# Voltage-Controlled Oscillator Surface Mount Module

## Applications
- Data Transmitter
- Digital Radios

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

## Performance Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oscillation Frequency Range</td>
<td>1050</td>
<td>1086</td>
<td>MHz</td>
<td></td>
</tr>
<tr>
<td>Phase Noise @ 10 kHz offset (1 Hz BW)</td>
<td>-112</td>
<td>dBc/Hz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harmonic Suppression (2nd)</td>
<td>-20</td>
<td>-18</td>
<td>dBc</td>
<td></td>
</tr>
<tr>
<td>Tuning Voltage</td>
<td>0.5</td>
<td>4.5</td>
<td>Vdc</td>
<td></td>
</tr>
<tr>
<td>Tuning Sensitivity (avg.)</td>
<td>21</td>
<td>MHz/V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Output</td>
<td>-4</td>
<td>-1</td>
<td>2</td>
<td>dBm</td>
</tr>
<tr>
<td>Load Impedance</td>
<td>50</td>
<td></td>
<td>Ω</td>
<td></td>
</tr>
<tr>
<td>Input Capacitance</td>
<td>85</td>
<td></td>
<td>pF</td>
<td></td>
</tr>
<tr>
<td>Pushing</td>
<td>1</td>
<td>MHz/V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pulling (12 dB Return Loss, Any Phase)</td>
<td>1</td>
<td>MHz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-40</td>
<td></td>
<td>°C</td>
<td></td>
</tr>
<tr>
<td>Package Style</td>
<td>MINI-14S-L</td>
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</table>

## Power Supply Requirements

<table>
<thead>
<tr>
<th>Parameter</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>Vdc</td>
<td></td>
</tr>
<tr>
<td>Supply Current (Icc)</td>
<td>23</td>
<td>26</td>
<td>mA</td>
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</tr>
</tbody>
</table>

## Additional Notes

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

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Voltage-Controlled Oscillator
Surface Mount Module

CLV1085E-LF
Rev A1

Tuning Curve, typ.

![Tuning Curve Graph]

- 85°C
- 25°C
- -40°C

Power Curve, typ.

![Power Curve Graph]

- 85°C
- 25°C
- -40°C

Footprint

![Footprint Diagram]

- Recommended footprint: Several holes of 0.015 on GND plane are recommended for good grounding.
- 0.030 min. cutback from live pads.

Physical Dimensions

![Physical Dimensions Diagram]

- Package: MINI-14S | MINI-14S-LOW | MINI-14S-L
- PIN configuration:
  - P1: Vt
  - P2: RF OUT
  - P3: Vcc, REST
- Physical dimensions are in inches
  - MINI-14S: 0.220
  - MINI-14S-LOW: 0.160
  - MINI-14S-L: 0.130

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