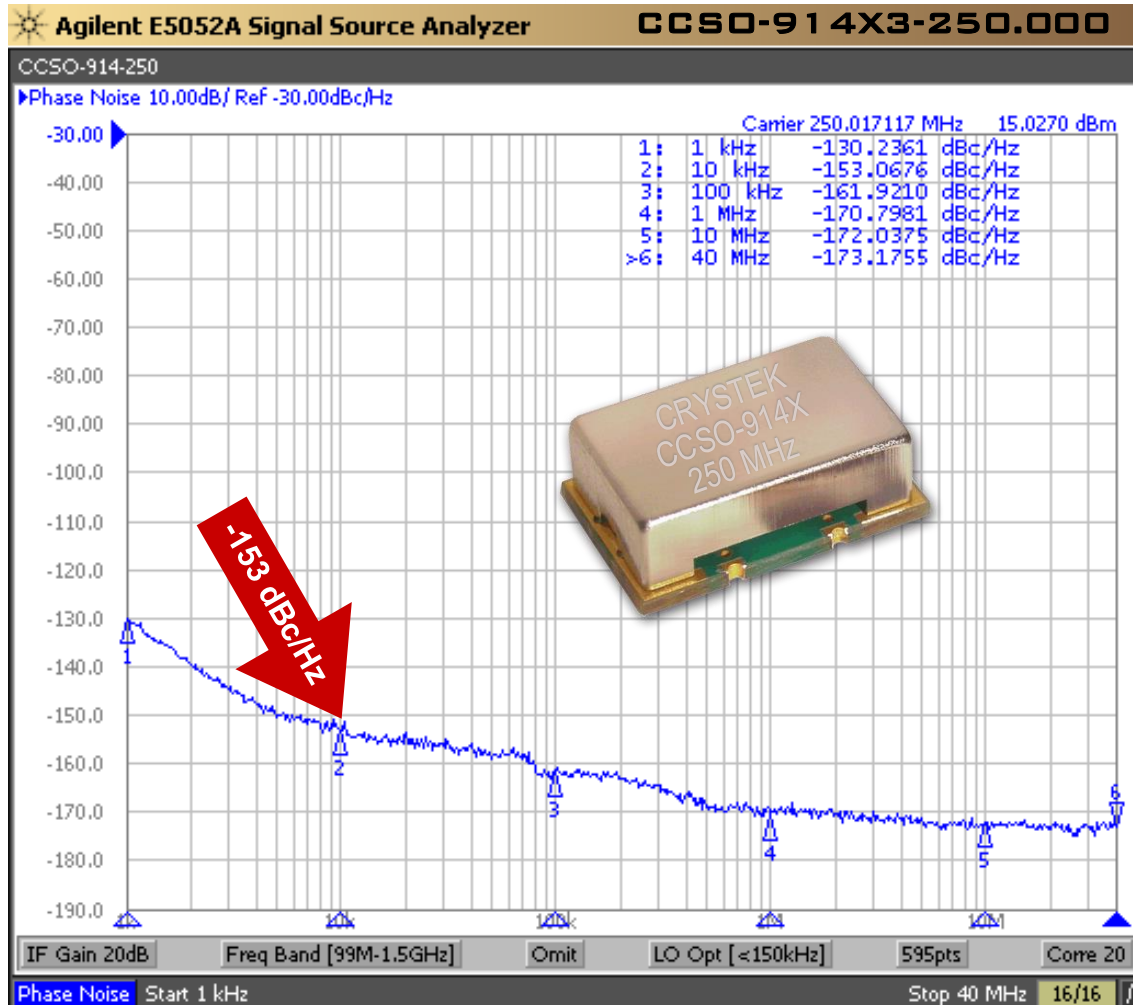


Ultra-Low Phase Noise SAW Clock

Frequency Range:

245.760 MHz to 1000 MHz



Model CCSO-914X is a SAW (surface acoustic wave) Clock Oscillator (CCSO). 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 at 1 GHz, 3.3V & 5V input voltage available, -40°C to +85°C operating temperature, FR5 PCB and 9×14 mm SMT package. The oscillator has no sub-harmonic and the second harmonic is typically -20 dBc.

Applications include:

Analog to Digital Converters (A/D Converters), System Clock for Network Clock Generator/Synchronizer, Clock for DDS, Test and Measurement, Avionics, Point-to-Point Radios, and Multi-point Radios.

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CCSO-914X
True SineWave
SAW Based Clock Oscillator
9x14mm SMD
3.3 & 5.0 Volt



Frequency Range:	245.760 MHz to 1000 MHz
Temperature Range:	-40°C to +85°C
Storage:	-45°C to 90°C
Input Voltage:	(option 3) 3.3V ± 0.165V
	(standard) 5.0V ± 0.25V
Frequency vs Temperature (Typical):	±200ppm (-40/85)
	±150ppm (0/70)
Input Current:	25mA Typical, 35mA Max
Output:	True SineWave
Output Power:	(3.3V) +5dBm Min into 50 Ω Load
	(5.0V) +8dBm Min into 50 Ω Load
Start-Up Time:	2mSec Typical, 10mSec Max
2nd Harmonic:	-20dBc Typical, -15dBc Max
Sub-Harmonics:	None

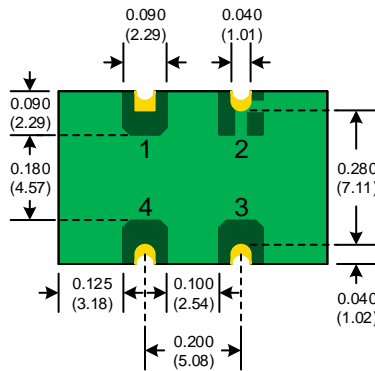
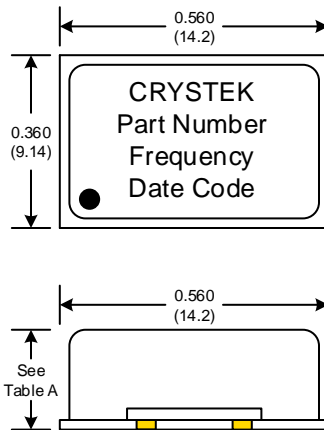


Phase Noise Typical @ 1 GHz:

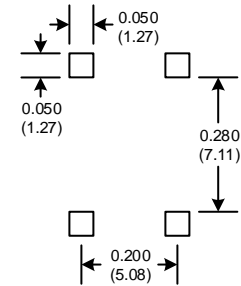
1kHz	-110 dBc/Hz
10kHz	-138 dBc/Hz
100kHz	-150 dBc/Hz
1MHz	-160 dBc/Hz
10MHz	-170 dBc/Hz

G-sensitivity:

0.9×10⁻⁹ per g



SUGGESTED PAD LAYOUT



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

Pad	Connection
1	N/C
2	GND
3	Output
4	Vdd

Package Height Options

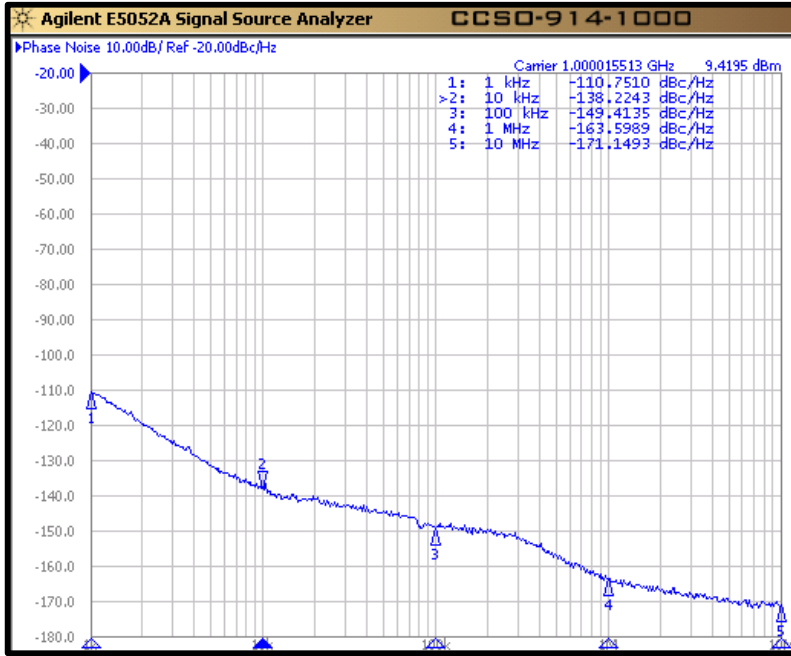
	inches	mm
Standard	0.210	5.33
Option L	0.135	3.43

Table A

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True SineWave
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Available Frequencies (MHz):

245.760	622.080
250.000	800.000
433.920	916.000
500.000	1000.000

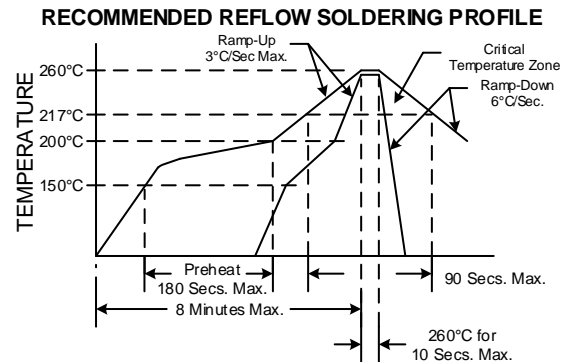
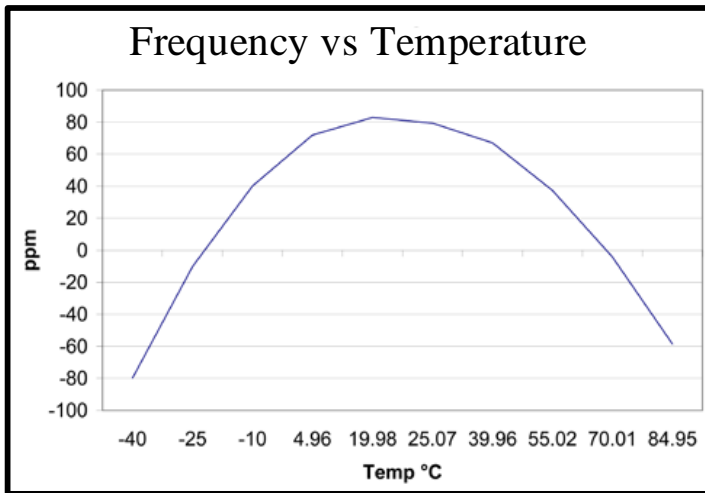
Custom Frequencies Available with NRE Fee

Crystek Part Number Guide

CCSO - 914X 3 L - 1000.000
#1 #2 #3 #4 #5

- #1 Crystek Saw Osc.
- #2 Model 914 with -40/85°C Temperature Range
- #3 (3 = 3.3Volts) (Blank = 5 Volts)
- #4 Height (L = 0.135") (Blank = 0.210")
- #5 Frequency in MHz: 3 or 6 decimal places

Similar Product in 5x7.5mm Package
[Click Here](#)

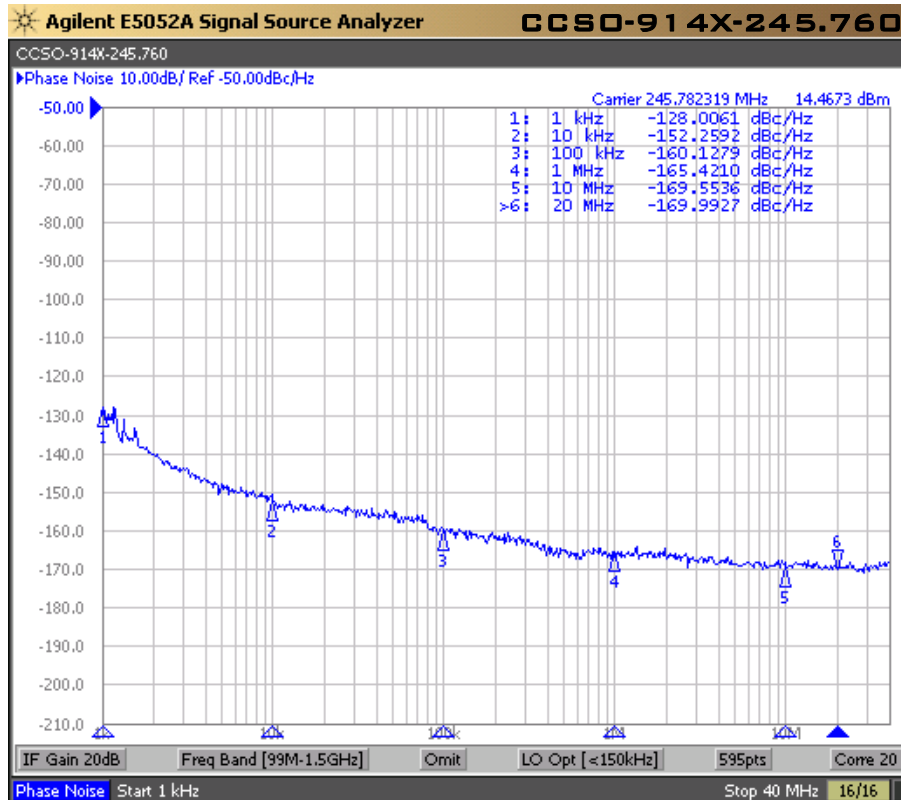
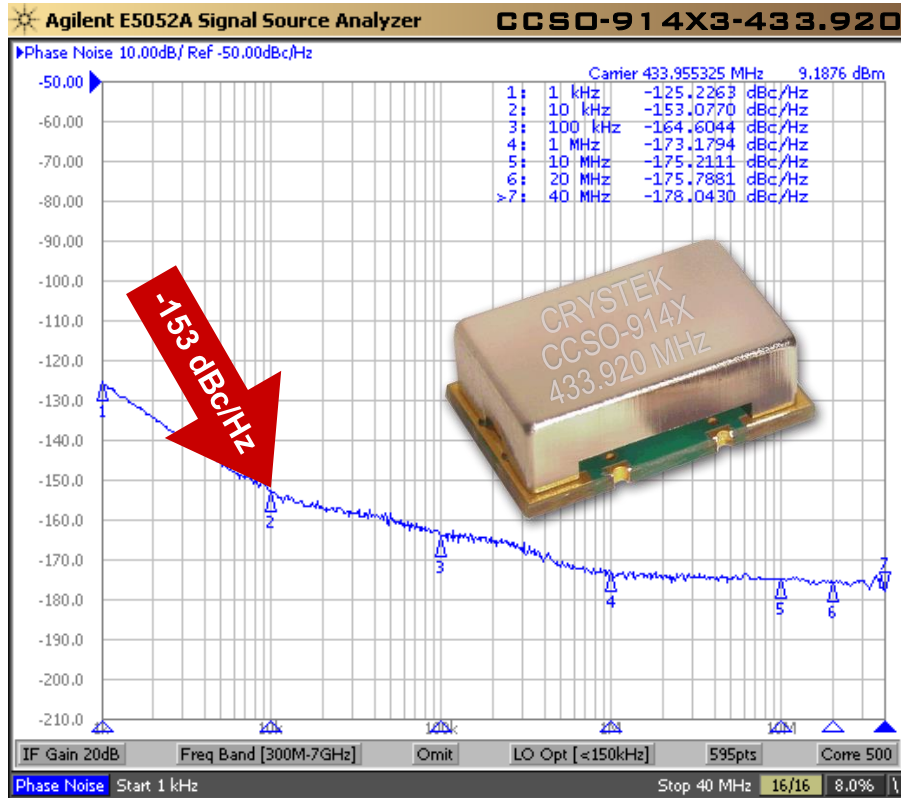


NOTE: Reflow Profile with 240°C peak also acceptable.

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

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