

DIELECTRIC RESONATOR OSCILLATOR

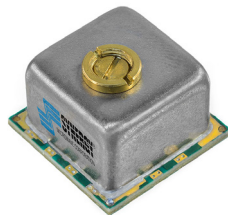
SURFACE MOUNT MODEL: SDRO1000-8

FREQUENCY

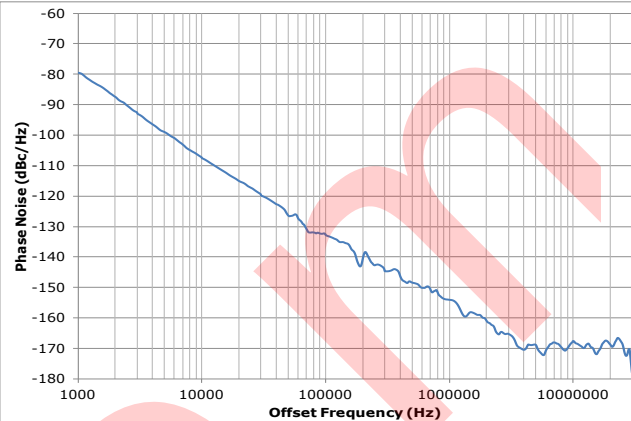
10 GHz

FEATURES:

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



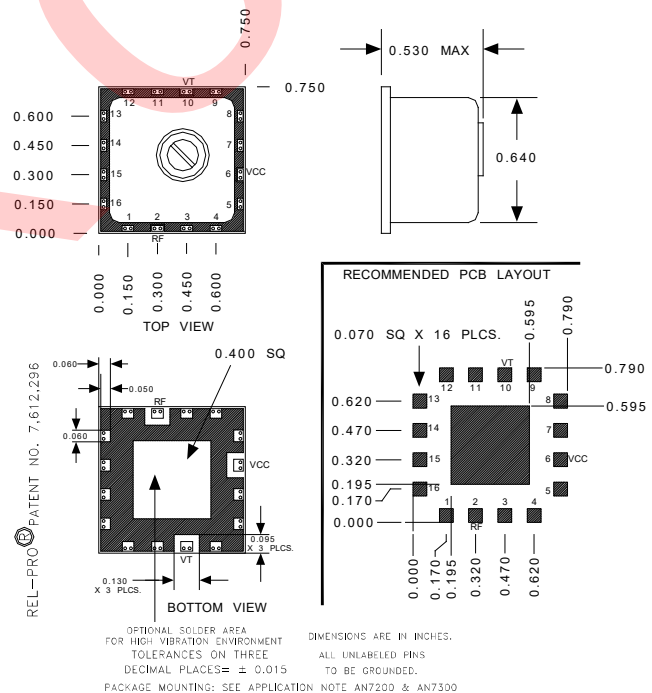
Phase Noise



SPECIFICATIONS (Rev. E 07/08/19)

Frequency	10 GHz										
Tuning Voltage	1 - 15 VDC										
Bias Voltage	+8 VDC @ 25 mA (Max.)										
Output Power	-2 dBm (Min.)										
Tuning Sensitivity	0.4 MHz/V (Typ.)										
Thermal Drift	2 ppm / °C (Typ.)										
Output Impedance	50 Ohms (Nom.)										
Harmonic Suppression	40 dBc (Typ.)										
Frequency Pulling	500 kHz (Typ. @ 1.75:1 VSWR)										
Frequency Pushing	500 kHz/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>-107</td></tr> <tr> <td>100 kHz</td><td>-127</td></tr> <tr> <td>1 MHz</td><td>-147</td></tr> <tr> <td>10 MHz</td><td>-165</td></tr> </tbody> </table>	Offset	dBc/Hz (Typ.)	10 kHz	-107	100 kHz	-127	1 MHz	-147	10 MHz	-165
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10 kHz	-107										
100 kHz	-127										
1 MHz	-147										
10 MHz	-165										
Jitter	90 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	+8.5 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 10 GHz.

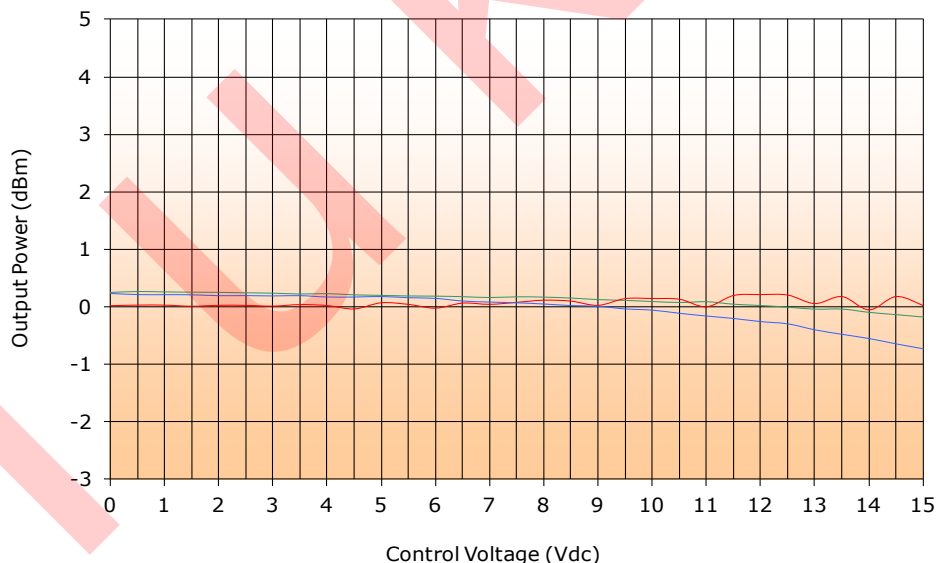
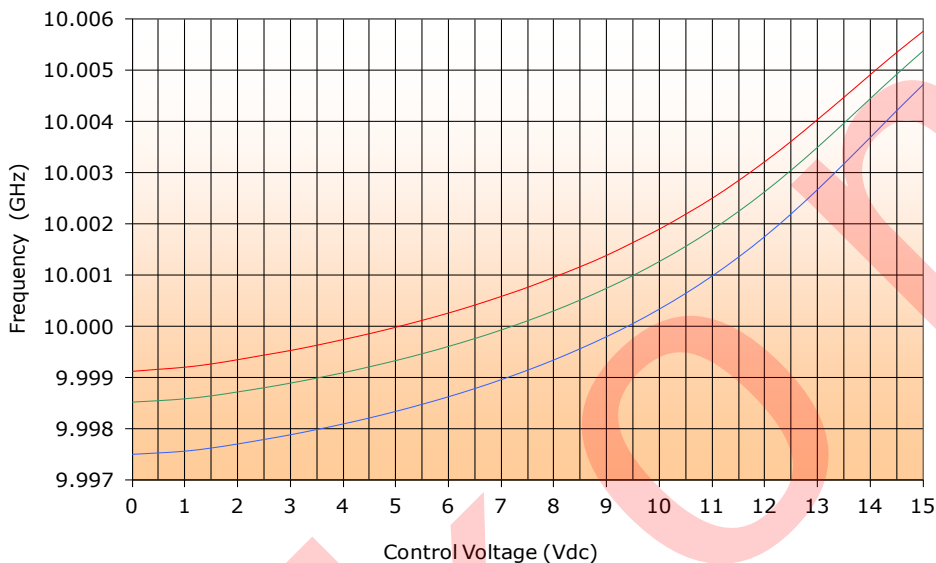
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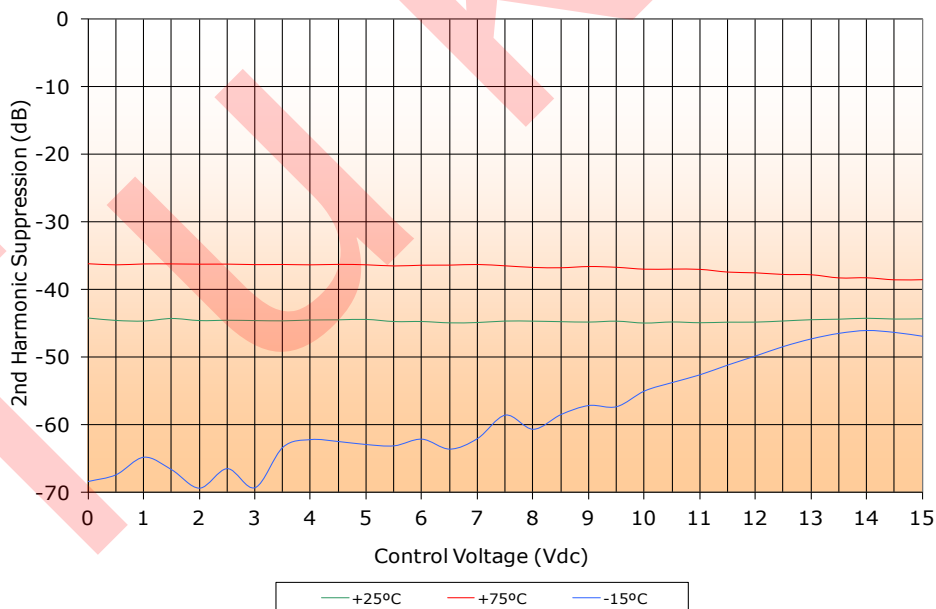
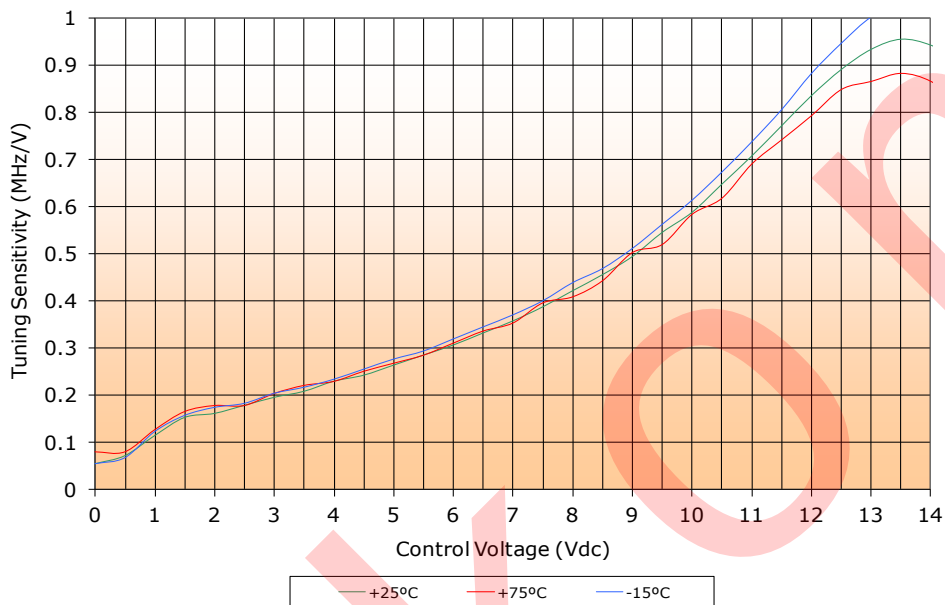
PERFORMANCE PLOTS



DIELECTRIC RESONATOR OSCILLATOR SURFACE MOUNT MODEL: SDRO1000-8

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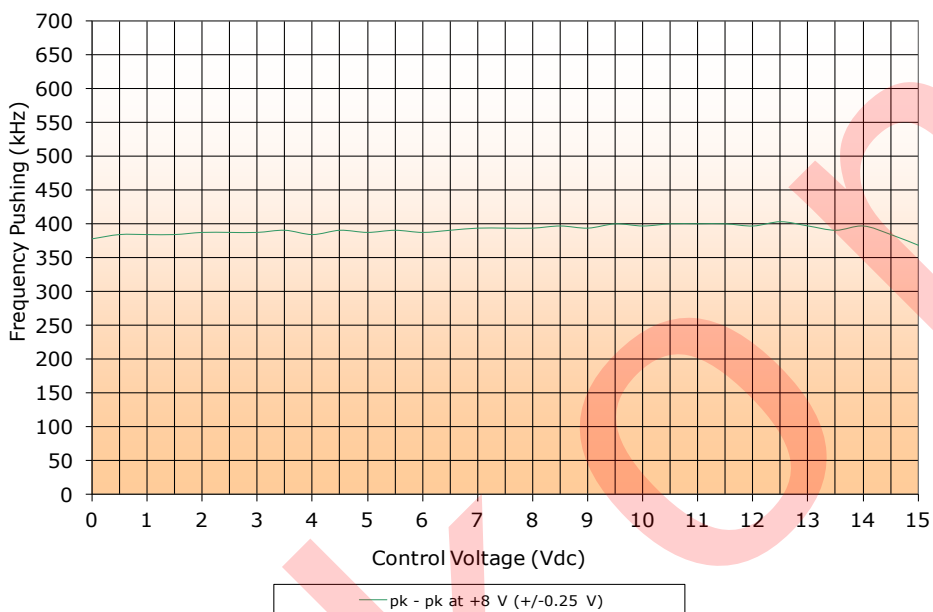
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