**VOLTAGE CONTROLLED OSCILLATOR**

**SURFACE MOUNT MODEL: DCMO2550-12**

**WIDE BANDWIDTH**

250 - 500 MHz

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**FEATURES:**

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

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**SPECIFICATIONS (Rev. A 10/09/08)**

- **Frequency**: 250 - 500 MHz
- **Tuning Voltage**: See table below.
- **Bias Voltage**: +12 VDC @ 37 mA (Max.)
- **Output Power**: +7 dBm (Min.)
- **Tuning Sensitivity**: 15 - 27 MHz/V (Typ.)
- **Output Impedance**: 50 Ohms (Nom.)
- **Harmonic Suppression**: 10 dB (Typ.)
- **Frequency Pulling**: 2 MHz (Typ. @ 1.75:1 VSWR)
- **Frequency Pushing**: 1 MHz/V (Typ.)
- **Tuning Port Capacitance**: 582 pF (Typ.)
- **Phase Noise @ 10 kHz**: -112 dBc/Hz (Typ.)
- **Operating Temperature Range**: -40 to +85 °C

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**Guaranteed Tuning Specifications**

<table>
<thead>
<tr>
<th>Tuning Voltage (V)</th>
<th>Frequency (MHz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.5</td>
<td>250 (Max.)</td>
</tr>
<tr>
<td>8</td>
<td>325 (Min.)</td>
</tr>
<tr>
<td>12</td>
<td>400 (Min.)</td>
</tr>
<tr>
<td>15</td>
<td>440 (Min.)</td>
</tr>
<tr>
<td>20</td>
<td>500 (Min.)</td>
</tr>
</tbody>
</table>

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**Absolute Maximum Ratings**

- **Storage Temp. Range**: -55 to +125 °C
- **Bias Voltage**: +12.5 V
- **Tuning Voltage**: +25 V
- **DC Voltage Applied to RF Out**: ±25 V

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**Phase Noise**

-170 dBc/Hz @ 10 kHz

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**Dimensions are in Inches**

Tolerances on Thru-hole pins, all unmarked pins to be grounded.

Package mounting: See Application Note AM7200 & AM7300
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250 - 500 MHz

PERFORMANCE PLOTS

Control Voltage (Vdc)

Output Power (dBm)

Frequency (MHz)

+25ºC  +85ºC  -40ºC
VOLTAGE CONTROLLED OSCILLATOR
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WIDE BANDWIDTH
250 - 500 MHz

PERFORMANCE PLOTS

0 2 4 6 8 10 12 14 16 18 20
Control Voltage (Vdc)

Tuning Sensitivity (MHz/V)

+25ºC
+85ºC
-40ºC

0 2 4 6 8 10 12 14 16 18 20
Control Voltage (Vdc)

2nd Harmonic Suppression (dB)

+25ºC
+85ºC
-40ºC