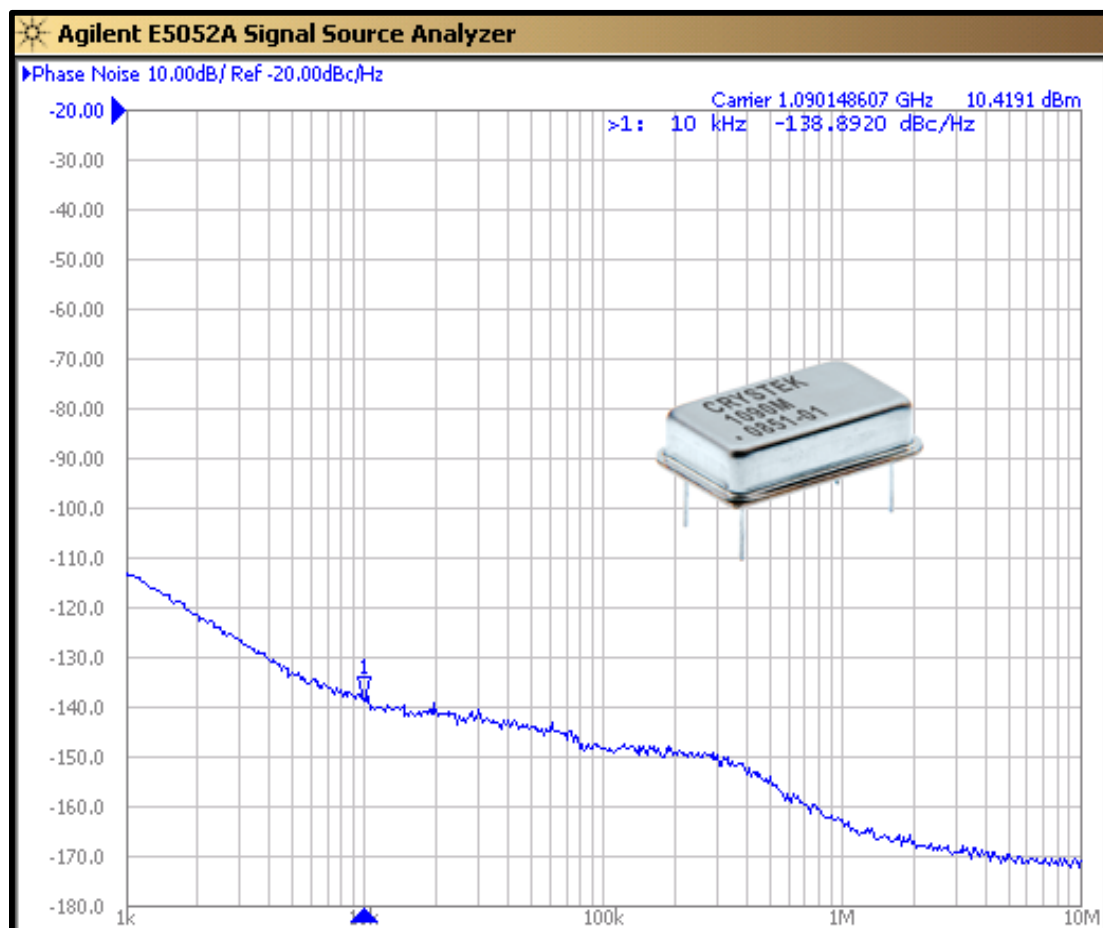




CRYSTEK
CRYSTALS
A DIVISION OF CRYSTEK CORPORATION

CCSO-014-1090
SAW Clock Oscillator

CCSO-014-1090 Model
14 Pin DIP, 12V, True Sinewave



Model CCSO-014-1090 is a 1.090 GHz SAW (surface acoustic wave) Clock Oscillator (CCSO). SAW crystal technology provides low-noise and low-jitter performance with true sinewave output. Features include -138 dBc/Hz phase noise at 10kHz offset, +12V input voltage, -55°C to +105°C operating temperature, 14 PIN DIP hermetic sealed package. The oscillator has no sub-harmonic and the second harmonic is -35dBc Max.

Designed for Identification Friend or Foe (IFF) application.

Rev: K
Date: 08-Aug-2014
Page 1 of 2



CRYSTEK
CORPORATION

12730 COMMONWEALTH DRIVE • FORT MYERS, FLORIDA 33913
PHONE: 239-561-3311 • 800-237-3061
FAX: 239-561-1025 • WWW.CRYSTEK.COM

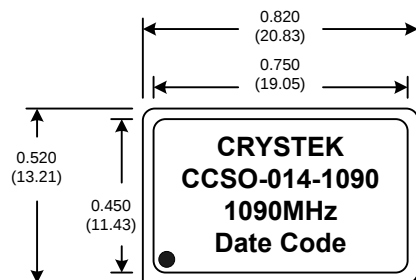


CCSO-014-1090 Model

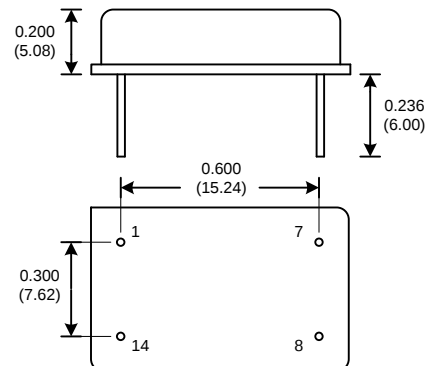
14 Pin DIP, 12V, True Sinewave



Frequency:	1.090 GHz
Temperature Range:	-55°C to 105°C
Optional*:	-40°C to 85°C
Storage:	-55°C to 110°C
Input Voltage:	12.0V ±0.25V
Supply Ripple:	150mV p-p Max
Freq. vs Temp.:	±250ppm Max
Input Current:	30mA Typical, 40mA Max
Output:	True SineWave
Output Power:	+12dBm ±2dBm
Start-up time:	2ms Typical, 10ms Max
2 nd Harmonic:	-40dBc Typical, -35dBc Max
Sub-harmonics:	None
Load:	50 Ω
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
G-sensitivity:	0.9×10 ⁻⁹ per g



PIN	Connection
1	N/C
7	GND
8	Output
14	Vdd



*Option: CCSO-014X-1090 -40°C to +85°C Version

Parameter	Conditions
Mechanical Shock	MIL-STD-202, Method 213, Condition A
Mechanical Vibration	MIL-STD-202, Method 204, Condition A
Solderability	MIL-STD-202, Method 208
Solvent Resistance	MIL-STD-202, Method 215
Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition C
Thermal Shock	MIL-STD-202, Method 107, Condition A
Moisture Resistance	MIL-STD-202, Method 106, 90% to 98% RH 10 Days
Terminal Strength	MIL-STD-202, Method 211, Condition A
Hermetic Seal	MIL-STD-202, Method 112, Procedure III, Condition C
Humidity	MIL-STD-202, Method 103
High Temperature Life (Operating)	MIL-STD-202, Method 108, Condition D, 1,000 hrs at +70°C
Acceleration	MIL-STD-202, Method 212, Condition A

Parameter	Conditions
100% Temperature Testing	-55/105°C
100% Start-Up Testing	-55°C and +85°C

Rev: K
Date: 08-Aug-2014
Page 2 of 2

