

# Differential LVPECL Clock Oscillator

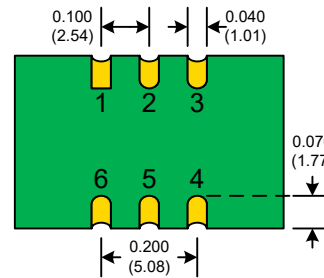
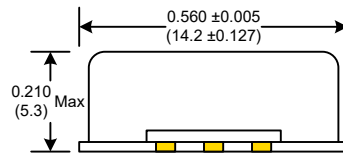
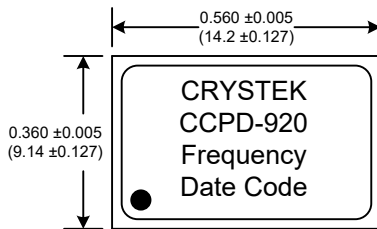


## CCPD-920 Model 9x14 mm SMD, 3.3V, LVPECL

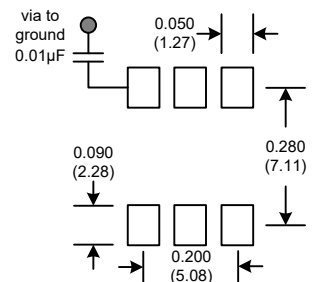
<b>Frequency Range:</b>	50 MHz to 150 MHz
<b>Frequency Stability:</b>	±20, ±25, ±50ppm (0°C to 70°C) ±25, ±50ppm (-40°C to 85°C)
<b>Temperature Range:</b>	0°C to 70°C (Option X) -40°C to 85°C
<b>Storage:</b>	-45°C to 90°C
<b>Input Voltage:</b>	3.3V ± 0.3V
<b>Input Current:</b>	88mA Max
<b>Output:</b>	Differential LVPECL
Symmetry:	45/55% Max @ zero crossing point
Rise/Fall Time:	1ns Max (20% to 80%)
Linearity:	± 10% Max
Logic:	Terminated to Vdd-2V into 50 ohms Logic "0" "0" = Vcc-1.85V Min, Vcc-1.62V Max Logic "1" "1" = Vcc-1.02V Min, Vcc-0.81V Max
Disable Time	200ns Max
Start-up Time	1ms Typical, 2ms Max
<b>Phase Jitter:</b>	12kHz to 80MHz 0.5ps Typical, 1psec RMS Max
<b>Phase Noise:</b>	10Hz -65 dBc/Hz Typical 100Hz -98 dBc/Hz Typical 1kHz -125 dBc/Hz Typical 10kHz -140 dBc/Hz Typical 100kHz - 100MHz -145 dBc/Hz Typical
<b>Aging:</b>	<3ppm 1 <sup>st</sup> year, <1ppm every year thereafter



Designed to meet today's requirements for 3.3V Differential LVPECL applications. The CCPD-920 is produced using our cost saving FR5 PCB and UM-1 overtone crystal technology. This design offers considerable cost savings over other HFF XO's products. Also available in 14 pin dip fully hermetic package.



### SUGGESTED PAD LAYOUT



**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	NC
2	E/D
3	GND
4	OUT
5	COUT
6	Vdd

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

### Crystek Part Number Guide

CCPD-920 X - 25 - 100.000

#1 #2 #3 #4 #5

#1 Crystek 9x14 SMD PECL OSC  
#2 Model 920  
#3 Temp. Range: Blank = 0/70°C, X=-40/85°C  
#4 Stability: (see Table 1)  
#5 Frequency in MHz: 3 or 6 decimal places

#### Stability Indicator

20 = 0/70°C (±20ppm)  
25 = 0/70°C (±25ppm)  
50 = 0/70°C (±50ppm)  
25 = -40/85°C (±25ppm)  
50 = -40/85°C (±50ppm)

Example:  
CCPD-920X-25-100.000 = 3.3V, 45/55, -40/85°C, 25ppm, 100.000 MHz

Table 1

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Rev: J  
Date: 26-Jan-2023  
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