**VOLTAGE CONTROLLED OSCILLATOR**  
**SURFACE MOUNT MODEL: DCR06569-5**  
**OPTIMIZED BANDWIDTH**  
650 - 690 MHz

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

**SPECIFICATIONS (Rev. A 02/25/08)**

**Frequency**
650 - 690 MHz

**Tuning Voltage**
See table below.

**Bias Voltage**
+5 VDC @ 26 mA (Max.)

**Output Power**
+8 dBm (Min.)

**Tuning Sensitivity**
2 - 4 MHz/V (Typ.)

**Output Impedance**
50 Ohms (Nom.)

**Harmonic Suppression**
11 dB (Typ.)

**Frequency Pulling**
0.5 MHz (Typ. @ 1.75:1 VSWR)

**Frequency Pushing**
0.25 MHz/V (Typ.)

**Tuning Port Capacitance**
115 pF (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>650 (Max.)</td>
</tr>
<tr>
<td>5</td>
<td>658 (Min.)</td>
</tr>
<tr>
<td>9</td>
<td>670 (Min.)</td>
</tr>
<tr>
<td>12</td>
<td>680 (Min.)</td>
</tr>
<tr>
<td>15</td>
<td>685 (Min.)</td>
</tr>
<tr>
<td>20</td>
<td>690 (Min.)</td>
</tr>
</tbody>
</table>

**Absolute Maximum Ratings**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage Temp. Range</td>
<td>-55 to +125 °C</td>
</tr>
<tr>
<td>Bias Voltage</td>
<td>+5.5 V</td>
</tr>
<tr>
<td>Tuning Voltage</td>
<td>+28 V</td>
</tr>
<tr>
<td>DC Voltage Applied to RF Out</td>
<td>± 25 V</td>
</tr>
</tbody>
</table>

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**Phase Noise**

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**Recommended PCB Layout**

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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; 5,805,431; 6,525,623; 6,850,575; 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.

Pending: 60/493075; 60/501371 & 60/501790; 60/527957 & 60/528670; 60/563481; 60/564173; 60/589090; 60/601823; 60/605791; EV31369834; 1 1/259766; 60/622485 & 60/710310; 10/937525/60/736901; 60/732787; 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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PERFORMANCE PLOTS

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SURFACE MOUNT MODEL: DCRO6569-5

OPTIMIZED BANDWIDTH
650 - 690 MHz

PERFORMANCE PLOTS

Tuning Sensitivity (MHz/V)

Control Voltage (Vdc)

+25ºC  +85ºC  -40ºC

2nd Harmonic Suppression (dB)

Control Voltage (Vdc)

+25ºC  +85ºC  -40ºC

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