FEATURES:

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

SPECIFICATIONS (Rev. A 10/09/08)

Frequency | 450 - 520 MHz
Tuning Voltage | See table below.
Bias Voltage | +5 VDC @ 32 mA (Max.)
Output Power | -6 dBm (Min.)
Tuning Sensitivity | 14 - 22 MHz/V (Typ.)
Output Impedance | 50 Ohms (Nom.)
Harmonic Suppression | 20 dB (Typ.)
Frequency Pulling | 0.05 MHz (Typ. @ 1.75:1 VSWR)
Frequency Pushing | 0.1 MHz/V (Typ.)
Tuning Port Capacitance | 100 pF (Typ.)
Phase Noise @ 10 kHz | -118 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>0.3</td>
<td>450 (Max.)</td>
</tr>
<tr>
<td>4.7</td>
<td>520 (Min.)</td>
</tr>
</tbody>
</table>

Absolute Maximum Ratings

| Storage Temp. Range | -55 to +125 °C |
| Bias Voltage        | +5.5 V         |
| Tuning Voltage      | +7 V           |
| DC Voltage Applied to RF Out | ± 25 V       |

Package # 278LF

Phase Noise

450.1MHz, 474.9MHz, 495.9MHz, 514.5MHz, 529.3MHz

Package Mounting: See Application Note AN7200 & AN7300

RECOMMENDED PCB LAYOUT

Dimensions are in inches.

Tolerances on three decimal places = ± 0.005

ALL UNLABELED PINS TO BE GROUND

REL-PRO® PATENT NO. 7,612,296

Operating Temperature Range

-40 to +85 °C

Harmonic Suppression

20 dB (Typ.)
VOLTAGE CONTROLLED OSCILLATOR
SURFACE MOUNT MODEL: DCRO4552-5

OPTIMIZED BANDWIDTH

450 - 520 MHz

This product is manufactured under one or more of the following patents. Approved: 5,160,810; 5,122,621; 5,390,349; 5,410,449; 5,520,754; 5,585,451; 6,323,623; 6,853,575; 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; 2,554,764; 7,545,229; 7,580,693; 7,586,381; 7,605,670; 7,612,296; 7,636,021; 10/1105904; 11/259766; 2,524,751

| Pending: 80/430875; 80/501371 & 60/501371; 80/501790 & 60/501790; 80/502071 & 60/502071; 80/504771 & 60/504771; 80/509990 & 60/509990; 80/517293; 80/517493; 80/519963; 11/259766; 2,533,623 & 2,533,624; 60/701031; 10/937525 & 60/736901; 60/732787; 7,495,525; 2,548,311; 2,548,317; 7,545,229; 2,524,751

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PERFORMANCE PLOTS
VOLTAGE CONTROLLED OSCILLATOR
SURFACE MOUNT MODEL: DCRO4552-5

OPTIMIZED BANDWIDTH
450 - 520 MHz

PERFORMANCE PLOTS

Tuning Sensitivity (MHz/V)

Control Voltage (Vdc)

+25ºC  +85ºC  -40ºC

2nd Harmonic Suppression (dB)

Control Voltage (Vdc)

+25ºC  +85ºC  -40ºC