



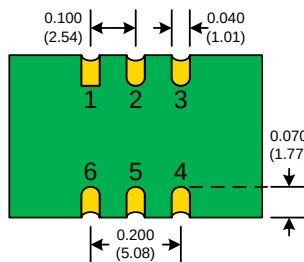
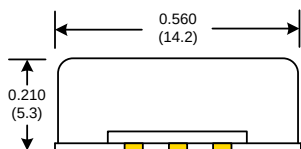
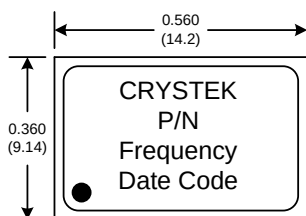
# Differential LVPECL Voltage Controlled Crystal Oscillator

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

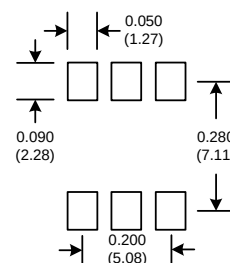
|                    |                                                                                                               |
|--------------------|---------------------------------------------------------------------------------------------------------------|
| Frequency Range:   | 50 MHz to 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:    | 1nSec Max (20% to 80%)                                                                                        |
| Linearity:         | ±10% Max                                                                                                      |
| Logic:             | Terminated to Vcc-2V into 50 ohms<br>"0" = Vcc-1.85V Min, Vcc-1.62V Max<br>"1" = Vcc-1.02V Min, Vcc-0.81V Max |
| Disable Time:      | 200nSec                                                                                                       |
| Start-up Time:     | 1mSec Typical, 2mSec Max                                                                                      |
| Phase Jitter:      | 12kHz to 80MHz 0.5pSec Typical, 1pSec 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 1 <sup>st</sup> year, <1ppm every year thereafter                                                       |



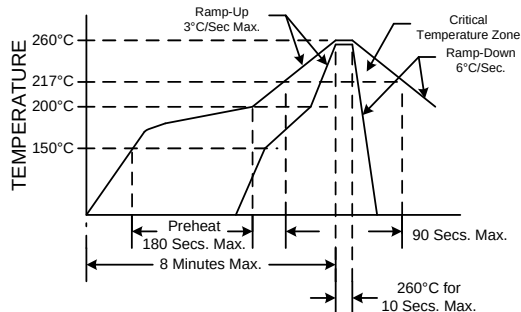
Designed to meet today's requirements for 3.3V Differential LVPECL applications. The CVPD-920 is produced using our cost saving FR5 PCB and UM-1 overtone crystal technology. This design offers considerable cost savings over other HFF VCXO products when broad frequency pulling is not required. Also available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



### SUGGESTED PAD LAYOUT



### RECOMMENDED REFLOW SOLDERING PROFILE



NOTE: Reflow Profile with 240°C peak also acceptable.

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

### Crystek Part Number Guide

#### CVPD-920 X - 100.000

| #1                                           | #2 | #3 | #4 |
|----------------------------------------------|----|----|----|
| #1 Crystek 9x14 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" |            |

Specifications subject to change without notice.

TD-030701 Rev. H



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