

## Excellent Integrated System Limited

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

[Crystek Corporation](#)  
[CCSO-914X-250.000](#)

For any questions, you can email us directly:

[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)



**CCSO-914X**

True SineWave

SAW Based Clock Oscillator

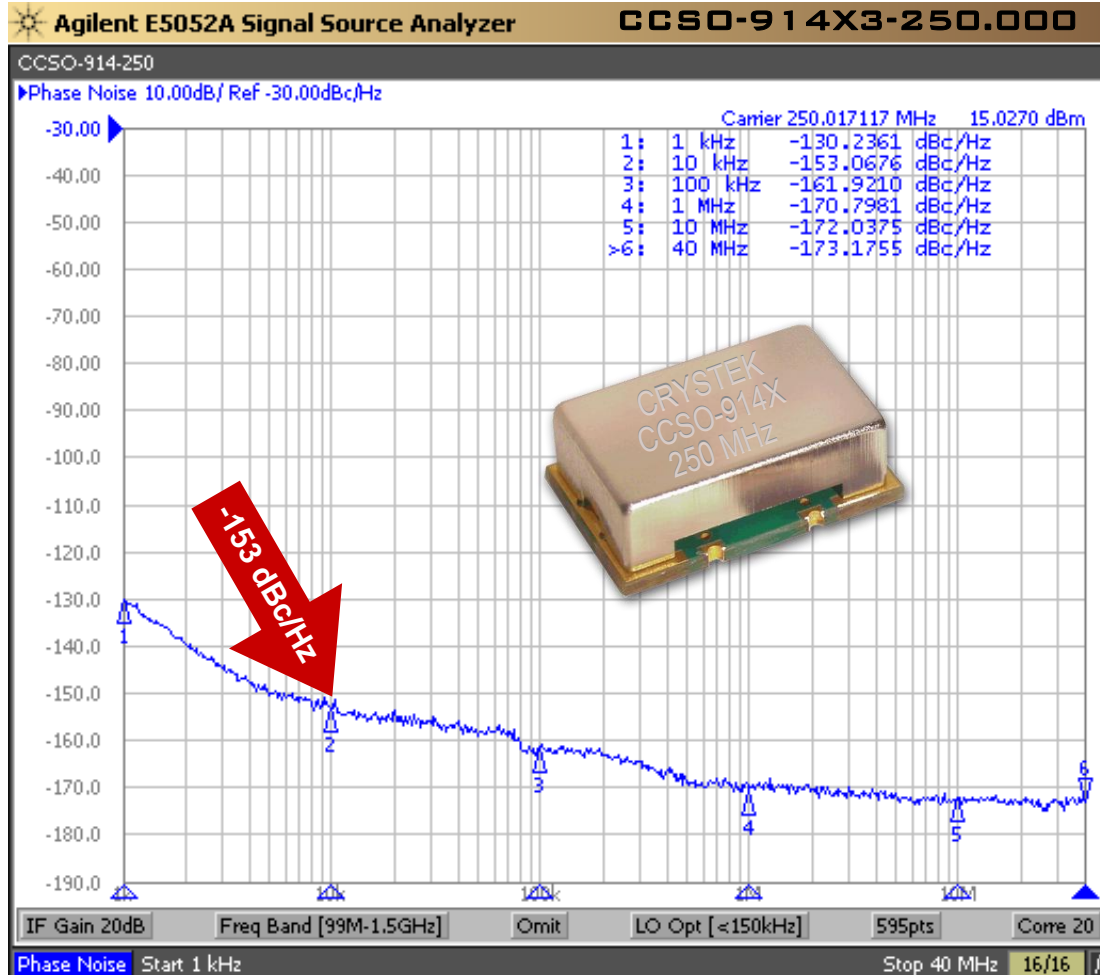
9×14mm SMD

3.3 & 5.0 Volt

*Ultra-Low Phase Noise SAW Clock*

**Frequency Range:**

**245.760 MHz to 1090 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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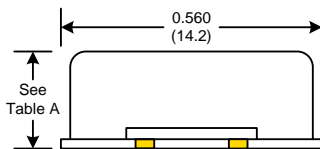
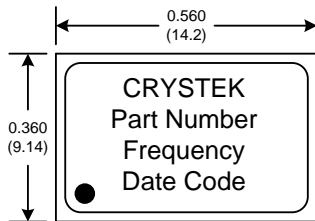
**Frequency Range:** 245.760 MHz to 1090 MHz  
**Temperature Range:** -40°C to +85°C  
**Storage:** -45°C to 90°C  
**Input Voltage:** (option 3) 3.3V ± 0.165V  
 (standard) 5.0V ± 0.25V  
**Frequency vs Temperature:** ±150ppm Typical  
**Input Current:** 25mA Typical, 35mA Max  
**Output:** True SineWave  
**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  
**2<sup>nd</sup> 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

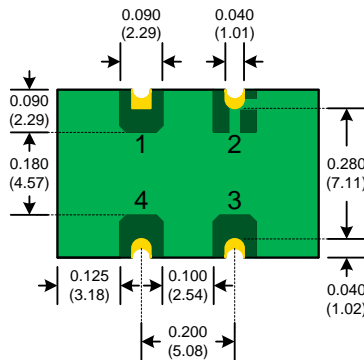
**G-sensitivity:** 0.9×10<sup>-9</sup> per g



**Package Height Options**

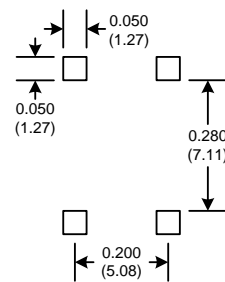
	inches	mm
Standard	0.210	5.33
Option L	0.135	3.43

Table A



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

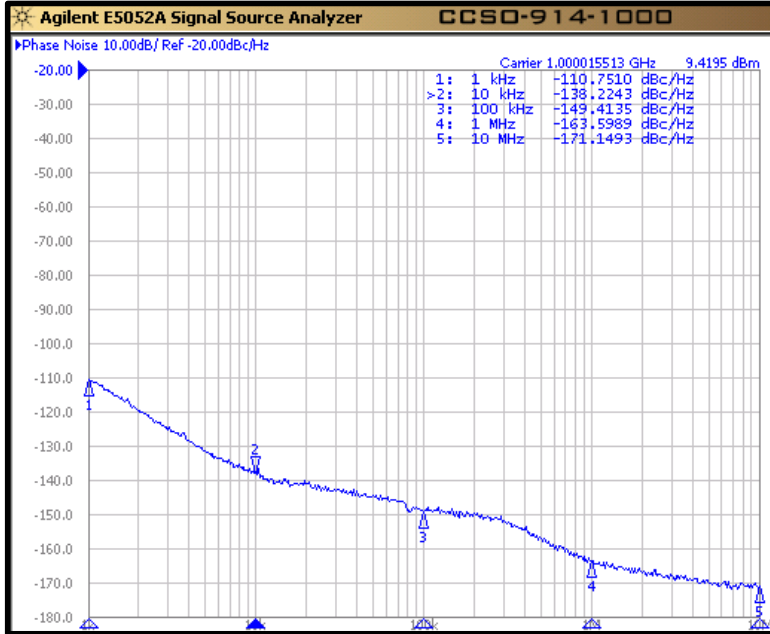
**SUGGESTED PAD LAYOUT**



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Available Frequencies (MHz):

- 245.760    800.000
- 250.000    916.000
- 433.920    1000.000
- 500.000    1090.000
- 622.080

Custom Frequencies Available with NRE Fee

**Crystek Part Number Guide**

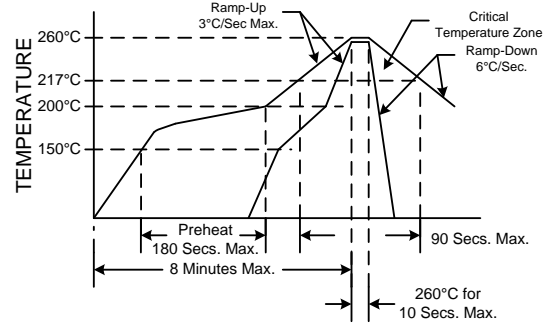
**CCSO - 914X 3 L - 315.500**

#1                  #2                  #3                  #4                  #5

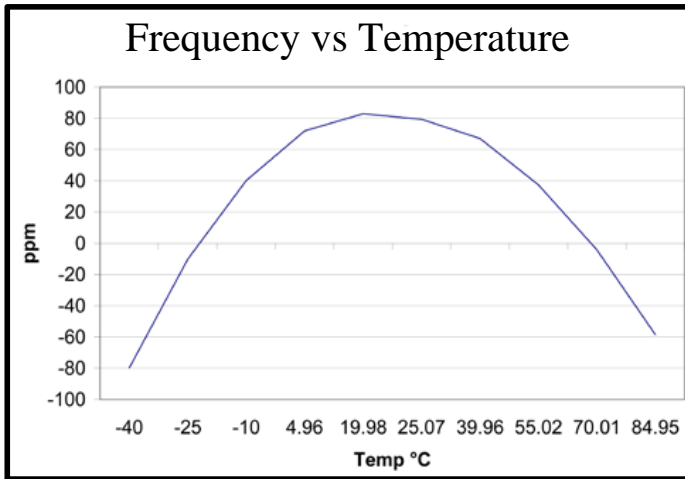
- #1 Crystek Saw Osc.
- #2 Model 914 with -40/85°C Temperature Range
- #3 (3 = 3.3Volts) (Blank = 5 Volts)
- #4 Height (L = 0.135") (Blank = 0.210")
- #5 Frequency in MHz: 3 or 6 decimal places

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

**RECOMMENDED REFLOW SOLDERING PROFILE**



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

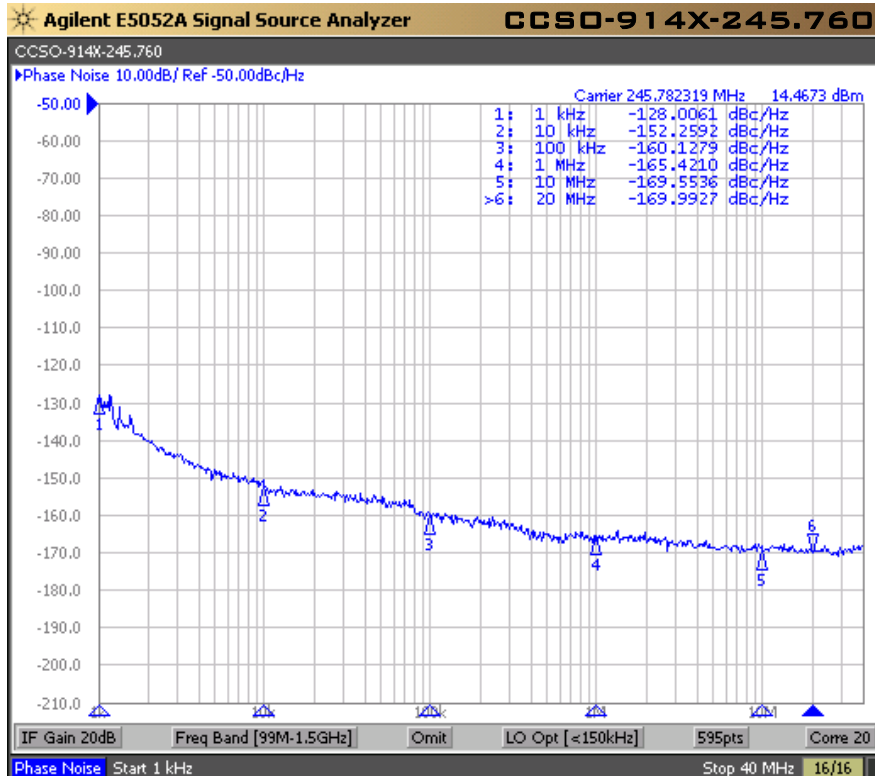
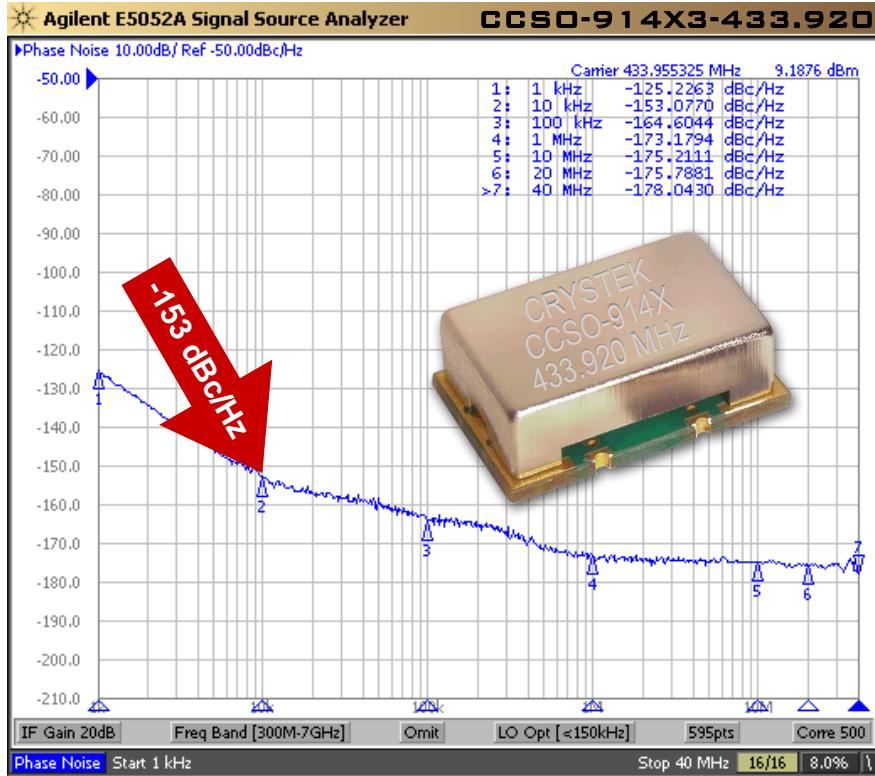


Parameter	Conditions
Mechanical Shock	MIL-STD-883, Method 2002, Condition B
Mechanical Vibration	MIL-STD-883, Method 2007, Condition A
Solderability	MIL-STD-883, Method 2003
Solvent Resistance	MIL-STD-202, Method 215
Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition I or J
Thermal Shock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

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