

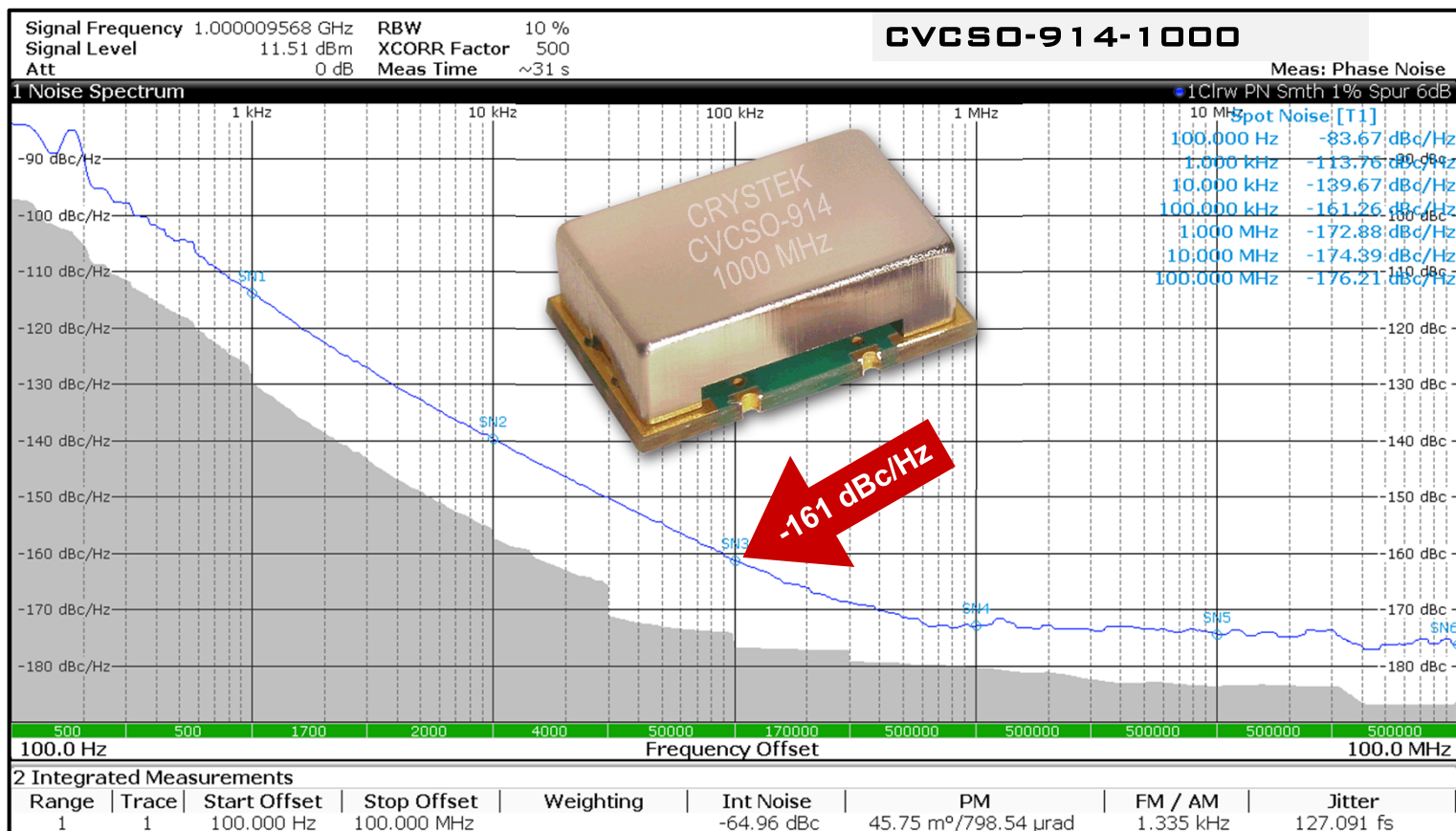


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Ultra-Low Phase Noise True SineWave 1GHz SAW Based VCISO

CVCSO-914-1000 Model
9×14 mm SMD, 5.0V, SineWave



Model CVCSO-914-1000 is a 1 GHz voltage-controlled SAW (surface acoustic wave) Clock Oscillator (VCISO). SAW crystal technology provides low-noise and low-jitter performance with true sinewave output. Features include -138 dBc/Hz phase noise at 10 kHz offset, 5V input voltage, -20°C to +70°C operating temperature, and 9×14 mm SMT package. The CVCSO-914X offers an operating temperature range of -40°C to +85°C. The oscillator has no sub-harmonic and the second harmonic is typically -20 dBc.

Applications include PLL frequency translation, test and measurement, avionics, point-to-point radios, and multi-point radios.

Rev: AB

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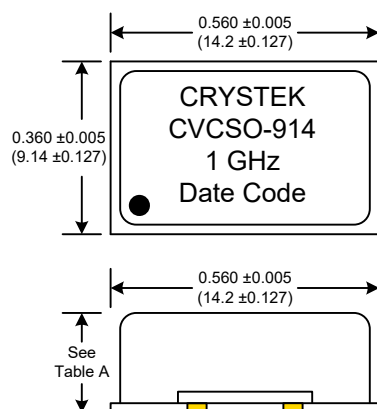
Ultra-Low Phase Noise True SineWave 1GHz SAW Based VCSO

CVCSO-914-1000 Model

9×14 mm SMD, 5.0V, SineWave

Frequency: 1 GHz
Temperature Range: -20°C to +70°C
-40°C to +85°C
CVCSO-914X-1000 option
-40°C to 90°C
Storage: -40°C to 90°C
Input Voltage: 5.0V ±0.25V
Control Voltage Range: 0V to 5.0V
Settability At Nominal (25°C): +0.5V to 2.0V
Tuning Sensitivity (Kv): +120ppm/V
Frequency vs Temperature: ±200ppm Typical
Input Current: 25mA Typical, 35mA Max

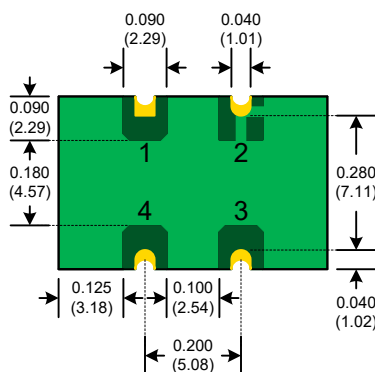
Output: True SineWave
Pullability APR: ±50ppm Min
Linearity: ±20% Max
Output Power: +10dBm Min into 50 Ω Load
Start-Up Time: 2ms Typical, 10ms Max
2nd Harmonic: -20dBc Typical, -15dBc Max
Sub-Harmonics: None
Modulation BW: >20kHz @ -3dB
Phase Noise Typical:
1kHz -110 dBc/Hz
10kHz -139 dBc/Hz
100kHz -160 dBc/Hz
1MHz -170 dBc/Hz
10MHz -174 dBc/Hz
G-sensitivity: 0.9×10⁻⁹ per g



Package Height Options (Max)

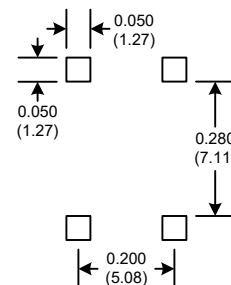
	inches	mm
Standard	0.210	5.33
Option L	0.135	3.43

Table A



PAD FINISH: Immersion Gold (ENIG); 5 micro inches maximum

SUGGESTED PAD LAYOUT



Pad	Connection
1	Volt. Control
2	GND
3	Output
4	Vdd

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CVCSO-914-1000 Model
9x14 mm SMD, 5.0V, SineWave

Crystek Part Number Guide

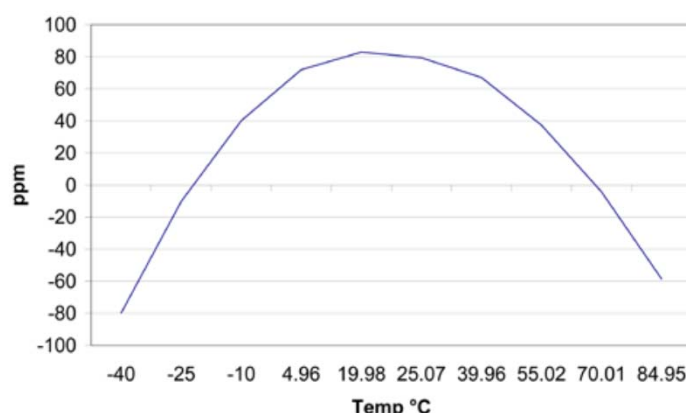
CVCSO - 914 X L - 1000.000

#1 #2 #3 #4

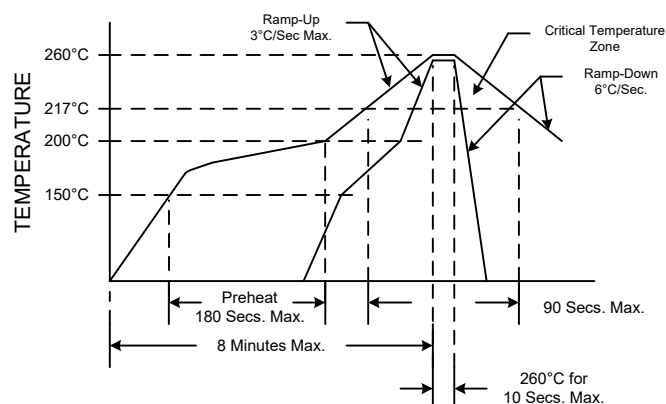
#1 Crystek Saw Voltage Controlled Oscillator
#2 Model 914
#3 Temperature Range (X = -40/85°C) (Blank = -20/70°C)
#4 Height (L = 0.135") (Blank = 0.210")

Parameter	Conditions
Mechanical Shock	MIL-STD-883, Method 2002, Condition B
Mechanical Vibration	MIL-STD-883, Method 2007, Condition A
Solderability	MIL-STD-883, Method 2003
Solvent Resistance	MIL-STD-202, Method 215
Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition I or J
Thermal Shock	MIL-STD-883, Method 1011, Condition A
Moisture Resistance	MIL-STD-883, Method 1004

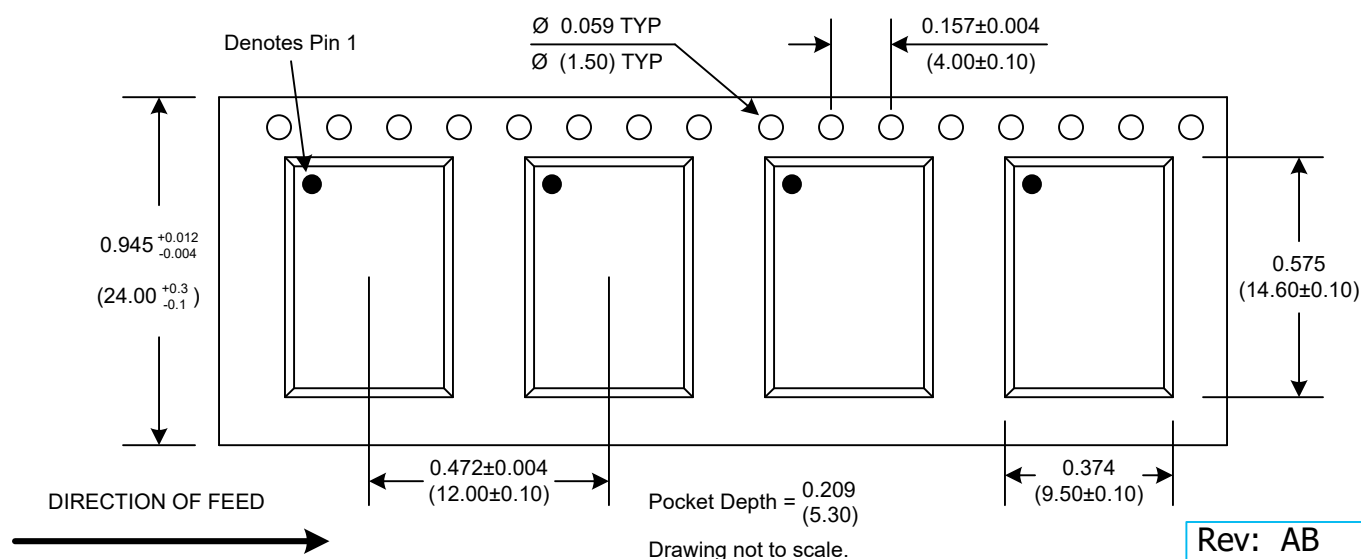
Frequency vs Temperature



RECOMMENDED REFLOW SOLDERING PROFILE



TAPE AND REEL



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