

# VOLTAGE CONTROLLED OSCILLATOR

## SURFACE MOUNT MODEL: DCRO4552-5

OPTIMIZED BANDWIDTH

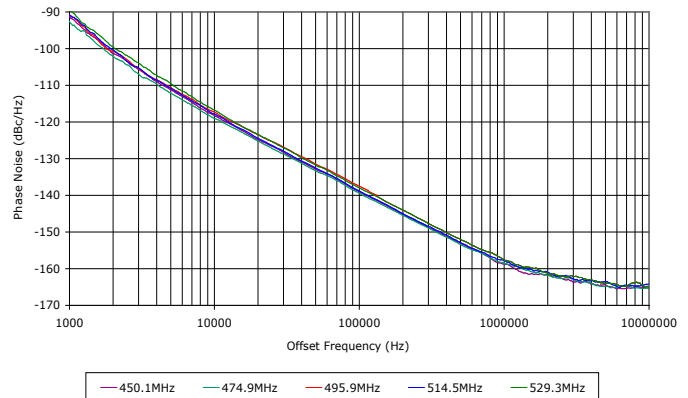
450 - 520 MHz

### FEATURES:

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



### Phase Noise



### 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                 |

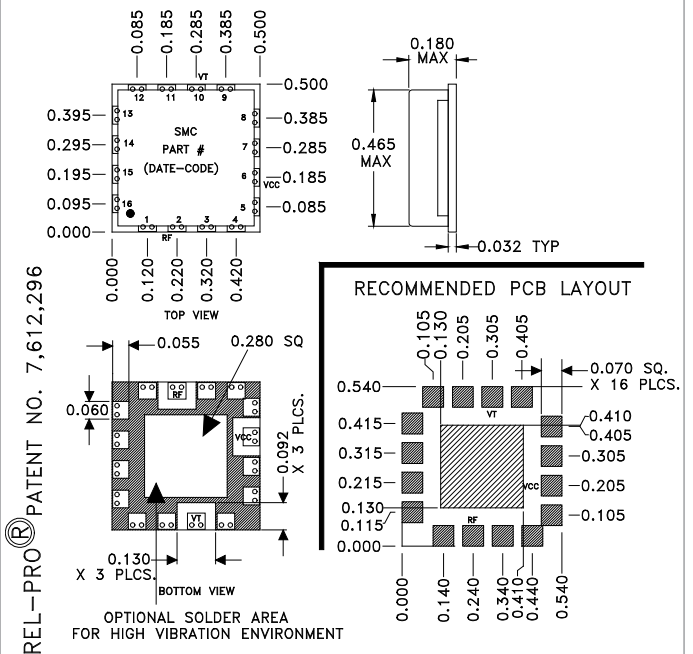
### Guaranteed Tuning Specifications

| Tuning Voltage ( V ) | Frequency ( MHz ) |
|----------------------|-------------------|
| 0.3                  | 450 (Max.)        |
| 4.7                  | 520 (Min.)        |

### 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



TOLERANCES ON THREE DECIMAL PLACES= ± 0.015  
 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; 6,525,623; 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; 11/259766; 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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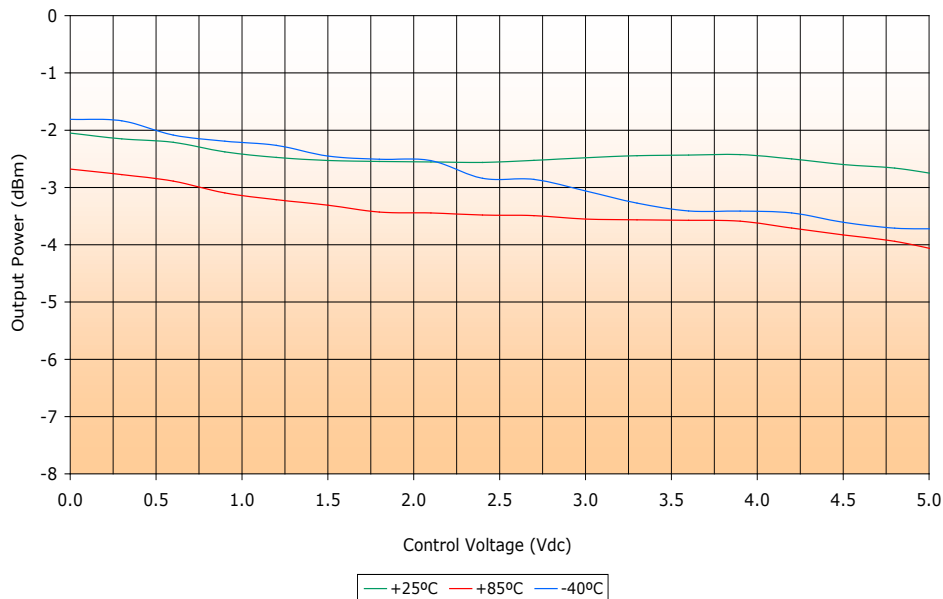
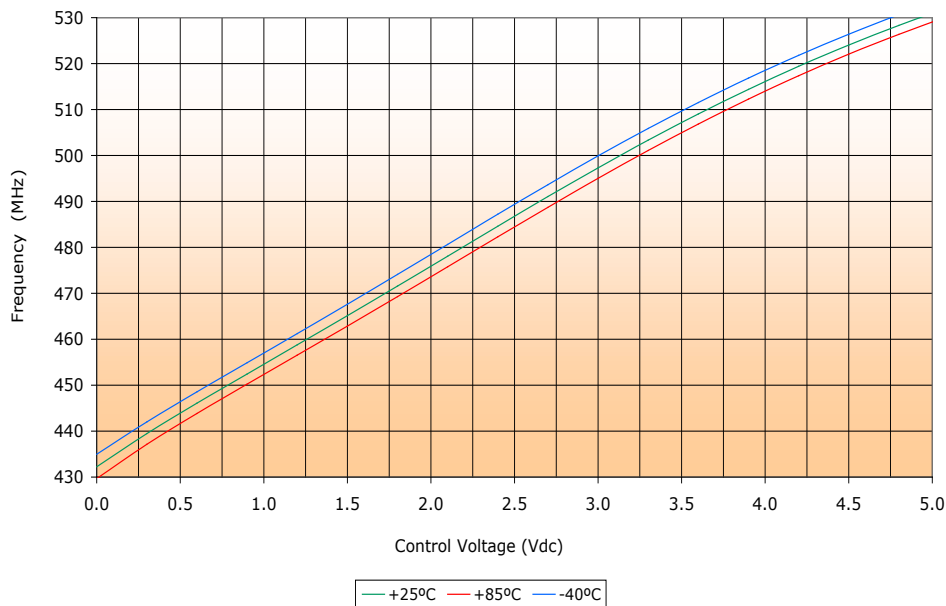
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OPTIMIZED BANDWIDTH

450 - 520 MHz

PERFORMANCE PLOTS



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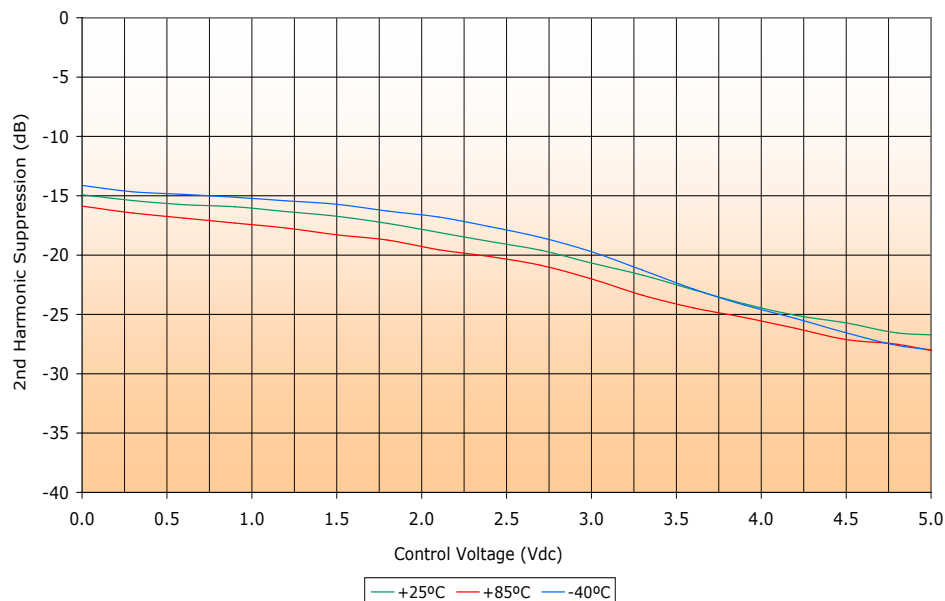
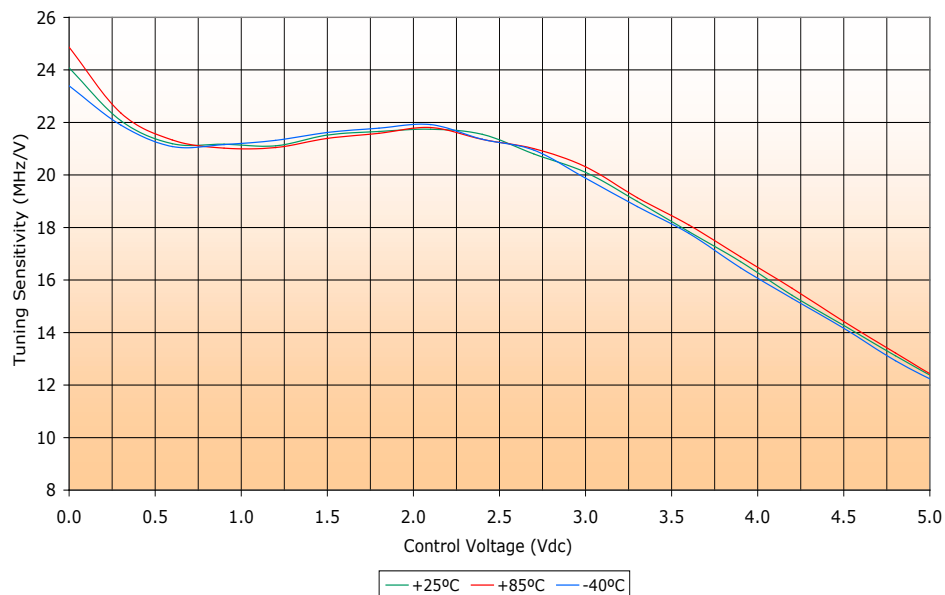
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