Hz</td>
</tr>
<tr>
<td>Harmonic Suppression (2nd)</td>
<td>-12</td>
<td></td>
<td></td>
<td>dBC</td>
</tr>
<tr>
<td>Tuning Voltage</td>
<td>0.5</td>
<td></td>
<td>15</td>
<td>Vdc</td>
</tr>
<tr>
<td>Tuning Sensitivity (avg.)</td>
<td></td>
<td>31</td>
<td></td>
<td>MHz/V</td>
</tr>
<tr>
<td>Power Output</td>
<td>-3</td>
<td>.25</td>
<td>3.5</td>
<td>dBm</td>
</tr>
<tr>
<td>Load Impedance</td>
<td>50</td>
<td></td>
<td></td>
<td>Ω</td>
</tr>
<tr>
<td>Input Capacitance</td>
<td></td>
<td>150</td>
<td></td>
<td>pF</td>
</tr>
<tr>
<td>Pushing</td>
<td></td>
<td>2</td>
<td></td>
<td>MHz/V</td>
</tr>
<tr>
<td>Pulling (14 dB Return Loss, Any Phase)</td>
<td></td>
<td>.5</td>
<td></td>
<td>MHz</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-40</td>
<td></td>
<td>85</td>
<td>°C</td>
</tr>
<tr>
<td>Package Style</td>
<td></td>
<td>MINI-14S</td>
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</table>

Power Supply Requirements

<table>
<thead>
<tr>
<th>Power Supply Requirement</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Voltage (Vcc, nom.)</td>
<td>5</td>
<td></td>
<td></td>
<td>Vdc</td>
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<tr>
<td>Supply Current (Icc)</td>
<td>20</td>
<td>25</td>
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<td>mA</td>
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</tbody>
</table>

Additional Notes
**Voltage-Controlled Oscillator**

**Surface Mount Module**

**CLV0975B-LF**

**Rev A1**

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### Tuning Curve, typ.

#### TUNING VOLTAGE (Vdc)

- 85°C
- 25°C
- -40°C

#### FREQUENCY (MHz)

![Graph of Tuning Curve with temperature markers](image)

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### Power Curve, typ.

#### FREQUENCY (MHz)

- 85°C
- 25°C
- -40°C

![Graph of Power Curve with temperature markers](image)

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### Footprint

**Recommended Footprint**

Several rows of pads or GND planes are recommended for good grounding.

- 0.010 MIN. CUT BACK FROM LINE PADS

**Physical Dimensions**

![Physical Dimensions Diagram](image)

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LFSuffix = RoHS Compliant. All specifications are subject to change without notice.

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