VOLTAGE CONTROLLED OSCILLATOR
SURFACE MOUNT MODEL: DCSR250-12

**FEATURES:**
- Optimized Tuning Frequency Band
- Exceptional Phase Noise Performance
- Small Size, Surface Mount
- Lead Free Patented REL-PRO® Technology
- Planar Resonator Construction

**SPECIFICATIONS (Rev. B 11/23/09)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>250 MHz</td>
</tr>
<tr>
<td>Tuning Voltage</td>
<td>0.5 - 12 VDC</td>
</tr>
<tr>
<td>Bias Voltage</td>
<td>+12 VDC @ 42 mA (Max.)</td>
</tr>
<tr>
<td>Output Power</td>
<td>+7 dBm (Min.)</td>
</tr>
<tr>
<td>Tuning Sensitivity</td>
<td>1.5 - 2.0 MHz/V (Typ.)</td>
</tr>
<tr>
<td>Output Impedance</td>
<td>50 Ohms (Nom.)</td>
</tr>
<tr>
<td>Harmonic Suppression</td>
<td>32 dB (Typ.)</td>
</tr>
<tr>
<td>Frequency Pulling</td>
<td>0.25 MHz (Typ. @ 1.75:1 VSWR)</td>
</tr>
<tr>
<td>Frequency Pushing</td>
<td>0.5 MHz/V (Typ.)</td>
</tr>
<tr>
<td>Tuning Port Capacitance</td>
<td>470 pF (Typ.)</td>
</tr>
<tr>
<td>Phase Noise @ 10 kHz</td>
<td>-126 dBc/Hz (Typ.)</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>-40 to +85 °C</td>
</tr>
</tbody>
</table>

**Absolute Maximum Ratings**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage Temp. Range</td>
<td>-55 to +125 °C</td>
</tr>
<tr>
<td>Bias Voltage</td>
<td>+12.5 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>

**Phase Noise**

-244MHz
-251.8MHz
-257.7MHz

**荐的PCB布局**

- RECOMMENDED PCB LAYOUT
- ALL UNLABELED PINS TO BE GROUNDED.

**PACKAGE MOUNTING**

- PACKAGE MOUNTING SEE APPLICATION NOTE AM7200 & AM7300

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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; 5,605,431; 6,025,625; 6,003,575; 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; 7,580,693; 7,586,381; 7,605,670; 7,636,021; 2,533,623; 2,563,174; 7,580,693; 7,612,296; 2,524,751

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VOLTAGE CONTROLLED OSCILLATOR
SURFACE MOUNT MODEL: DCSR250-12

OPTIMIZED FREQUENCY

250 MHz

PERFORMANCE PLOTS

Control Voltage (Vdc)

Frequency (MHz)

+25ºC +85ºC -40ºC

Control Voltage (Vdc)

Output Power (dBm)

+25ºC +85ºC -40ºC
VOLTAGE CONTROLLED OSCILLATOR
SURFACE MOUNT MODEL: DCSR250-12

OPTIMIZED FREQUENCY
250 MHz

PERFORMANCE PLOTS

Control Voltage (Vdc)

2nd Harmonic Suppression (dB)

-40
-35
-30
-25
-20
-15
-10
-5
0
0 1 2 3 4 5 6 7 8 9 10 11 12

Tuning Sensitivity (MHz/V)

+25ºC  +85ºC  -40ºC

Control Voltage (Vdc)

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

0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

+25ºC  +85ºC  -40ºC

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