

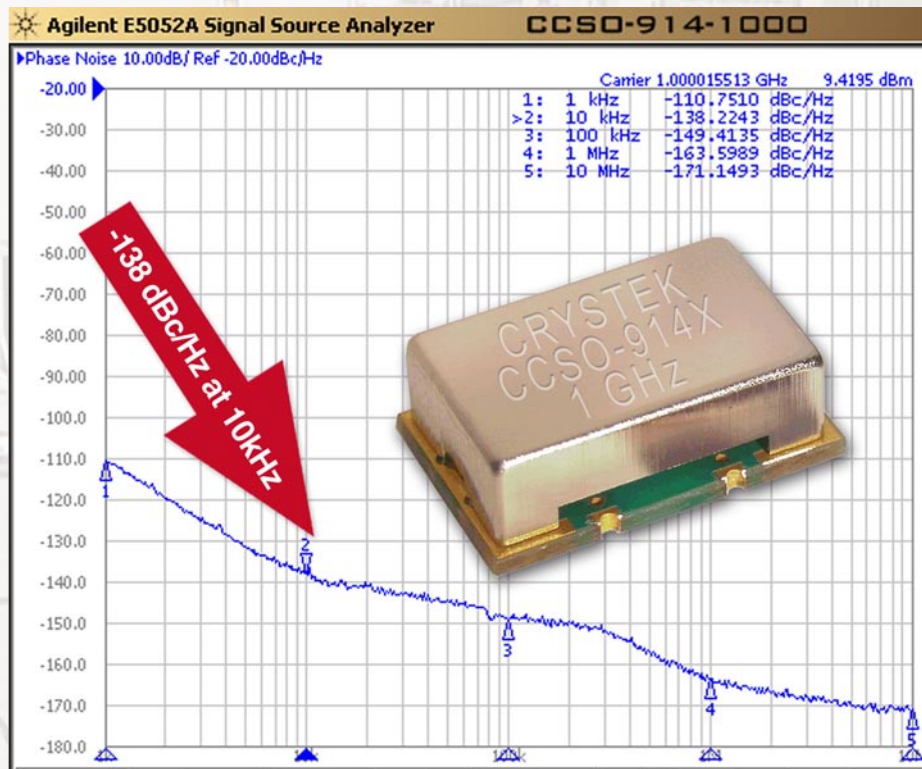


**CRYSTEK**  
**CRYSTALS**  
A DIVISION OF CRYSTEK CORPORATION

**CCSO-914X-1000**  
TRUE SINEWAVE  
SAW BASED CLOCK OSC  
9X14MM SMD  
5 VOLT



## *Ultra-Low Phase Noise 1GHz SAW Clock*



Model CCSO-914-1000 is a 1GHz 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 to +85C operating temperature, FR5 PCB and 9x14 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.



# CRYSTEK

## CRYSTALS

A DIVISION OF CRYSTEK CORPORATION

**CCSO-914X-1000**  
 TRUE SINEWAVE  
 SAW BASED CLOCK OSC  
 9X14MM SMD  
 5 VOLT

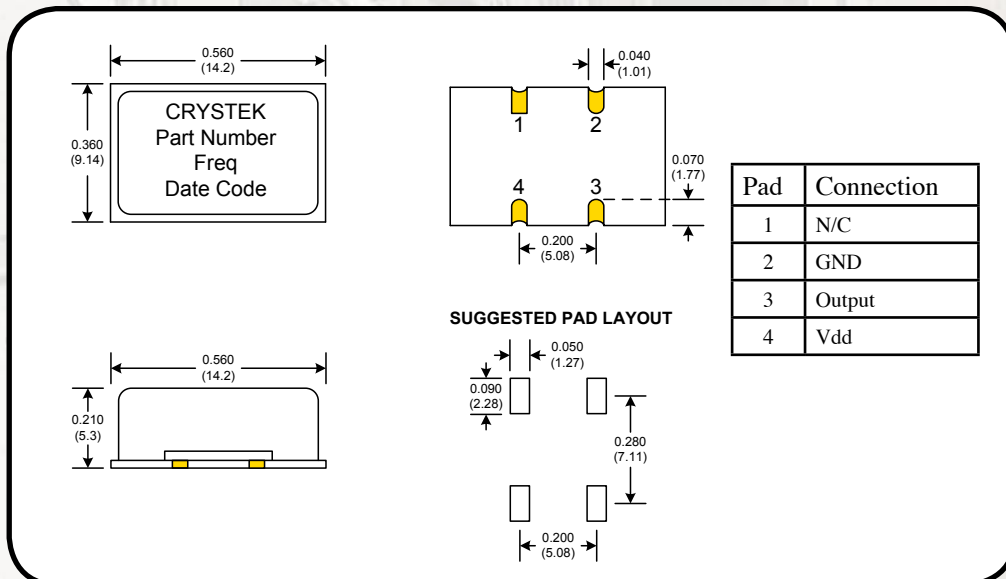


**Frequency :** 1 GHz  
**Temperature Range:** -40°C to 85°C  
**Storage:** -45°C to 90°C  
**Input Voltage:** 5.0V ± 0.25V

**Freq. vs Temp.** ±100ppm Typ.  
**Input Current:** 25mA Typ., 35mA Max  
**Output:** True SineWave  
**Output Power:** +8dBm Min. into 50 Ohm Load  
**Start-up time:** 2ms Typ., 10ms Max  
**2nd Harmonic:** -20dBc Typ., -15dBc Max  
**Sub-harmonics:** None  
**Modulation BW:** >20KHz @ -3dB  
**Jitter:**  
 SONET OC-48(12KHz~80MHz) 0.18ps RMS Typ., 0.20ps RMS Max  
 SONET OC-192(50KHz~80MHz) 0.12ps RMS Typ., 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



**CRYSTEK**  
 CORPORATION

12730 COMMONWEALTH DRIVE • FORT MYERS, FL 33913

PHONE: 239-561-3311 • 800-237-3061

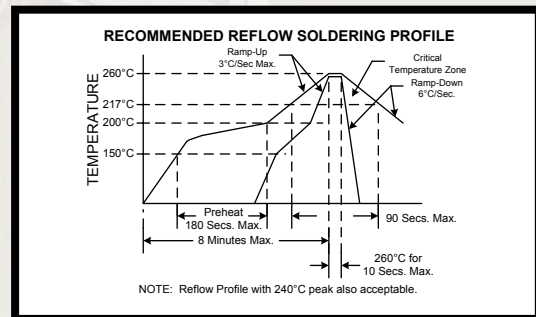
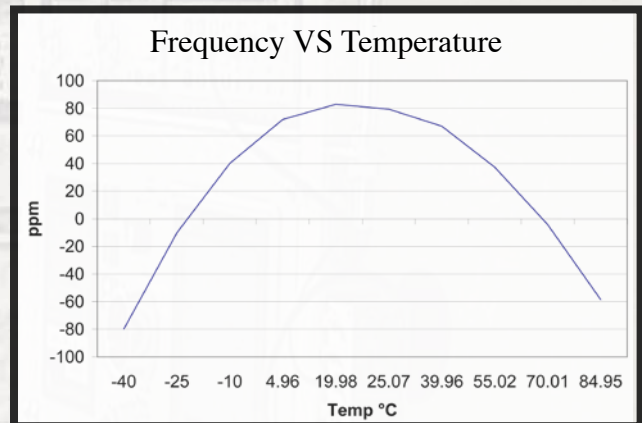
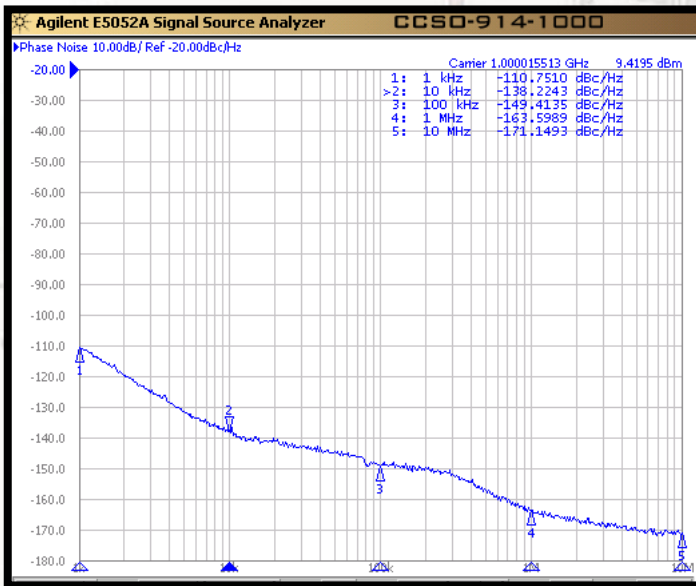
FAX: 239-561-1025 • WWW.CRYSTEK.COM

Rev.: C  
 Date: 10-23-07



**CRYSTEK**  
CRYSTALS  
A DIVISION OF CRYSTEK CORPORATION

**CCSO-914X-1000**  
TRUE SINEWAVE  
SAW BASED CLOCK OSC  
9X14MM SMD  
5 VOLT



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