

# DIELECTRIC RESONATOR OSCILLATOR

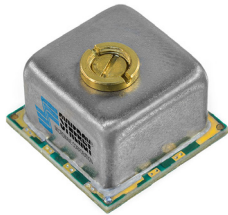
## SURFACE MOUNT MODEL: SDR01121-7

### FREQUENCY

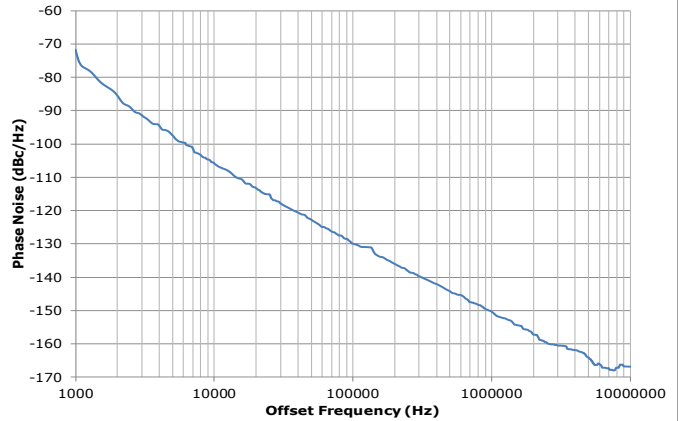
### 11.217 GHz

#### FEATURES:

- ▶ Exceptional Phase Noise Performance
- ▶ Small Size Surface Mount
- ▶ Lead Free RoHS Compliant



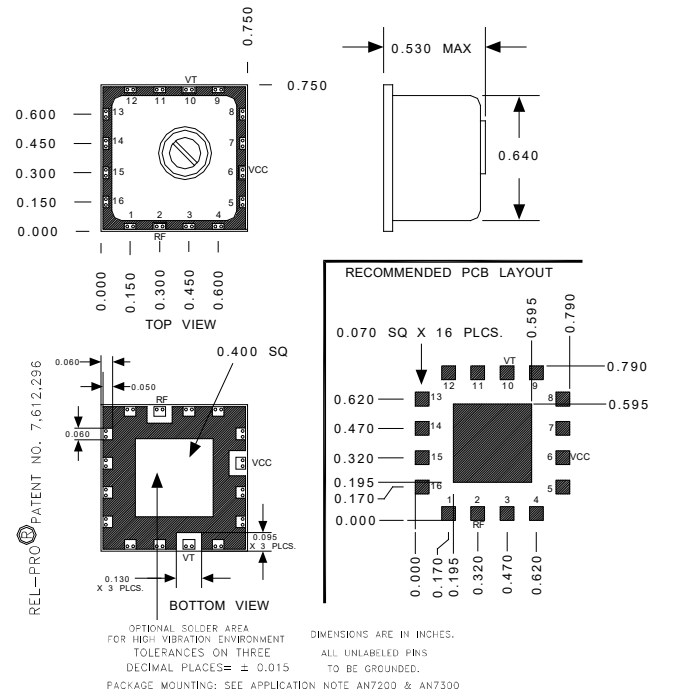
#### Phase Noise



#### SPECIFICATIONS

| Frequency                   | 11.217 GHz   |               |               |        |      |         |      |       |      |
|-----------------------------|--|---------------|---------------|--------|------|---------|------|-------|------|
| Tuning Voltage              | 1 - 12 VDC   |               |               |        |      |         |      |       |      |
| Bias Voltage                | +7 VDC @ 25 mA (Max.)  |               |               |        |      |         |      |       |      |
| Output Power                | 0 dBm (Min.)   |               |               |        |      |         |      |       |      |
| Tuning Sensitivity          | 0.3 MHz/V (Typ.)   |               |               |        |      |         |      |       |      |
| Thermal Drift               | 2 ppm / °C (Typ.)  |               |               |        |      |         |      |       |      |
| Output Impedance            | 50 Ohms (Nom.)   |               |               |        |      |         |      |       |      |
| Harmonic Suppression        | 30 dBc (Typ.)  |               |               |        |      |         |      |       |      |
| Frequency Pulling           | 1.2 MHz (Typ. @ 1.75:1 VSWR)   |               |               |        |      |         |      |       |      |
| Frequency Pushing           | 1.7 MHz/V (Typ.)   |               |               |        |      |         |      |       |      |
| Tuning Port Capacitance     | 35 pF (Typ.)   |               |               |        |      |         |      |       |      |
| Modulation Bandwidth        | > 20 MHz   |               |               |        |      |         |      |       |      |
| Phase Noise                 | <table border="1"> <thead> <tr> <th>Offset</th> <th>dBc/Hz (Typ.)</th> </tr> </thead> <tbody> <tr> <td>10 kHz</td> <td>-106</td> </tr> <tr> <td>100 kHz</td> <td>-130</td> </tr> <tr> <td>1 MHz</td> <td>-150</td> </tr> </tbody> </table> | Offset        | dBc/Hz (Typ.) | 10 kHz | -106 | 100 kHz | -130 | 1 MHz | -150 |
|                             | Offset   | dBc/Hz (Typ.) |               |        |      |         |      |       |      |
|                             | 10 kHz   | -106          |               |        |      |         |      |       |      |
|                             | 100 kHz  | -130          |               |        |      |         |      |       |      |
| 1 MHz                       | -150   |               |               |        |      |         |      |       |      |
| Jitter                      | 96 fs (@ 1 kHz to 30 MHz) (Typ.)   |               |               |        |      |         |      |       |      |
| Operating Temperature Range | -15 to +75°C   |               |               |        |      |         |      |       |      |

Package # 396



#### Absolute Maximum Ratings

|                              |               |
|------------------------------|---------------|
| Storage Temp. Range          | -30 to +85 °C |
| Bias Voltage                 | +7.5 V        |
| Tuning Voltage               | +16 V         |
| DC Voltage Applied to RF Out | ±25 V         |

#### Notes:

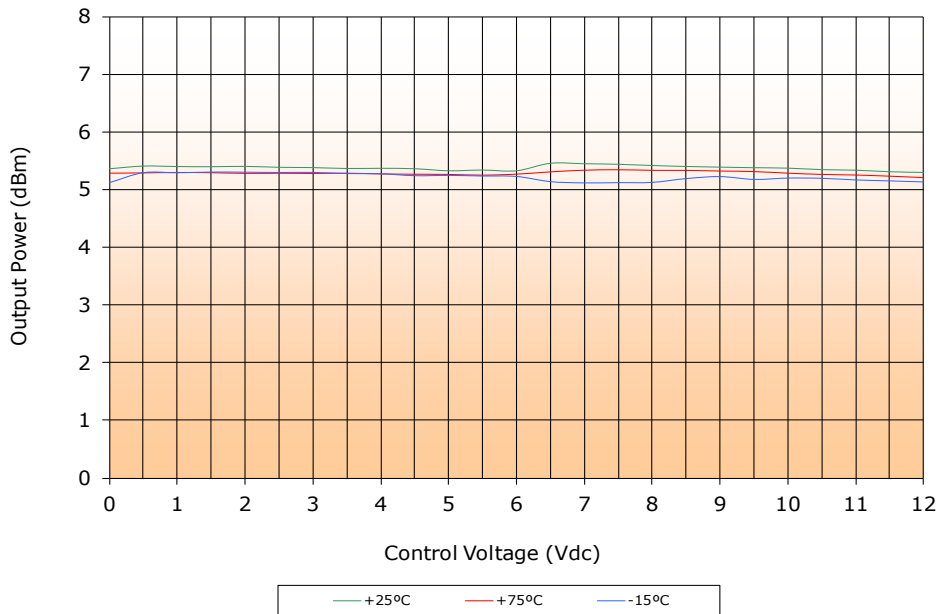
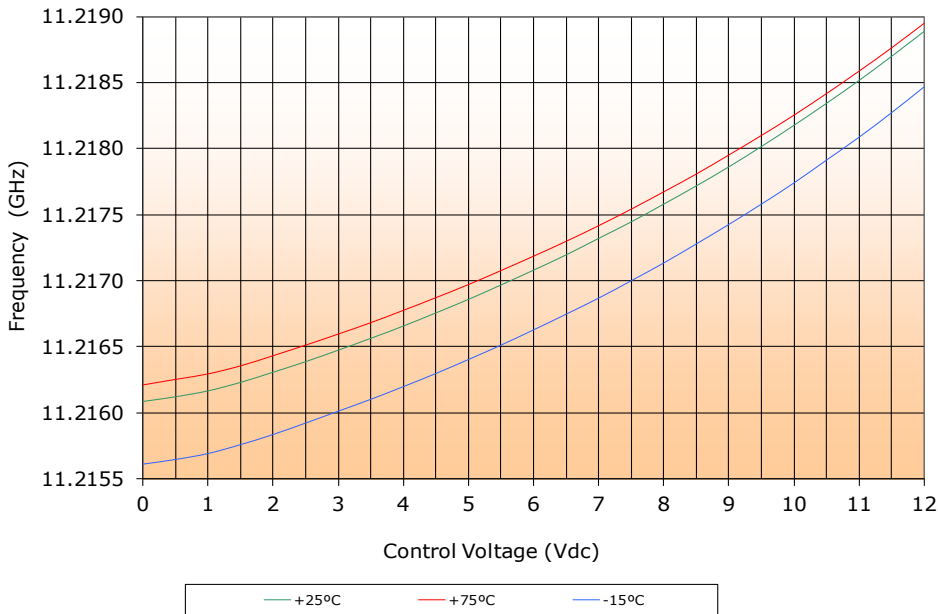
1. Tuning of the mechanical screw can cause significant shifts in frequency and cause irreversible damage to the product. Warranty is void if tuning screw exceeds ±0.5 turn max.
2. Test data measured with bias voltage at +8V.
3. Specifications guaranteed at 11.217 GHz.

# DIELECTRIC RESONATOR OSCILLATOR SURFACE MOUNT MODEL: SDRO1121-7

FREQUENCY

11.217 GHz

PERFORMANCE PLOTS



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