Voltage-Controlled Oscillator Surface Mount Module

Applications

- Satellite Communications
- Test Equipment
- 

Application Notes

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

### Performance Specifications

<table>
<thead>
<tr>
<th></th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oscillation Frequency Range</td>
<td>1350</td>
<td>1550</td>
<td>MHz</td>
<td></td>
</tr>
<tr>
<td>Phase Noise @ 10 kHz offset (1 Hz BW)</td>
<td>-98</td>
<td></td>
<td>dBc/Hz</td>
<td></td>
</tr>
<tr>
<td>Harmonic Suppression (2nd)</td>
<td>-8</td>
<td>-6</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>88</td>
<td></td>
<td>MHz/V</td>
<td></td>
</tr>
<tr>
<td>Power Output</td>
<td>-3</td>
<td>0</td>
<td>3</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>50</td>
<td></td>
<td>pF</td>
<td></td>
</tr>
<tr>
<td>Pushing</td>
<td>5</td>
<td></td>
<td>MHz/V</td>
<td></td>
</tr>
<tr>
<td>Pulling (20. dB Return Loss, Any Phase)</td>
<td>2</td>
<td></td>
<td>MHz</td>
<td></td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-40</td>
<td>85</td>
<td>°C</td>
<td></td>
</tr>
<tr>
<td>Package Style</td>
<td>SUB-L</td>
<td></td>
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</table>

### Power Supply Requirements

<table>
<thead>
<tr>
<th></th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Voltage (Vcc, nom.)</td>
<td>3</td>
<td></td>
<td>Vdc</td>
<td></td>
</tr>
<tr>
<td>Supply Current (Icc)</td>
<td>11</td>
<td>15</td>
<td>mA</td>
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</tbody>
</table>

### Notes

LFSuffix = RoHS Compliant. All specifications are subject to change without notice.
Voltage-Controlled Oscillator
Surface Mount Module

SMV1450A-LF
Rev A1

Tuning Curve, typ.

![Tuning Curve Diagram]

- **85°C**
- **25°C**
- **-40 °C**

Power Curve, typ.

![Power Curve Diagram]

- **85°C**
- **25°C**
- **-40 °C**

Footprint

RECOMMENDED FOOTPRINT

- SEVERAL HOLES OF 0.015 ON GND. PLANE ARE RECOMMENDED FOR GOOD GROUNDING.

![Footprint Diagram]

- 0.060 TYP
- 0.242 TYP
- 0.000
- 0.240 2X
- 0.180 2X
- 0.120 2X

Physical Dimensions

![Physical Dimensions Diagram]

- PIN CONFIGURATION
  - P1: VI
  - P2: RF Out
  - P3: Vcc
  - REST: GROUND

- PACKAGE: H
- W/O#:
  - D/C

- SUB MINI: 0.110
- SUB MINI-L: 0.080

- NOTE: ALL DIMENSIONS ARE IN INCHES
- TOL: XXX: +/- 0.010

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