

High Frequency SineWave Crystal Oscillator

CCO-983/985 Model

9x14 mm SMD, 3.3V/5V, SineWave



Frequency Range:	50MHz to 500MHz
Temperature Range:	±25ppm, 0°C to 70°C
(Option X)	±50ppm, -40°C to 85°C
Storage:	-45°C to 90°C
Input Voltage:	3.3V ±0.3V
	5.0V ±0.5V
Input Current:	30mA Max @ 3.3V
	50mA Max @ 5.0V
Output:	True SineWave
Output Power:	0 dBm Min
Start-up time:	2ms Typical, 10ms Max
Load	50 Ω
2nd Harmonic:	-20dBc Max
Sub-harmonics:	
(50MHz~170MHz)	None
(171MHz~500MHz)	-50dBc Typical, -45dBc 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 Typ.:	
(@311.04MHz)	10Hz -50 dBc/Hz
	100Hz -80 dBc/Hz
	1kHz -110 dBc/Hz
	10kHz -135 dBc/Hz
	100kHz -145 dBc/Hz
Aging:	<3ppm 1 st /yr, <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 Crystal Oscillator with True Sinewave Output.

TD-041205 Rev. F

Page 1 of 2

Specifications subject to change without notice.

High Frequency SineWave Crystal Oscillator

CCO-983/985 Model 9x14 mm SMD, 3.3V/5V, SineWave

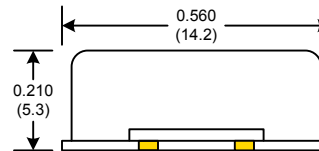
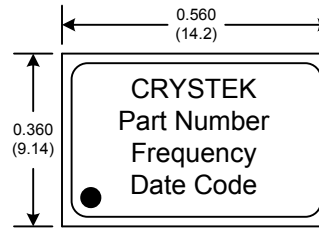
Crystek Part Number Guide

CCO-983 X-500.000

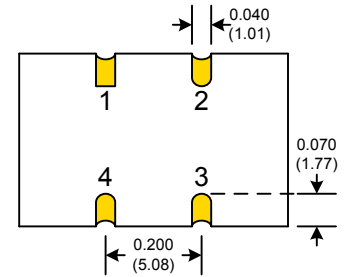
#1 #2 #3 #4

- #1 Crystek 9x14 SMD SineWave Oscillator
- #2 Model 983 = 983=3.3V 985=5.0V
- #3 Temp. Range: Blank = 0/70°C, X=-40/85°C
- #4 Frequency in MHz: 3 or 6 decimal places

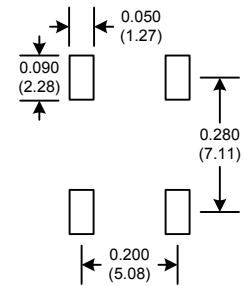
Example:
CCO-983X-500.000 = 3.3V, -40/85°C, 500.000 MHz



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

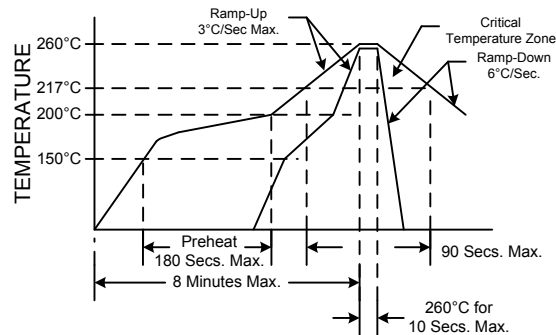


SUGGESTED PAD LAYOUT



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

RECOMMENDED REFLOW SOLDERING PROFILE



NOTE: Reflow Profile with 240°C peak also acceptable.



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

TD-041205 Rev. F

Page 2 of 2

Specifications subject to change without notice.