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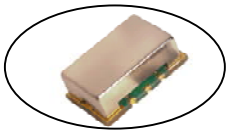


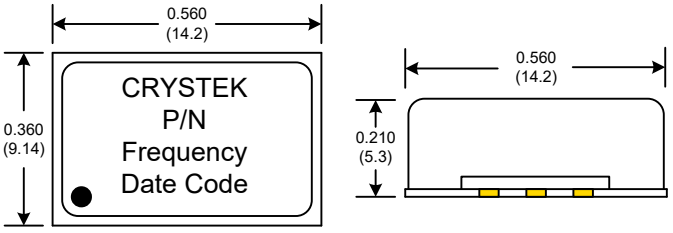
Differential LVPECL Voltage Controlled Crystal Oscillator

CVPD-920 Model
9×14 mm SMD, 3.3V, LVPECL

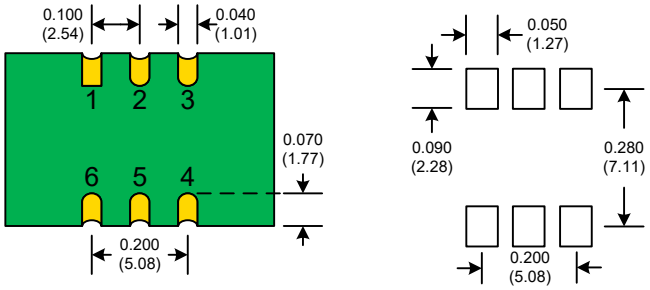
Frequency Range:		50 MHz to 125 MHz
Frequency Pulling:		±20ppm APR Min
Temperature Range:		0°C to 70°C
	(Option X)	-40°C to 85°C
Storage:		-45°C to 90°C
Input Voltage:		3.3V ±0.3V
Control Voltage:		1.65V ±1.65V
Input Current:		88mA Max
Output:		Differential LVPECL
	Symmetry:	45/55% Max @ zero crossing point
	Rise/Fall Time:	1ns Max (20% to 80%)
	Linearity:	±10% Max
	Logic:	Terminated to Vcc-2V into 50 ohms "0" = Vcc-1.85V Min, Vcc-1.62V Max "1" = Vcc-1.02V Min, Vcc-0.81V Max
	Disable Time:	200ns
	Start-up Time:	1ms Typical, 2ms Max
Phase Jitter:	12kHz to 80MHz	0.5ps Typical, 1ps RMS Max
Phase Noise:	10Hz	-65 dBc/Hz Typical
	100Hz	-98 dBc/Hz Typical
	1kHz	-125 dBc/Hz Typical
	10kHz	-140 dBc/Hz Typical
	100kHz	-145 dBc/Hz Typical
Aging:		<3ppm 1st year, <1ppm every year thereafter

RoHS Compliant

Designed to meet today's requirements for 3.3V Differential LVPECL applications. The CVPD-920 is produced using our cost saving FR5 PCB and UM-1 overtone crystal technology. This design offers considerable cost savings over other HFF VCXO products when broad frequency pulling is not required. Also available in 14 pin dip fully hermetic package.



SUGGESTED PAD LAYOUT



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

Crystek Part Number Guide

CVPD-920 X - 100.000
#1 #2 #3 #4

#1 Crystek 9×14 SMD PECL VCXO
#2 Model 920
#3 Temp. Range: Blank = 0/70°C, X = -40/85°C
#4 Frequency in MHz: 3 or 6 decimal places

Example:
CVPD-920X-100.000 = 3.3V, 45/55, -40/85°C, 100.000 MHz

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"	

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

NOT RECOMMENDED FOR NEW DESIGNS
PLEASE USE CVPD-922 FAMILY
http://www.crystek.com/crystal/spec-sheets/vcxo/CVPD-922.pdf

PIN	Function
1	Control Volt
2	E/D
3	GND
4	OUT
5	$\overline{\text{OUT}}$
6	Vcc

Rev: L
Date: 14-Sep-2017

Specifications subject to change without notice.

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Crystek:

CVPD-920-74.25 CVPD-920-74.1758 CVPD-920-61.44 CVPD-940-74.1758