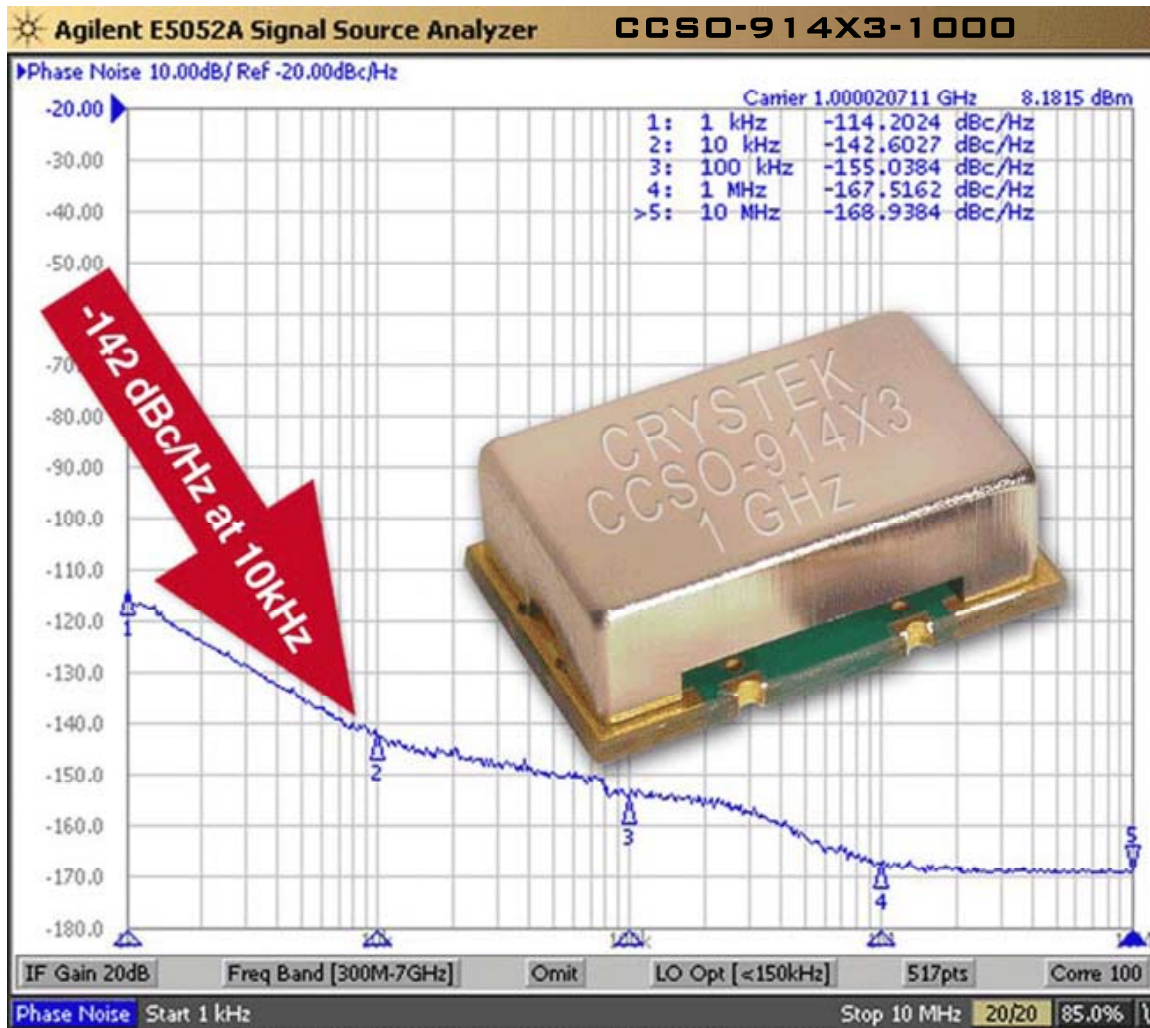


Ultra-Low Phase Noise 1GHz SAW Clock



Model CCSO-914X3-1000 is a 1 GHz SAW (surface acoustic wave) Clock Oscillator (CCSO). SAW crystal technology provides low-noise and low-jitter performance with true sinewave output. Features include -142dBc/Hz phase noise at 10kHz offset, 3.3V input voltage, -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 -25dBc.

Applications include:

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-914X3-1000
True SineWave
SAW Based Clock Oscillator
9×14mm SMD
3.3 Volt



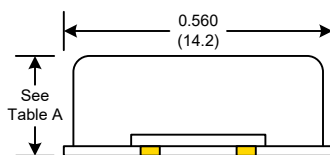
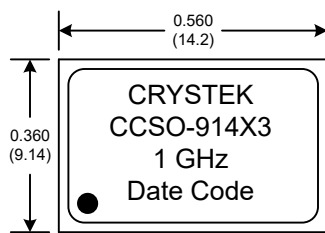
Frequency: 1 GHz
Temperature Range: -40°C to +85°C
Storage: -45°C to 90°C
Input Voltage: 3.3V ± 0.15V

Frequency vs Temperature: ±150ppm Typical
Input Current: 25mA Typical, 35mA Max
Output: True SineWave
Output Power: +5dBm Min into 50 Ω Load
Start-Up Time: 2ms Typical, 10mSec Max
2nd Harmonic: -25dBc Typical, -20dBc Max
Sub-Harmonics: None
Jitter:
SONET OC-48(12kHz~80MHz) 0.18ps RMS Typical, 0.20ps RMS Max
SONET OC-192(50kHz~80MHz) 0.12ps RMS Typical, 0.15ps RMS Max



Phase Noise Typical:
1kHz -112 dBc/Hz
10kHz -142 dBc/Hz
100kHz -155 dBc/Hz
1MHz -167 dBc/Hz
10MHz -168 dBc/Hz

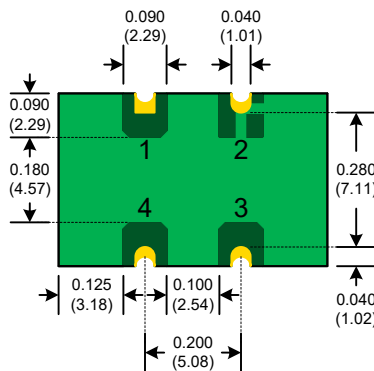
G-sensitivity: 0.9×10⁻⁹ per g



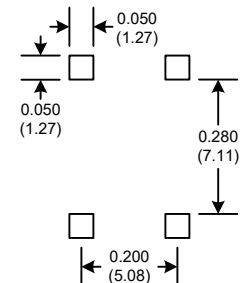
Package Height Options

	inches	mm
Standard	0.210	5.33
Option L	0.135	3.43

Table A



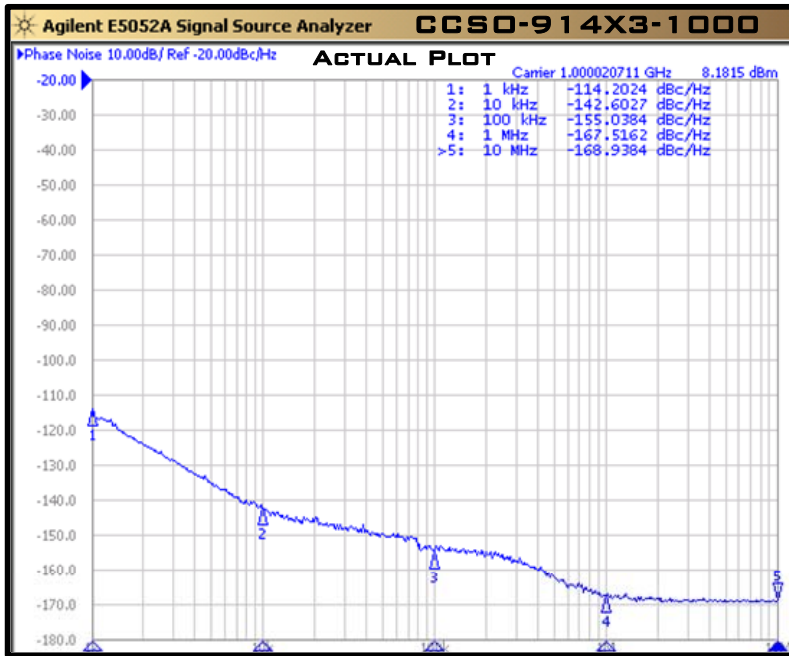
SUGGESTED PAD LAYOUT



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

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

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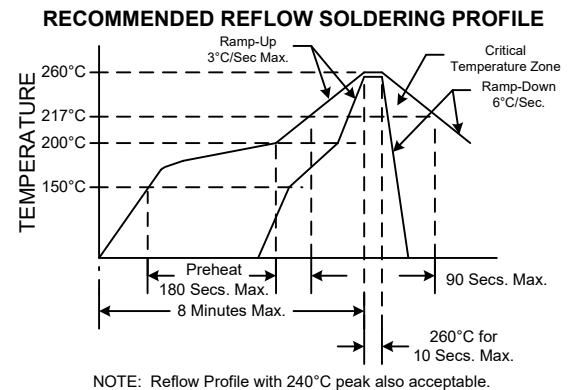
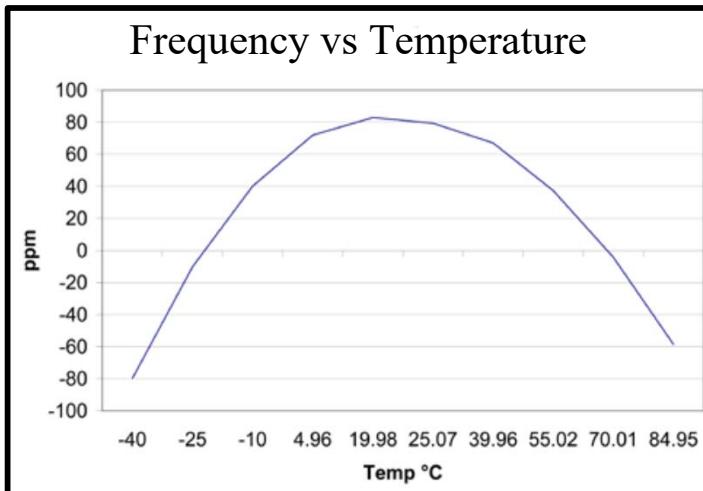


Crystek Part Number Guide

CCSO - 914X3 L - 1000

#1 #2 #3

#1 Crystek Saw Osc.
#2 Model 914 with -40/85°C Temperature Range
#3 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

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