

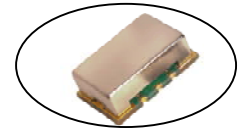
# Ultra-Low Noise LVPECL CLOCK

## with -162 dBc/Hz Noise Floor!

### CCPD-922 Model

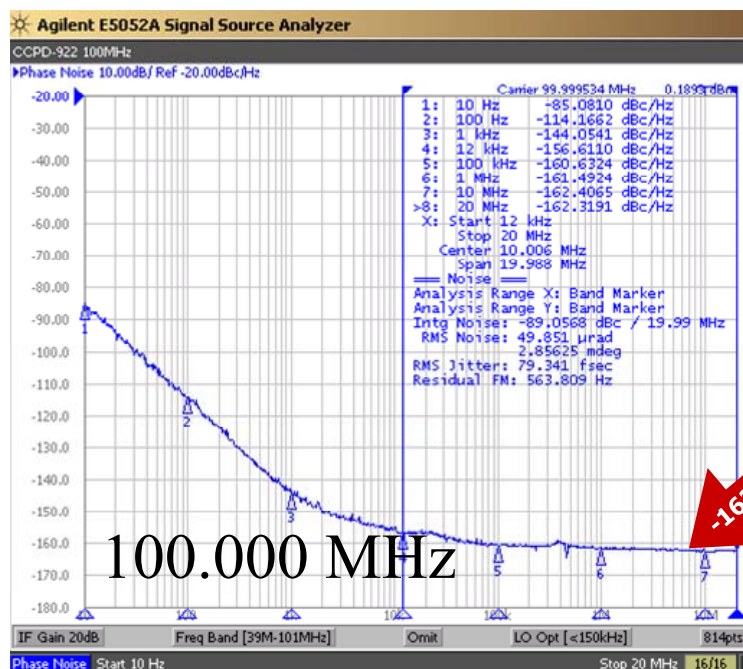
9x14 mm SMD, 3.3V, LVPECL

<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>Phase Jitter:</b>	12 kHz to 20 MHz	80 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 CCPD-922 represents our lowest phase noise LVPECL CLOCK 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 CLOCK.



Rev: A  
Date: 02-Jun-2016  
Page 1 of 2

Specifications subject to change without notice.

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

# Ultra-Low Noise LVPECL CLOCK

with -162 dBc/Hz Noise Floor!

### Crystek Part Number Guide

CCPD-922 X - 25 - 100.000

#1 #2 #3 #4 #5

#1 Crystek 9x14 SMD PECL OSC  
#2 Model 922  
#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

Example:  
CCPD-922X-100.000 = 3.3V, 45/55, -40/85°C, 100.000 MHz

#### Stability Indicator

20 = ±20ppm  
25 = ±25ppm

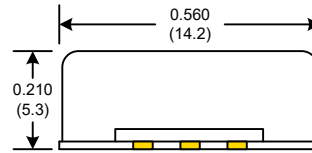
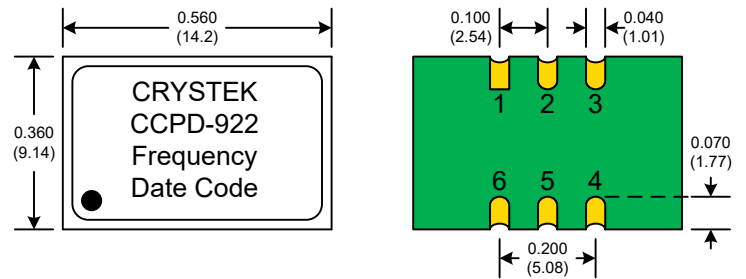
Table 1

#### Enable/Disable Function

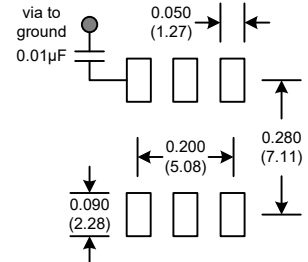
Pin 2	Output Pin
Open	Active
"0" level Vcc-1.620V Max	Disabled
"1" level Vcc-1.025V Min	Active

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

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



#### SUGGESTED PAD LAYOUT



PIN	Function
1	NC
2	E/D
3	GND
4	OUT
5	COUT
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

Rev: A

Date: 02-Jun-2016

Page 2 of 2