



CRYSTEK
CRYSTALS
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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 1 st 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
CORPORATION

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



Differential LVPECL VCXO



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

Crystek Part Number Guide

CVPD - 970 - X - 622.080

#1 #2 #3 #4

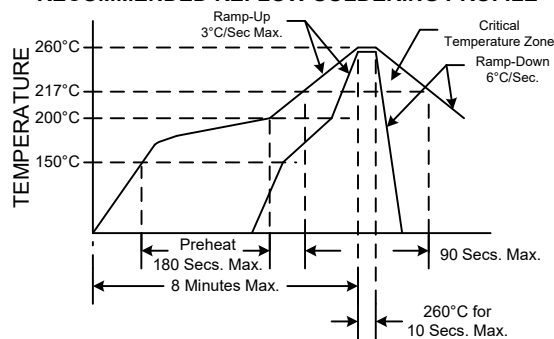
- #1 Crystek 9×14 SMD PECL VCXO
- #2 Model 970 = High Frequency 3.3V
- #3 Temp. Range: Blank = 0/70°C, X = -40/85°C
- #4 Frequency in MHz: 3 or 6 decimal places

Example:
CVPD-970X-622.080 = 3.3V, -40/85°C, 622.080 MHz

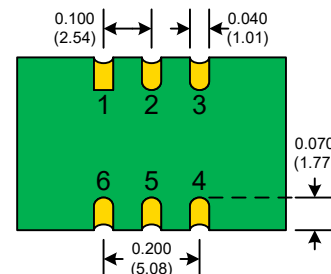
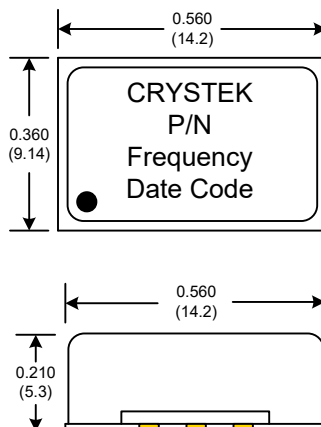
Standard Frequencies MHz

622.080	666.514300
625.000	669.128100
644.531300	669.326500

RECOMMENDED REFLOW SOLDERING PROFILE



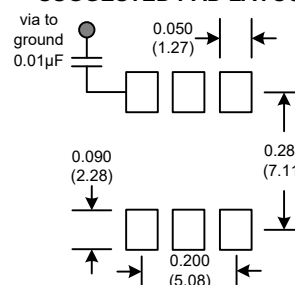
NOTE: Reflow Profile with 240°C peak also acceptable.



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

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

SUGGESTED PAD LAYOUT



Enable/Disable Function	
Pin 2	Output pin
Open	Active
"0" level Vcc-1.620V Max	Active
"1" level Vcc-1.025V Min	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:
Solderability:
Vibration:
Solvent Resistance:
Resistance to Soldering Heat:

MIL-STD-883, Method 2002, Condition B
MIL-STD-883, Method 2003
MIL-STD-883, Method 2007, Condition A
MIL-STD-202, Method 215
MIL-STD-202, Method 210, Condition I or J

Environmental:

Thermal Shock:
Moisture Resistance:

MIL-STD-883, Method 1011, Condition A
MIL-STD-883, Method 1004

Packaging:

Tape/Reel:

100ea, 250ea, 500ea 24mm Tape

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Mouser Electronics

Authorized Distributor

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[CVPD-970X-622.08](#) [CVPD-970X-666.5143](#) [CVPD-970X-669.3265](#) [CVPD-970X-644.5313](#) [CVPD-970X-669.1281](#)