FEATURES:
- Miniature Size, Surface Mount (0.3" x 0.3")
- Superb Phase Noise Performance
- Fast Tuning
- Planar Resonator Construction

VOLTAGE CONTROLLED OSCILLATOR
SURFACE MOUNT MODEL: DCO80100-3
OPTIMIZED BANDWIDTH

800 - 1000 MHz

SPECIFICATIONS (Rev. B 01/09/14)

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>800 - 1000 MHz</td>
</tr>
<tr>
<td>Tuning Voltage</td>
<td>0 - 3.0 V</td>
</tr>
<tr>
<td>Bias Voltage</td>
<td>+3 VDC @ 15 mA (Max.)</td>
</tr>
<tr>
<td>Output Power</td>
<td>+1 dBm (Min.)</td>
</tr>
<tr>
<td>Tuning Sensitivity</td>
<td>70 - 105 MHz/V (Typ.)</td>
</tr>
<tr>
<td>Output Impedance</td>
<td>50 Ohms (Nom.)</td>
</tr>
<tr>
<td>Harmonic Suppression</td>
<td>12 dB (Typ.)</td>
</tr>
<tr>
<td>Frequency Pulling</td>
<td>3.5 MHz (Typ. @ 1.75:1 VSWR)</td>
</tr>
<tr>
<td>Frequency Pushing</td>
<td>15 MHz/V (Typ.)</td>
</tr>
<tr>
<td>Tuning Port Capacitance</td>
<td>45 pF (Typ.)</td>
</tr>
<tr>
<td>Typical Phase Noise</td>
<td>Offset dBc/Hz</td>
</tr>
<tr>
<td></td>
<td>10 kHz</td>
</tr>
<tr>
<td></td>
<td>-105</td>
</tr>
<tr>
<td></td>
<td>100 kHz</td>
</tr>
<tr>
<td></td>
<td>-126</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-40 to +85 ºC</td>
</tr>
</tbody>
</table>

Absolute Maximum Ratings

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage Temp. Range</td>
<td>-55 to +125 ºC</td>
</tr>
<tr>
<td>Bias Voltage</td>
<td>+3.3 V</td>
</tr>
<tr>
<td>Tuning Voltage</td>
<td>+8 V</td>
</tr>
<tr>
<td>DC Voltage Applied to RF Out</td>
<td>± 25 V</td>
</tr>
</tbody>
</table>

Phase Noise

OFFSET FREQUENCY (Hz)
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VOLTAGE CONTROLLED OSCILLATOR
SURFACE MOUNT MODEL: DCO80100-3

OPTIMIZED BANDWIDTH

800 - 1000 MHz

PERFORMANCE PLOTS

Control Voltage (Vdc)

Frequency (MHz)

Output Power (dBm)

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Patents: http://www.synergymwave.com/patents
VOLTAGE CONTROLLED OSCILLATOR
SURFACE MOUNT MODEL: DCO80100-3

OPTIMIZED BANDWIDTH
800 - 1000 MHz

PERFORMANCE PLOTS

Tuning Sensitivity (MHz/V)

Control Voltage (Vdc)

+25°C, +85°C, -40°C

2nd Harmonic Suppression (dB)

Control Voltage (Vdc)

+25°C, +85°C, -40°C