Voltage-Controlled Oscillator
Surface Mount Module

Applications

- WiMAX
- Earthstations

Application Notes

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

### Performance Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oscillation Frequency Range</td>
<td>2008</td>
<td>2186</td>
<td>MHz</td>
<td></td>
</tr>
<tr>
<td>Phase Noise @ 10 kHz offset (1 Hz BW)</td>
<td>-95</td>
<td>dBc/Hz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harmonic Suppression (2nd)</td>
<td>-20</td>
<td>dBc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuning Voltage</td>
<td>0.5</td>
<td>Vdc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuning Sensitivity (avg.)</td>
<td>69</td>
<td>MHz/V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Output</td>
<td>-2</td>
<td>1.5</td>
<td>5</td>
<td>dBm</td>
</tr>
<tr>
<td>Load Impedance</td>
<td>50</td>
<td>Ω</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input Capacitance</td>
<td>20</td>
<td>pF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pushing</td>
<td>5</td>
<td>MHz/V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pulling (14 dB Return Loss, Any Phase)</td>
<td>6</td>
<td>MHz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-25</td>
<td>70</td>
<td>°C</td>
<td></td>
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<tr>
<td>Package Style</td>
<td>MINI-14S</td>
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</table>

### Power Supply Requirements

<table>
<thead>
<tr>
<th>Specification</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>Vdc</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supply Current (Icc)</td>
<td>14</td>
<td>18</td>
<td>mA</td>
<td></td>
</tr>
</tbody>
</table>

Additional Notes

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

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

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Tuning Curve, typ.

![Tuning Curve Diagram](image)

- **70°C**
- **25°C**
- **-25°C**

Power Curve, typ.

![Power Curve Diagram](image)

- **70°C**
- **25°C**
- **-25°C**

Footprint

![Footprint Diagram](image)

- RECOMMENDED FOOTPRINT
- SEVERAL HOLES OF 0.015 ON GND. PLANE ARE RECOMMENDED FOR GOOD GROUNDING.
- 0.030 MIN. CUTBACK FROM LIVE PADS
- 0.060 TYP
- 0.050
- 0.415 2X
- 0.315 2X
- 0.215 2X
- 0.090 2X
- 0.030
- 0.070 TYP

Physical Dimensions

![Physical Dimensions Diagram](image)

- **MINI-145**: 0.220
- **MINI-145-LOW**: 0.160
- **MINI-145-L**: 0.130

NOTE: ALL DIMENSIONS ARE IN INCHES

TOL: XXX +/- 0.010

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