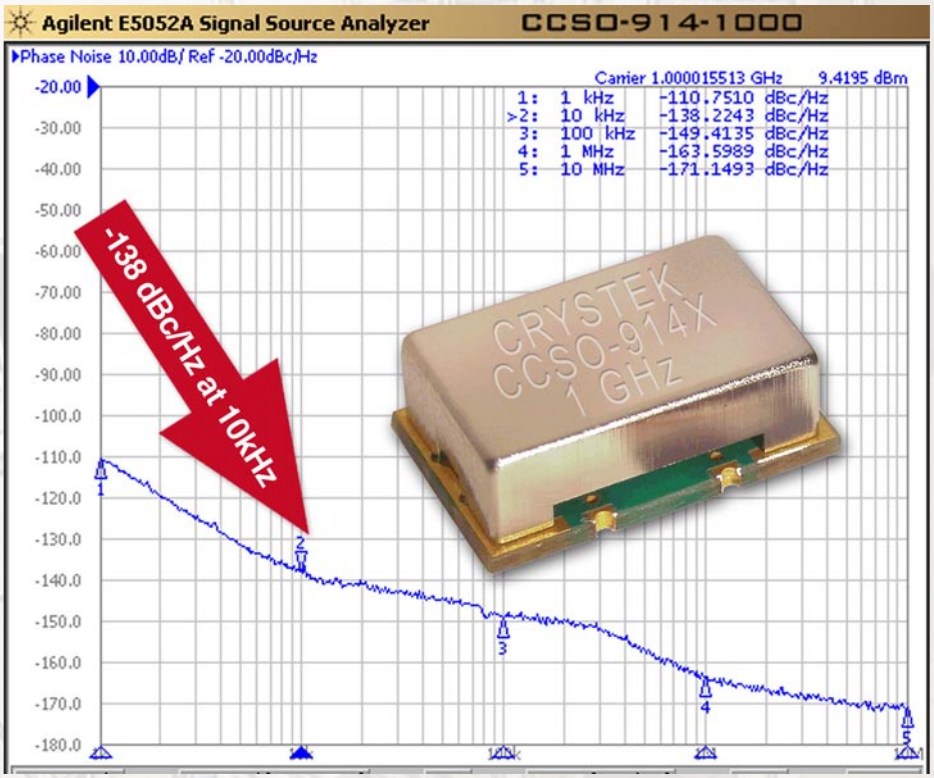
CRYSTEK
CRYSTALS
A DIVISION OF CRYSTEK CORPORATION

CCSO-914X-1000

TRUE SINEWAVE
SAW BASED CLOCK OSC
9X14MM SMD
5 VOLT

RoHS Compliant

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.

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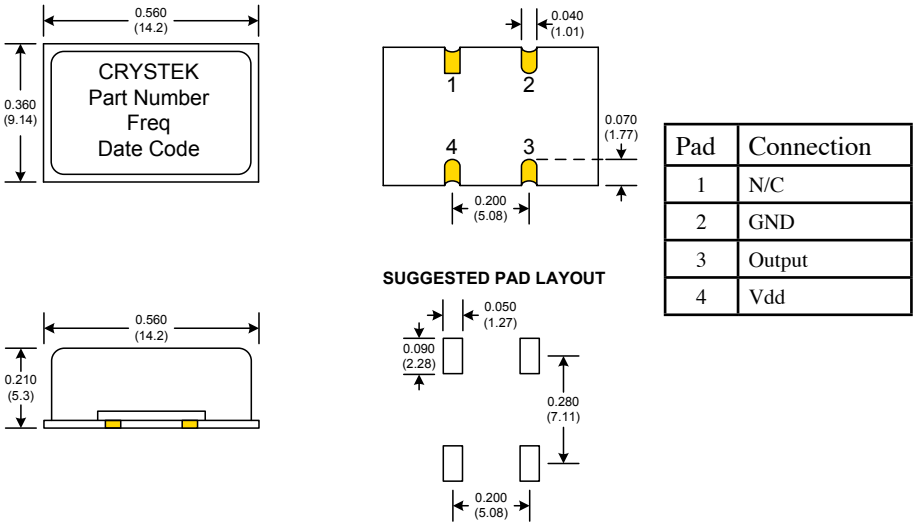
Frequency :	**1 GHz**
Temperature Range:	**-40°C to 85°C**
Storage:	**-45°C to 90°C**
Input Voltage:	**5.0V ± 0.25V**
Freq. vs Temp.	**±100ppm Typ.**
Input Current:	**25mA Typ., 35mA Max**
Output:	**True SineWave**
Output Power:	**+8dBm Min. into 50 Ohm Load**
Start-up time:	**2ms Typ., 10ms Max**
2nd 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**



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

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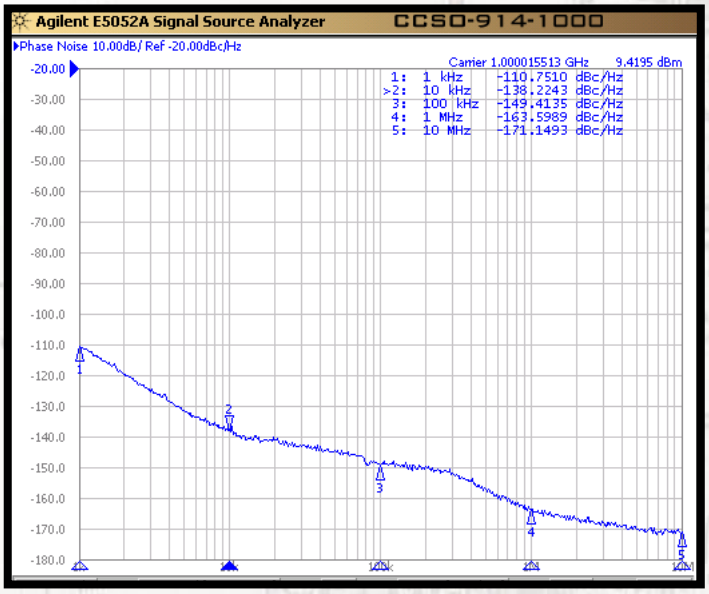

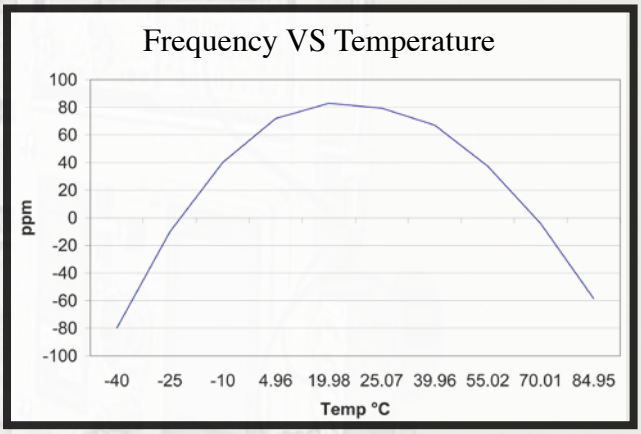

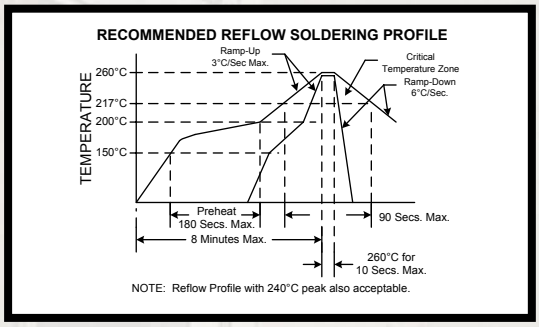

Parameter	Conditions
Mechanical Shock	MIL-STD-883, Method 2002, Condition B
Mechanical Vibration	MIL-STD-883, Method 2007, Condition A
Solderability	MIL-STD-883, Method 2003
Solvent Resistance	MIL-STD-202, Method 215
Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition I or J
Thermal Shock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