VOLTAGE CONTROLLED OSCILLATOR
SURFACE MOUNT MODEL: DCRO185210-5

OPTIMIZED BANDWIDTH 1850 - 2100 MHz

FEATURES:
► Exceptional Phase Noise Performance
► Small Size, Surface Mount
► Lead Free REL-PRO® Technology
► Planar Resonator Construction

Phase Noise

SPECIFICATIONS

Frequency 1850 - 2100 MHz
Tuning Voltage See table below.
Bias Voltage 5 VDC @ 30 mA (Max.)
Output Power +2.5 dBm (Min.)
Tuning Sensitivity 35 - 55 MHz/V (Typ.)
Output Impedance 50 Ohms (Nom.)
Harmonic Suppression 18 dB (Typ.)
Frequency Pulling 10 MHz (Typ. @ 2:1 VSWR)
Frequency Pushing 6 MHz/V (Typ.)
Tuning Port Capacitance 80 pF (Typ.)
Phase Noise @ 10 kHz -98 dBc/Hz (Typ.)
Operating Temperature Range -40 to +85 ºC

Guaranteed Tuning Specifications

<table>
<thead>
<tr>
<th>Tuning Voltage (V)</th>
<th>Frequency (MHz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>1850 (Max.)</td>
</tr>
<tr>
<td>8</td>
<td>1980 (Min.)</td>
</tr>
<tr>
<td>14</td>
<td>2100 (Min.)</td>
</tr>
</tbody>
</table>

Absolute Maximum Ratings

<table>
<thead>
<tr>
<th>Storage Temp. Range</th>
<th>-55 to +125 ºC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bias Voltage</td>
<td>+5.2 V</td>
</tr>
<tr>
<td>Tuning Voltage</td>
<td>+18 V</td>
</tr>
<tr>
<td>DC Voltage Applied to RF Out</td>
<td>± 25 V</td>
</tr>
</tbody>
</table>

Package # 278LF

Dimensions are in inches.

Tolerances on three decimal places = ± 0.015

All unlabeled pins to be grounded.

Package mounting: See application note AN7200 & AN7300

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VOLTAGE CONTROLLED OSCILLATOR
SURFACE MOUNT MODEL: DCRO185210-5

OPTIMIZED BANDWIDTH
1850 - 2100 MHz

PERFORMANCE PLOTS

1700 1750 1800 1850 1900 1950 2000 2050 2100 2150 2200 2250 2300 2350 2400 2450 2500

Frequency (MHz)

0  1  2  3  4  5  6  7  8  9  10  11  12  13  14  15

Control Voltage (Vdc)

+25ºC  +85ºC  -40ºC

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

Output Power (dBm)

+25ºC  +85ºC  -40ºC

0 1 2 3 4 5 6 7 8 9 10 11 12

Control Voltage (Vdc)
VOLTAGE CONTROLLED OSCILLATOR
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PERFORMANCE PLOTS

Tuning Sensitivity (MHz/V) vs. Control Voltage (Vdc)

2nd Harmonic Suppression (dB) vs. Control Voltage (Vdc)