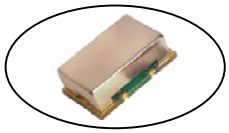
CRYSTEK CRYSTALS
A Division of Crystek Corporation

RoHS Compliant

High Frequency SineWave VCXO

CVSS-940 Model
9×14 mm SMD, 3.3V, SineWave

Frequency Range:		77.760 MHz to 500 MHz
Temperature Range:		0°C to 70°C
	(Option X)	-40°C to 85°C
Storage:		-40°C to 100°C
Input Voltage:		3.3V ± 0.3V
Control Voltage:		1.65V ± 1.65V
Settability At Nominal:		1.65V ± 0.25V
Input Current:		30mA Max
Output:		True SineWave
	Pullability APR:	±50ppm Min
	Linearity:	±10% Max
	Output Power:	0 dBm Min
	Start-up time:	2ms Typical, 10ms Max
	Load:	50 Ω
2nd Harmonic:		-20 dBc Max
Sub-harmonics:		
	(77MHz~170MHz)	None
	(171MHz~500MHz)	-40 dBc Typical, -35 dBc Max
Modulation BW:		>10kHz @ -3dB
Period Jitter:	(20,000 periods)	<5ps RMS (1-sigma) Max
Phase Jitter:	12kHz~20MHz	<1ps RMS (1-sigma) Max
	50kHz~80MHz	<1ps RMS (1-sigma) Max
Phase Noise Typical:	10Hz	-50 dBc/Hz
(@311.04MHz)	100Hz	-80 dBc/Hz
	1kHz	-110 dBc/Hz
	10kHz	-135 dBc/Hz
	100kHz	-145 dBc/Hz
Aging:		<3ppm 1st year, <2ppm every year thereafter



Applications:
- 10 Gigabit Ethernet
- OC48: Forward Error Correction
- Broadband Networks
- SONET/SDH/DWD
- ATM
- Network/switch
- Telecom

Designed using FR5 PCB & HFF crystal technology to provide a Low Noise, Low Jitter Voltage Controlled Crystal Oscillator with True SineWave Output.

Rev: N
Date: 22-Mar-2024

CRYSTEK CORPORATION
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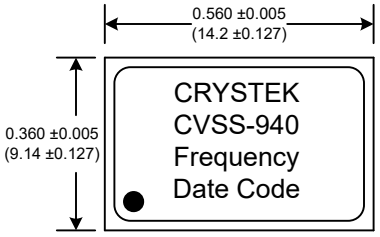
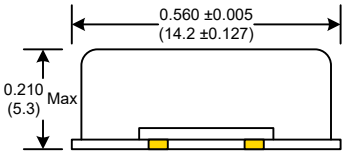
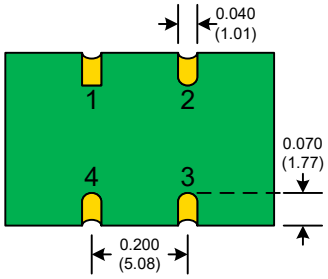






Crystek Part Number Guide

CVSS-940 X-155.520
#1 #2 #3 #4

#1 Crystek 9×14 SMD SineWave VCXO
#2 Model 940 = High Frequency 3.3V
#3 Temp. Range: Blank = 0/70°C, X = -40/85°C
#4 Frequency in MHz: 3 or 6 decimal places

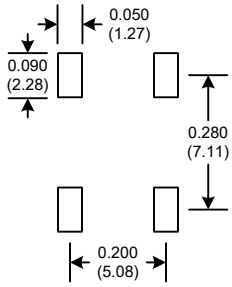
Example:
CVSS-940X-155.520 = 3.3V, -40/85°C, 155.520 MHz

Standard Frequencies MHz	
77.7600	167.3317
155.5200	212.5000
156.2500	250.0000
161.1328	311.0400
166.6286	

PAD FINISH: Immersion Gold (ENIG); 5 micro inches maximum

Pad	Connection
1	Volt Cont.
2	GND
3	OUT
4	Vdd

SUGGESTED PAD LAYOUT



RECOMMENDED REFLOW SOLDERING PROFILE
900034 (See App Note listed on website)
http://www.crystek.com/specification/reflow/900034.pdf

Mechanical:

Shock:	MIL-STD-883, Method 2002, Condition B
Solderability:	MIL-STD-883, Method 2003
Vibration:	MIL-STD-883, Method 2007, Condition A
Solvent Resistance:	MIL-STD-202, Method 215
Resistance to Soldering Heat:	MIL-STD-202, Method 210, Condition I or J

Environmental:

Thermal Shock:	MIL-STD-883, Method 1011, Condition A
Moisture Resistance:	MIL-STD-883, Method 1004

Packaging:

Tape/Reel:	100ea, 250ea, 500ea 24mm Tape

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