

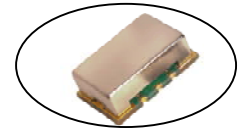
# Ultra-Low Noise LVPECL VCXO

## with -162 dBc/Hz Noise Floor!

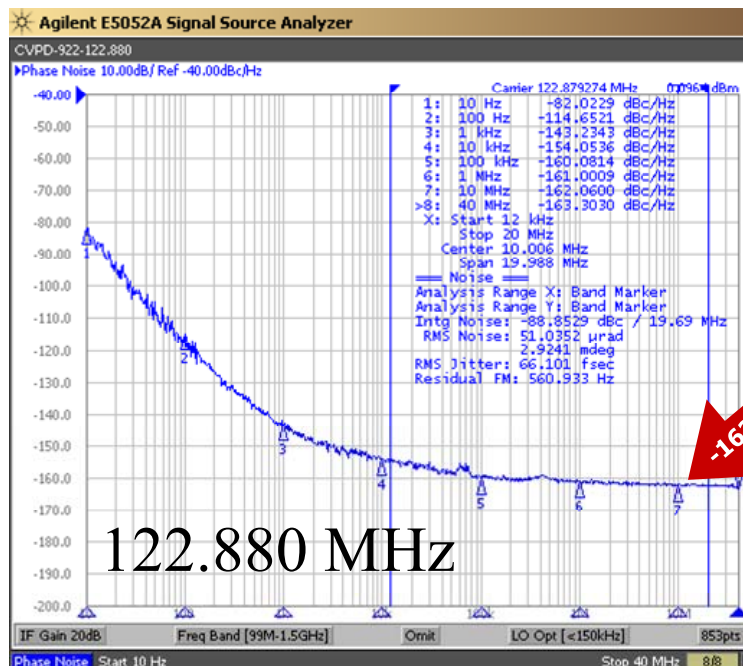
### CVPD-922 Model

9x14 mm SMD, 3.3V, LVPECL

<b>Frequency Range:</b>	40 MHz to 125 MHz
<b>Frequency Pulling:</b>	±20ppm APR Min
<b>Temperature Range:</b>	0°C to 70°C
(Option X)	-40°C to 85°C
<b>Storage:</b>	-45°C to 90°C
<b>Input Voltage:</b>	3.3V ±0.3V
<b>Input Current:</b>	88mA Max
<b>Output:</b>	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
<b>Input:</b>	
Modulation Bandwidth:	>10kHz @ -3dB
Input Impedance:	51 kΩ
Control Voltage:	1.65V ±1.65V
Tuning Sensitivity:	+25ppm/V Typical
<b>Phase Jitter:</b>	12 kHz to 20 MHz 85 femtoseconds Typical @ 100 MHz
<b>Phase Noise @ 100 MHz:</b>	
10 Hz	-85 dBc/Hz Typical
100 Hz	-115 dBc/Hz Typical
1 kHz	-145 dBc/Hz Typical
10 kHz	-155 dBc/Hz Typical
100 kHz	-160 dBc/Hz Typical
1 MHz	-162 dBc/Hz Typical
10 MHz	-162 dBc/Hz Typical
<b>Aging:</b>	<3ppm 1 <sup>st</sup> year, <1ppm every year thereafter



The CVPD-922 represents our lowest phase noise LVPECL VCXO family. Close-in phase noise has been reduced to -85 dBc/Hz @ 10 Hz offset while the noise floor is at -162 dBc/Hz which leads the industry for an LVPECL VCXO.



**-162 dBc/Hz Floor**

Rev: F  
Date: 15-Sep-2017  
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Specifications subject to change without notice.

# Ultra-Low Noise LVPECL VCXO

## with -162 dBc/Hz Noise Floor!

**CVPD-922 Model**  
9x14 mm SMD, 3.3V, LVPECL

### Crystek Part Number Guide

**CVPD-922 X - 100.000**

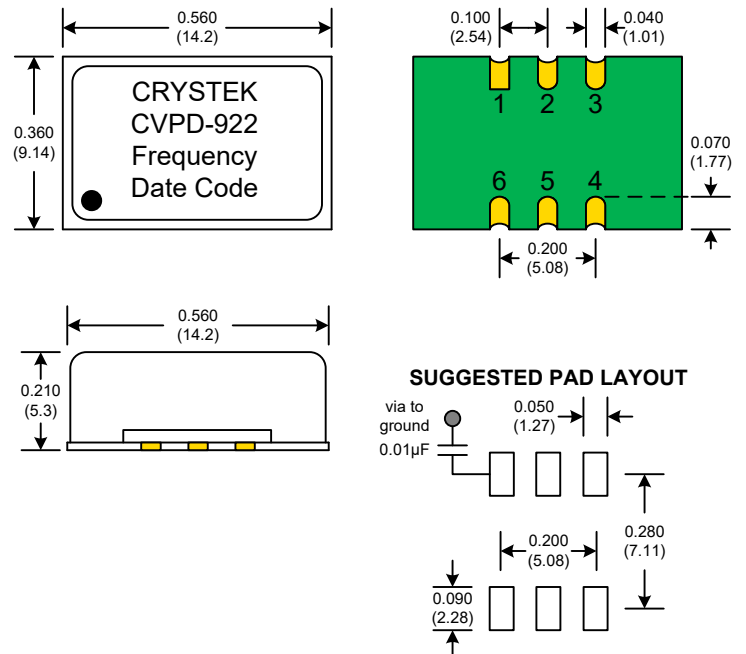
#1 #2 #3 #4

#1 Crystek 9x14 SMD PECL VCXO  
#2 Model 922  
#3 Temp. Range: Blank = 0/70°C, X = -40/85°C  
#4 Frequency in MHz: 3 or 6 decimal places

Example:  
CVPD-922X-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	Disabled
"1" level Vcc-1.025V Min	Active



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

### RECOMMENDED REFLOW SOLDERING PROFILE 900034 (See App Note listed on website)

<http://www.crystek.com/specification/reflow/900034.pdf>

PIN	Function
1	Control Volt
2	E/D
3	GND
4	OUT
5	COU
6	Vdd

Enable/Disable	
Pin 2 Input	Output Pin
Open	Active
"1" level 2.0V Min	Active
"0" level 0.8V Max	High Z

### 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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