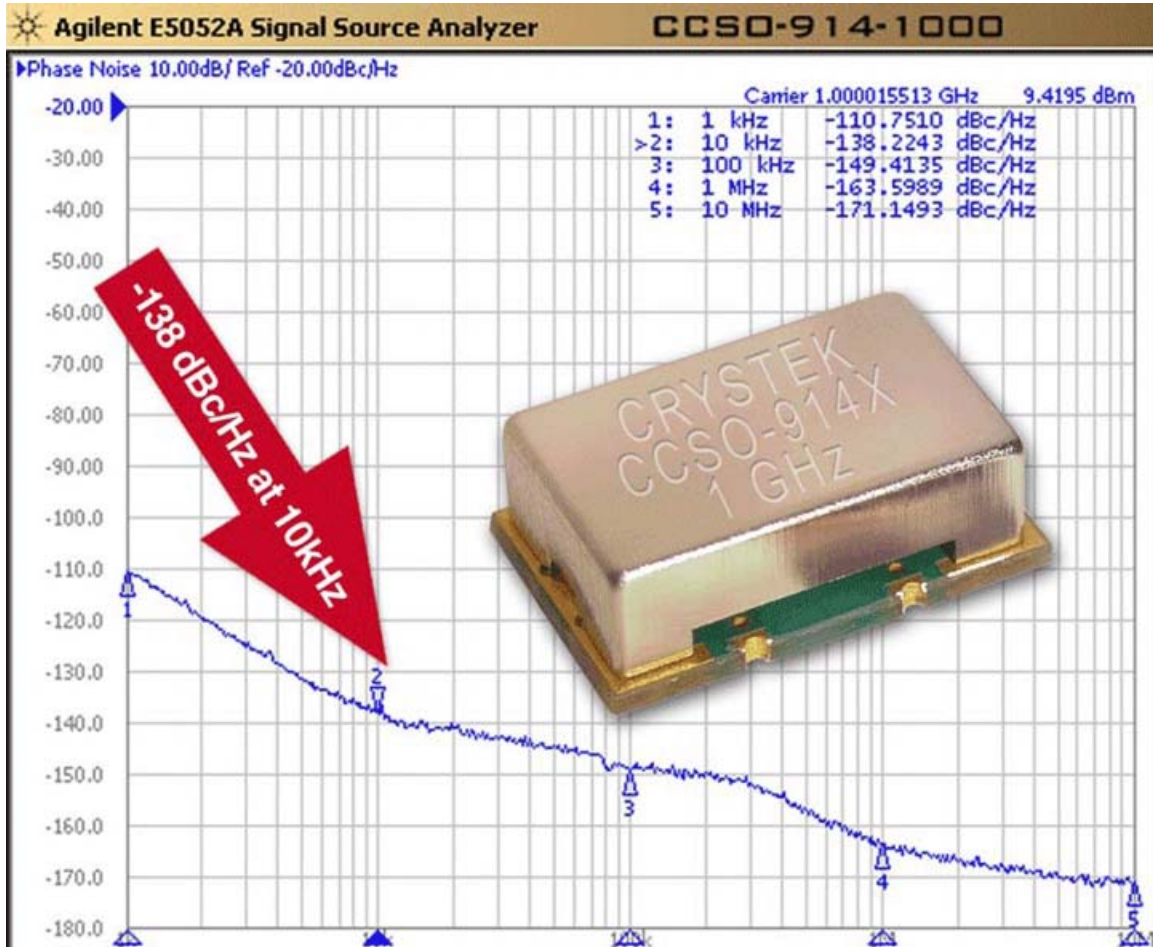


Ultra-Low Phase Noise 1GHz SAW Clock



Model CCSO-914X-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 -138dBc/Hz phase noise at 10kHz offset, 5V 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 -20dBc.

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-914X-1000
True SineWave
SAW Based Clock Oscillator
9×14mm SMD
5 Volt



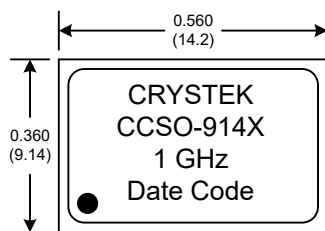
Frequency: 1 GHz
Temperature Range: -40°C to +85°C
Storage: -45°C to 90°C
Input Voltage: 5.0V ± 0.25V

Frequency vs Temperature: ±150ppm Typical
Input Current: 25mA Typical, 35mA Max
Output: True SineWave
Output Power: +8dBm Min into 50 Ω Load
Start-Up Time: 2mSec Typical, 10mSec Max
2nd Harmonic: -20dBc Typical, -15dBc 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 -110 dBc/Hz
10kHz -138 dBc/Hz
100kHz -150 dBc/Hz
1MHz -160 dBc/Hz
10MHz -170 dBc/Hz

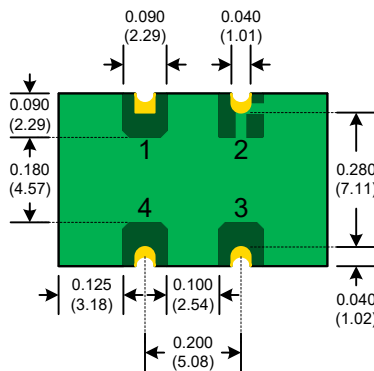
G-sensitivity: 0.9×10⁻⁹ per g



Package Height Options

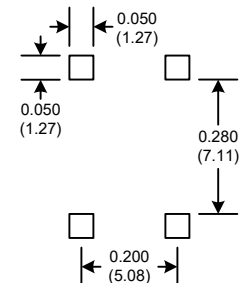
	inches	mm
Standard	0.210	5.33
Option L	0.135	3.43

Table A



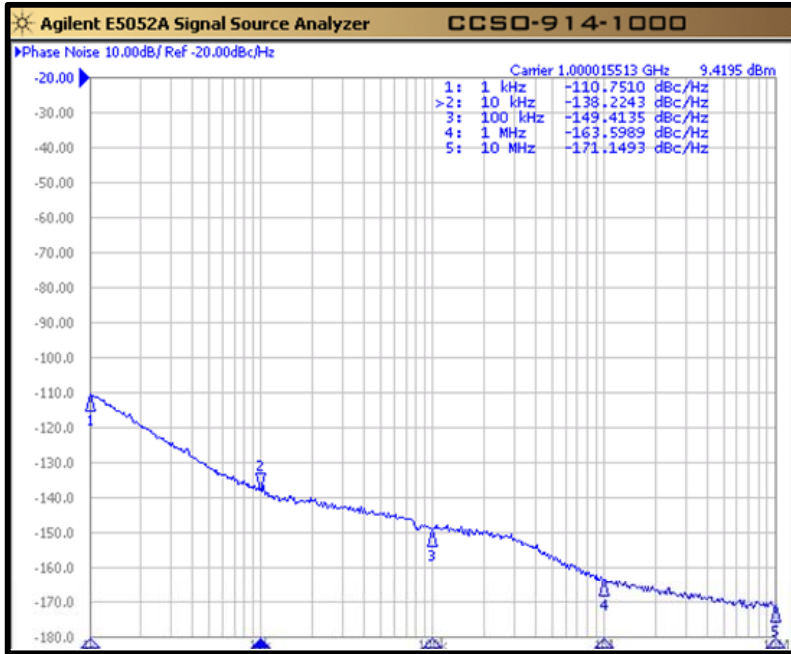
Pad	Connection
1	N/C
2	GND
3	Output
4	Vdd

SUGGESTED PAD LAYOUT



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CCSO-914X-1000
True SineWave
SAW Based Clock Oscillator
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5 Volt

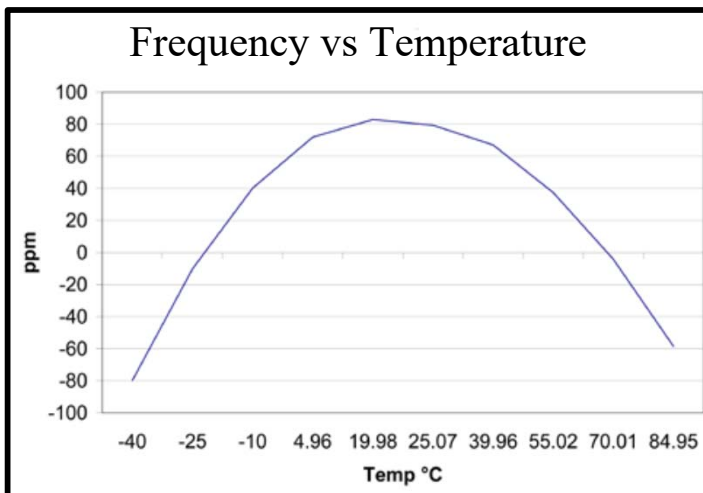


Crystek Part Number Guide

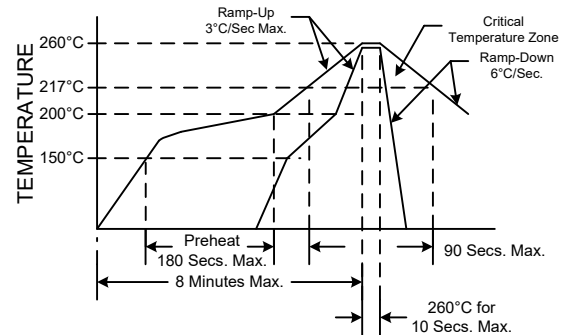
CCSO - 914X L - 1000

#1 #2 #3

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



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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