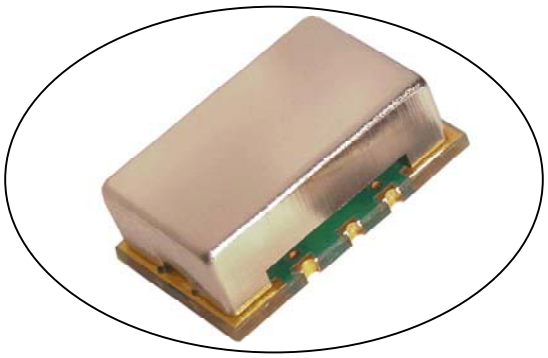
CRYSTEK CRYSTALS
A DIVISION OF CRYSTEK CORPORATION

RoHS Compliant

Differential LVPECL VCXO

CVPD-970 Model
9×14 mm SMD, 3.3V, LVPECL

Frequency Range:		622.080 MHz to 670 MHz
Frequency Stability:		±25ppm
Temperature Range:		0°C to 70°C
	(Option X)	-40°C to 85°C
Storage:		-45°C to 90°C
Input Voltage:		3.3V ±0.3V
Control Voltage:		1.65V ±1.65V
Input Current:		80mA Max
Output:		Differential LVPECL
Symmetry:		49/51% Typical, 45/55% Max @ zero crossing point
Rise/Fall Time:		0.4ns Max (20% to 80%)
Pullability APR:		±50ppm Min
Linearity:		±10% Max
Load:		Terminated to Vdd-2V into 50 ohms
Logic "1" Level:		Vcc-0.96V Min, Vcc-0.81V Max
Logic "0" Level:		Vcc-1.85V Min, Vcc-1.65V Max
Disable Time:		100ns Max
Start-up Time:		2ms Typical, 10ms Max
Modulation BW:		>10kHz @ -3dB
Sub-harmonics:		-40dBc
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:	100Hz	-80 dBc/Hz
	1kHz	-108 dBc/Hz
	10kHz	-132 dBc/Hz
	100kHz	-140 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 Clock Oscillator solution at a competitive price.

Specifications subject to change without notice.

Rev: G
Date: 15-Sep-2017

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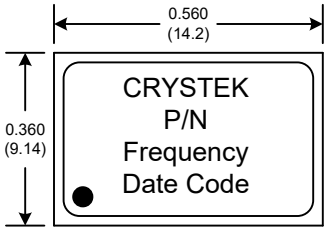
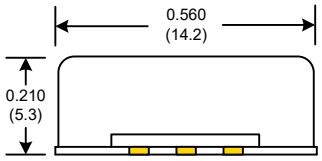
Crystek Part Number Guide

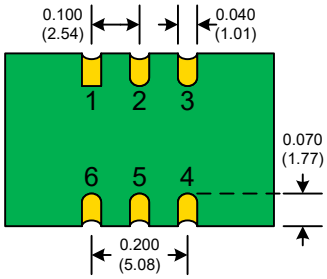
CVPD - 970 - X - 622.080
(#1 - #2 - #3 - #4)

#1	Crystek 9×14 SMD PECL VCXO
#2	Model 970 = 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:
CVPD-970X-622.080 = 3.3V, -40/85°C, 622.080 MHz







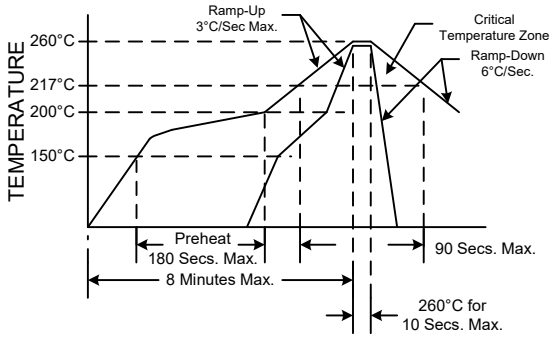
RoHS Compliant

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

Standard Frequencies MHz	
622.080	666.514300
625.000	669.128100
644.531300	669.326500

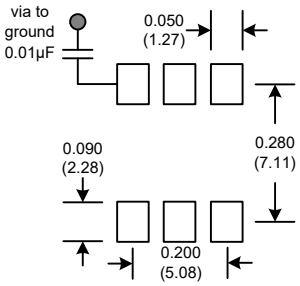
PIN	Function
1	Vcont
2	E/D
3	GND
4	OUT
5	COUT
6	Vdd

RECOMMENDED REFLOW SOLDERING PROFILE



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

SUGGESTED PAD LAYOUT



Enable/Disable Function	
Pin 2	Output pin
Open "0" level Vcc-1.620V Max "1" level Vcc-1.025V Min	Active Active Disabled
Disabled State: Pin 4 will assume a fixed level of logic "0" Pin 5 will assume a fixed level of logic "1"	

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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