VOLTAGE CONTROLLED OSCILLATOR
SURFACE MOUNT MODEL: DCRO615712-5

OPTIMIZED BANDWIDTH
6150 - 7120 MHz

FEATURES:
► Small Size Surface Mount (0.5” x 0.5”)
► Superb Phase Noise Performance
► Planar Resonator Construction

SPECIFICATIONS

- Frequency: 6150 - 7120 MHz
- Tuning Voltage: See table below.
- Bias Voltage: +5 VDC @ 22 mA (Max.)
- Output Power: -6 dBm (Min.)
- Tuning Sensitivity: 55 - 170 MHz/V (Typ.)
- Output Impedance: 50 Ohms (Nom.)
- Harmonic Suppression: 25 dB (Typ.)
- Frequency Stability: ±175 kHz/1 V SWR (Typ.)
- Frequency Pushing: ±12 MHz/V (Typ.)
- Tuning Port Capacitance: 10 pF (Typ.)
- Typical Phase Noise: Offset dBc/Hz
  - 10 kHz: -85
  - 100 kHz: -106

Operating Temperature Range: -40 to +85 °C

Guaranteed Tuning Specifications

<table>
<thead>
<tr>
<th>Tuning Voltage (V)</th>
<th>Frequency (MHz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>6150 (Max.)</td>
</tr>
<tr>
<td>5</td>
<td>6400 (Min.)</td>
</tr>
<tr>
<td>8</td>
<td>6800 (Min.)</td>
</tr>
<tr>
<td>12</td>
<td>7120 (Min.)</td>
</tr>
</tbody>
</table>

Absolute Maximum Ratings

- Storage Temp. Range: -65 to +125 °C
- Bias Voltage: ±5.5 V
- Tuning Voltage: ±15 V
- DC Voltage Applied to RF Out: ± 25 V

Phase Noise

- Offset Frequency (Hz)
- Phase Noise (dBc/Hz)

6071.20 MHz
6254.40 MHz
6440.50 MHz
6776.29 MHz
6995.06 MHz
7297.60 MHz

Recommended PCB Layout

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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PERFORMANCE PLOTS

- Frequency (MHz) vs. Control Voltage (Vdc)
- Output Power (dBm) vs. Control Voltage (Vdc)
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PERFORMANCE PLOTS

Tuning Sensitivity (MHz/V)

2nd Harmonic Suppression (dB)