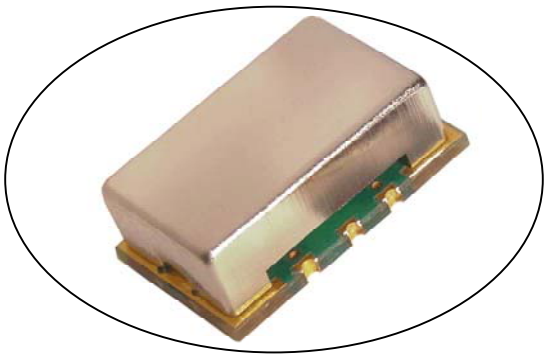
CRYSTEK CRYSTALS
A DIVISION OF CRYSTEK CORPORATION

RoHS Compliant

Differential LVPECL VCXO

CVPD-940 Model
9×14 mm SMD, 3.3V, LVPECL

Frequency Range:		50 MHz to 212.500 MHz
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
Settability At Nominal:		1.65V ±0.25V
Input Current:		88mA Max
Output:		Differential LVPECL
Symmetry:		49/51% Typical, 45/55% Max @ zero crossing point
Rise/Fall Time:		550ps 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:		none
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 Max:	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 Crystal Oscillator solution at a competitive price.

Rev: L
Date: 05-Nov-2021

CRYSTEK CORPORATION
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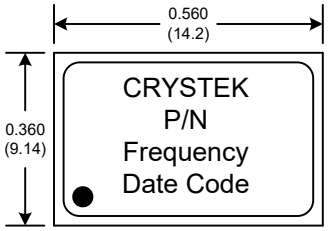
Crystek Part Number Guide

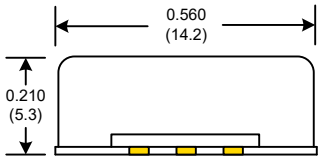
CVPD - 940 - X - 155.520
(#1 - #2 - #3 - #4)

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

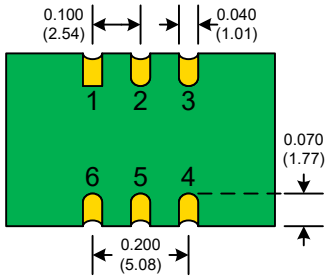
Example:
CVPD-940X-155.520 = 3.3V, -40/85°C, 155.520 MHz

Standard Frequencies MHz	
74.175800	161.132800
74.250	166.628600
77.760	167.331700
155.520	212.500
156.250	





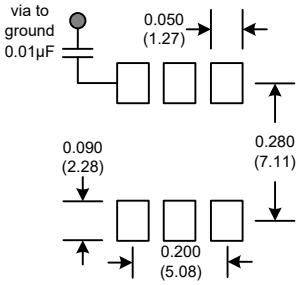
RoHS Compliant



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



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

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:	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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