Voltage-Controlled Oscillator Surface Mount Module

### Applications
- Direct Broadcast
- Up/Down Converters

### 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>3100</td>
<td>3500</td>
<td>MHz</td>
<td></td>
</tr>
<tr>
<td>Phase Noise @ 10 kHz offset (1 Hz BW)</td>
<td>-89</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>1</td>
<td>12</td>
<td>Vdc</td>
<td></td>
</tr>
<tr>
<td>Tuning Sensitivity (avg.)</td>
<td>62</td>
<td>MHz/V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Output</td>
<td>0</td>
<td>3</td>
<td>6</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>50</td>
<td>pF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pushing</td>
<td>10</td>
<td>MHz/V</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pulling (12 dB Return Loss, Any Phase)</td>
<td>10</td>
<td>MHz</td>
<td></td>
<td></td>
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<tr>
<td>Operating Temperature Range</td>
<td>-30</td>
<td>80</td>
<td>°C</td>
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<tr>
<td>Package Style</td>
<td>MINI-14H-L</td>
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</table>

### Power Supply Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>Supply Voltage (Vcc, nom.)</td>
<td>5</td>
<td>Vdc</td>
<td></td>
<td></td>
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<tr>
<td>Supply Current (Icc)</td>
<td>22</td>
<td>27</td>
<td>mA</td>
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</tbody>
</table>

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

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**Voltage-Controlled Oscillator**
**Surface Mount Module**

**V846ME24-LF**

**Tuning Curve, typ.**

![Tuning Curve Graph]

- **FREQUENCY (MHz)**
- **TUNING VOLTAGE (Vdc)**

- **Power Curve, typ.**

![Power Curve Graph]

- **POWER OUTPUT (dBm)**
- **FREQUENCY (MHz)**

- **Footprint**

- **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]

- **Z-COMM XXXXXXX-LF W/O# D/C**

- **PIN CONFIGURATION**
  - P1
  - P2
  - RF OUT
  - Vcc
  - REST
  - GROUND

- **PACKAGE**
  - MINI-14H: 0.220
  - MINI-14H-LOW: 0.160
  - MINI-14H-L: 0.130

- **NOTE:** All dimensions are in inches. TOL: XXX +/- 0.010

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