VOLTAGE CONTROLLED OSCILLATOR
SURFACE MOUNT MODEL: DCMO60170-12

WIDE BANDWIDTH

600 - 1700 MHz

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

SPECIFICATIONS (Rev. B 02/17/10)

Frequency 600 - 1700 MHz
Tuning Voltage See table below.
Bias Voltage +12 VDC @ 35 mA (Max.)
Output Power +3 dBm (Min.)
Tuning Sensitivity 30 - 85 MHz/V (Typ.)
Output Impedance 50 Ohms (Nom.)
Harmonic Suppression 10 dB (Typ.)
Frequency Pulling 5 MHz (Typ. @ 1.75:1 VSWR)
Frequency Pushing 5 MHz/V (Typ.)
Tuning Port Capacitance 194 pF (Typ.)
Phase Noise @ 10 kHz -102 dBc/Hz (Typ.)
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>600 (Max.)</td>
</tr>
<tr>
<td>5</td>
<td>780 (Min.)</td>
</tr>
<tr>
<td>8</td>
<td>1025 (Min.)</td>
</tr>
<tr>
<td>12</td>
<td>1270 (Min.)</td>
</tr>
<tr>
<td>15</td>
<td>1430 (Min.)</td>
</tr>
<tr>
<td>18</td>
<td>1530 (Min.)</td>
</tr>
<tr>
<td>24</td>
<td>1700 (Min.)</td>
</tr>
</tbody>
</table>

Phase Noise

100 1000 10000 100000 1000000 10000000
Offset Frequency (Hz)
100 1000 10000 100000 1000000 10000000
Phase Noise (dBc/Hz)
604MHz 874.9MHz 1088.8MHz 1335MHz 1487.3MHz 1812.7MHz

Absolute Maximum Ratings

Storage Temp. Range -55 to +125 °C
Bias Voltage +12 V
Tuning Voltage +26 V
DC Voltage Applied to RF Out ± 25 V

Recommended PCB Layout

Dimensions are in inches. Tolerances on three decimal places = ± 0.015

All unmarked pins to be grounded.

Package Mounting: See Application Note AN7200 & AN7300

This product is manufactured under one or more of the following patents. Approved: 5,160,810; 5,122,621; 5,390,349; 5,416,449; 5,650,754; 5,805,431; 6,025,626; 6,402,575; 7,088,189; 7,180,381; 7,196,591; 7,262,670; 7,265,642; 7,292,113; 7,365,612; 7,495,525; 2,548,311; 2,548,317; 7,545,229; 2,563,174; 7,580,693; 7,612,296; 2,524,751

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SURFACE MOUNT MODEL: DCMO60170-12

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600 - 1700 MHz

PERFORMANCE PLOTS

- Frequency vs. Control Voltage
- Output Power vs. Control Voltage

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Pending: 60/493075; 60/501371 & 60/501790; 60/527957 & 60/528670; 60/563481; 60/564173; 60/589090; 60/601823; 60/605791; EV31369834; 11/259766; 60/622485 & 60/710310; 10/937525/60/736901; 60/732787; 7,495,525; 2,548,311; 2,548,317; 2,563,174; 7,545,229; 7,580,693; 7,612,296; 7,636,021

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