

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.

Rev: F  
Date: 14-May-12  
Page 1 of 3



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

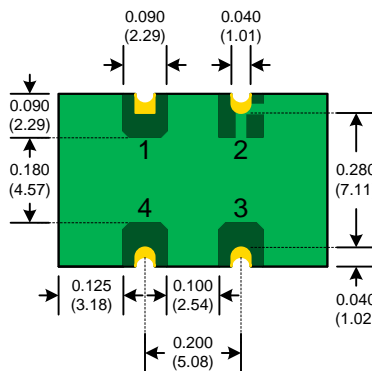
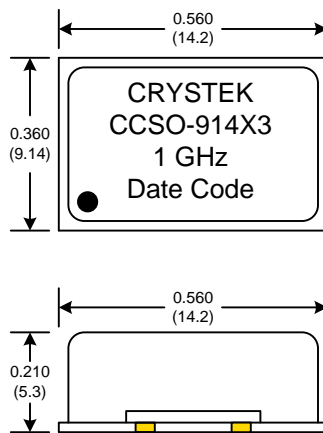
**Frequency vs Temperature:** ±120ppm Typical  
**Input Current:** 25mA Typical, 35mA Max  
**Output:** True SineWave  
**Output Power:** +5dBm Min into 50 Ω Load  
**Start-Up Time:** 2mSec Typical, 10mSec Max  
**2<sup>nd</sup> Harmonic:** -25dBc Typical, -20dBc Max  
**Sub-Harmonics:** None  
**Modulation BW:** >20kHz @ -3dB  
**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

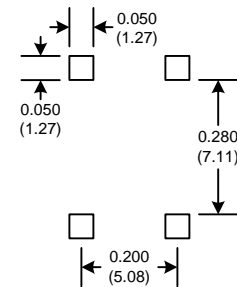
**Phase Noise Typical:**

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<sup>-9</sup> per g

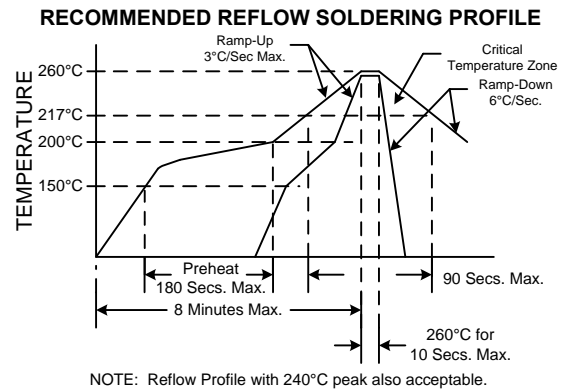
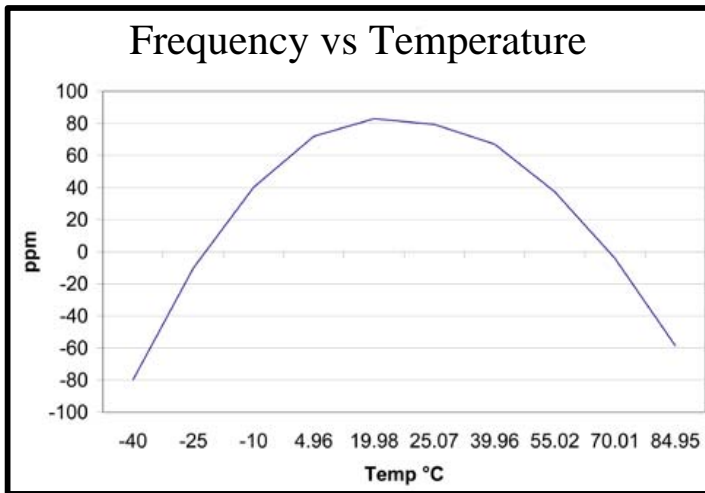
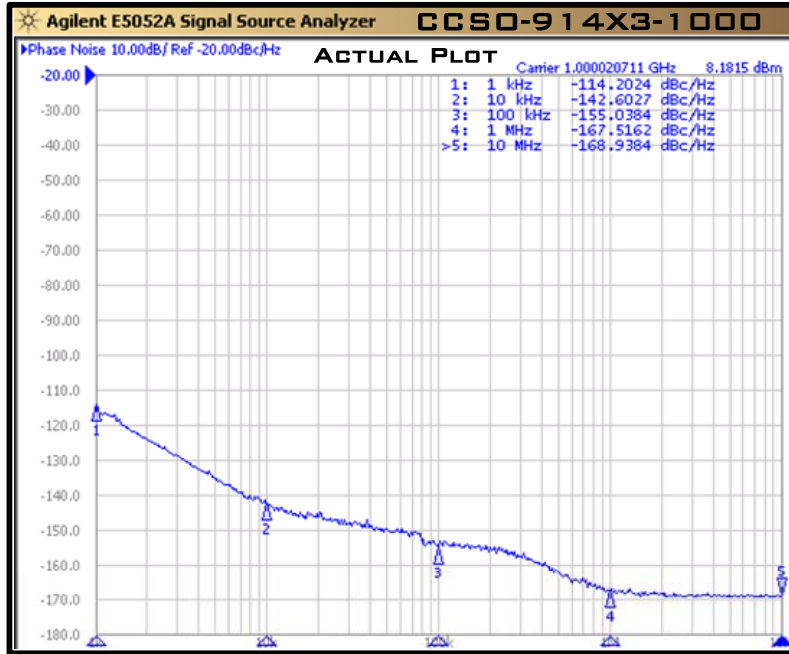


**SUGGESTED PAD LAYOUT**



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

Rev: F  
 Date: 14-May-12  
 Page 2 of 3



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

Rev: F  
Date: 14-May-12  
Page 3 of 3

