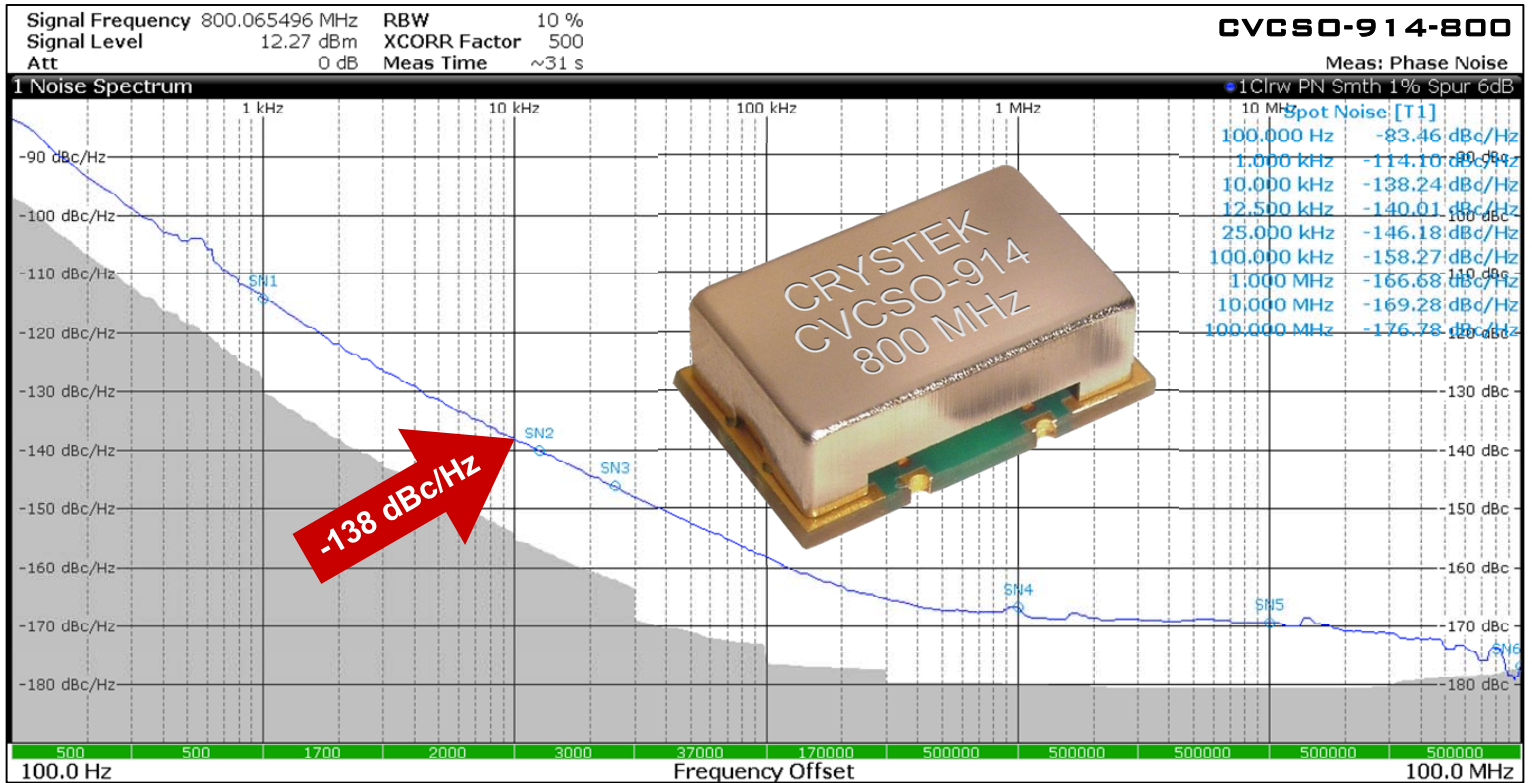


# Ultra-Low Phase Noise True SineWave SAW Based VCISO

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



Model CVCSO-914 is a 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 -135 dBc/Hz phase noise at 10 kHz offset at 1 GHz, 5V input voltage, -20°C to +70°C operating temperature, and 9×14 mm SMT package. 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: W  
Date: 08-Dec-2021  
Page 1 of 4

# Ultra-Low Phase Noise True SineWave SAW Based VCISO

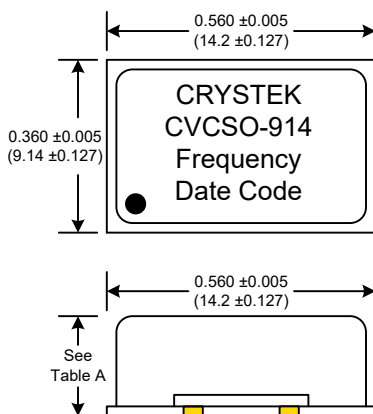
**CVCSO-914 Model**  
9×14 mm SMD, 5.0V, SineWave

<b>Frequency Range:</b>	<b>500.000 MHz to 1000 MHz</b>
<b>Temperature Range:</b>	<b>0°C to +70°C</b>
<b>CVCSO-914A option</b>	<b>0°C to +50°C</b>
<b>CVCSO-914M option</b>	<b>-20°C to +70°C</b>
<b>CVCSO-914X option</b>	<b>-40°C to +85°C</b>
<b>Storage:</b>	<b>-40°C to 90°C</b>
<b>Input Voltage:</b>	<b>5.0V ±0.25V</b>
<b>Control Voltage Range:</b>	<b>0V to 5.0V</b>
<b>Tuning Sensitivity (Kv):</b>	<b>+120 ppm/V Typical</b>
<b>Settability At Nominal (25°C):</b>	<b>1.5V +0.5V -1.0V</b>
<b>Frequency vs Temperature:</b>	<b>±200ppm Typical</b>
<b>Input Current:</b>	<b>25mA Typical, 35mA Max</b>



<b>Output:</b>	<b>True SineWave</b>
<b>Pullability APR:</b>	<b>±50ppm Min</b>
<b>Linearity:</b>	<b>±20% Max</b>
<b>Output Power:</b>	<b>+10dBm Min into 50 Ω Load</b>
<b>Start-Up Time:</b>	<b>2ms Typical, 10ms Max</b>
<b>2<sup>nd</sup> Harmonic:</b>	<b>-20dBc Typical, -15dBc Max</b>
<b>Sub-Harmonics:</b>	<b>None</b>
<b>Modulation BW:</b>	<b>&gt;20kHz @ -3dB</b>

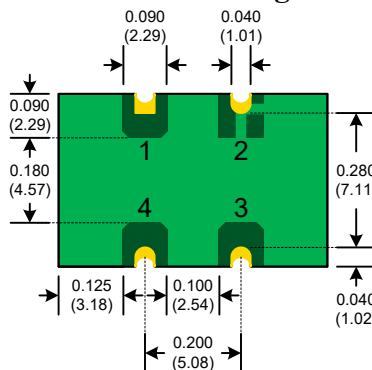
**G-sensitivity:** **0.9×10<sup>-9</sup> per G**  
**Weight:** **0.816 g**



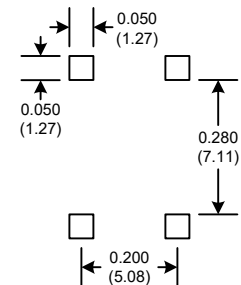
Package Height Options (Max)

	inches	mm
Standard	0.210	5.33
Option L	0.135	3.43

Table A



SUGGESTED PAD LAYOUT



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

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

Rev: W  
Date: 08-Dec-2021  
Page 2 of 4



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**CVCSO-914 Model**  
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### Crystek Part Number Guide

CVCSO - 914 X L - 640.000

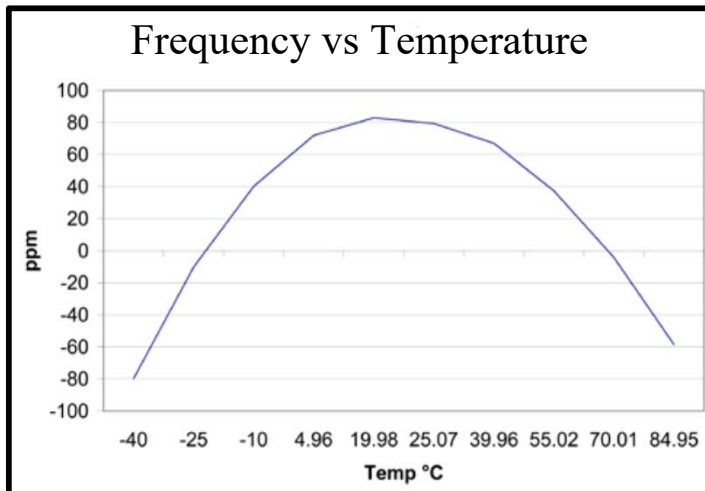
#1 #2 #3 #4 #5

- #1 Crystek Saw Voltage Controlled Oscillator
- #2 Model 914
- #3 Temperature Range (X = -40/85°C) (M = -20/70°C)  
(Blank = 0/70°C)
- #4 Height (L = 0.135") (Blank = 0.210")
- #5 Frequency in MHz: 3 or 6 decimal places

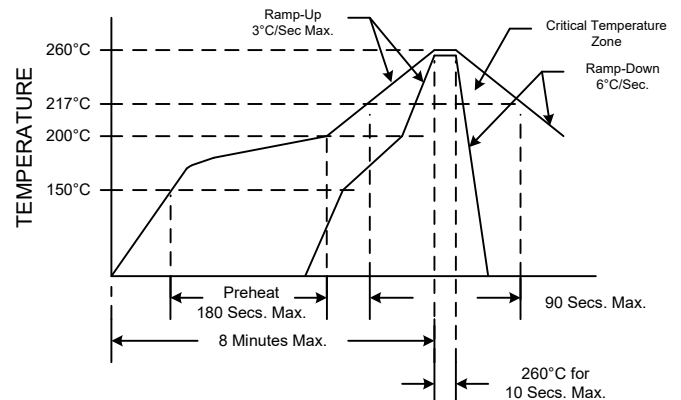
Available Frequencies (MHz):

640.000	916.000
800.000	1000.000
840.000	

Custom Frequencies Available with NRE Fee



### RECOMMENDED REFLOW SOLDERING PROFILE



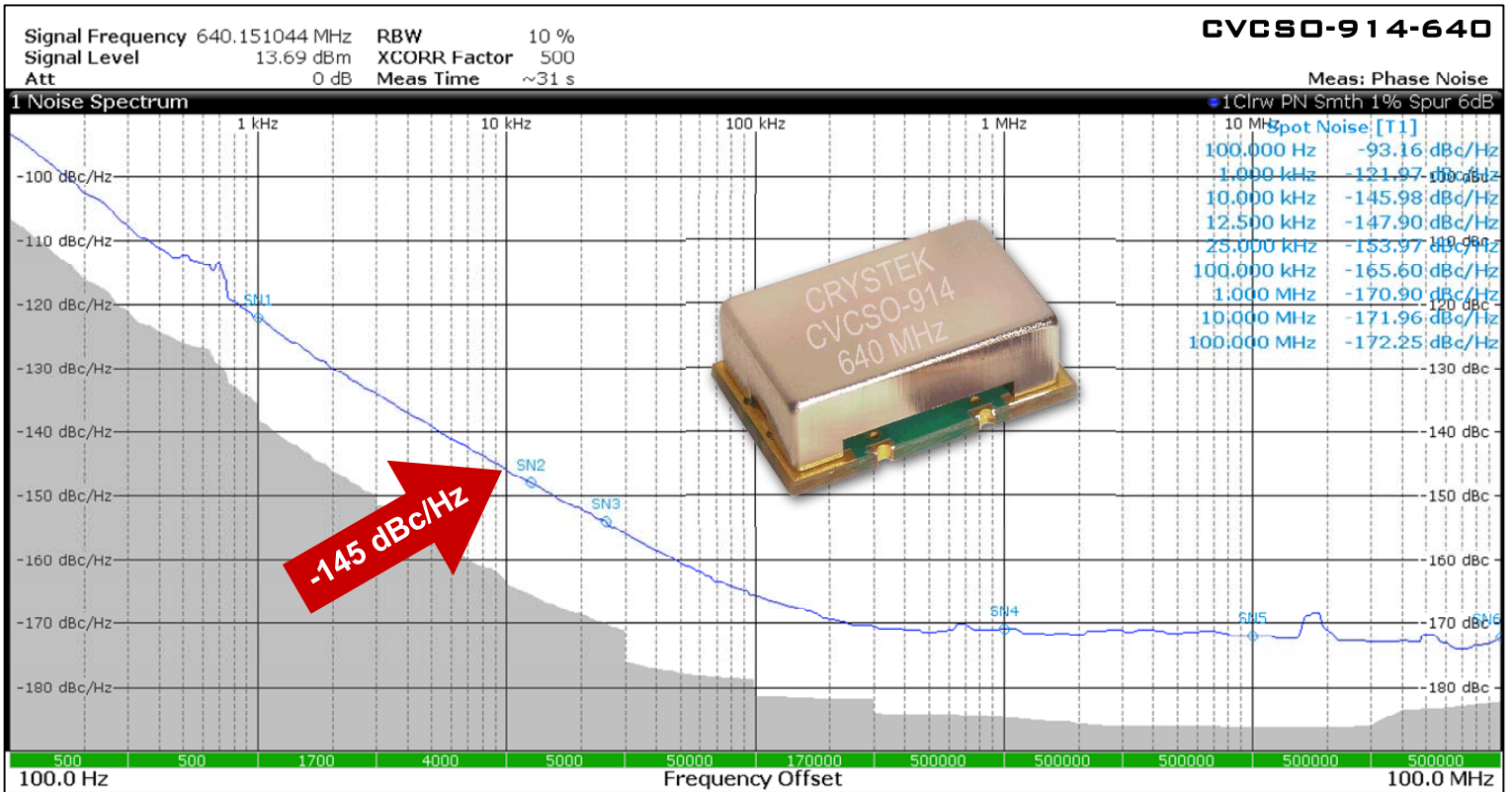
Parameter	Conditions
Mechanical Shock	MIL-STD-883, Method 2002, Condition B
Mechanical Vibration	MIL-STD-883, Method 2007, Condition A
Solderability	MIL-STD-883, Method 2003
Solvent Resistance	MIL-STD-202, Method 215
Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition I or J
Thermal Shock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

Rev: W  
Date: 08-Dec-2021  
Page 3 of 4

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No liability is assumed as a result of its use or application.

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Rev: W  
Date: 08-Dec-2021  
Page 4 of 4