

# CVPD-914 Model

## 9X14 mm SMD, 3.3V, LVPECL

Lead Free  
RoHS  
Compliant

# Differential LVPECL

## Voltage Controlled

## Crystal Oscillator

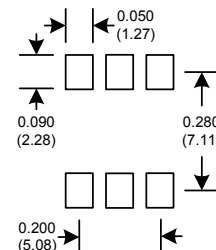
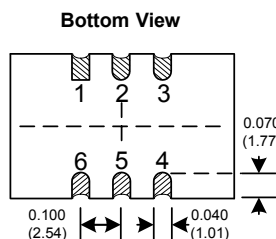
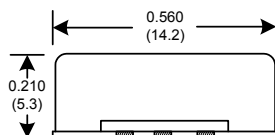
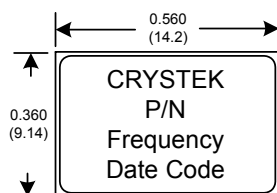


Designed to meet today's requirements for 3.3V Differential LVPECL applications. The CVPD-914 is produced using mesa crystal design to provide a very low noise, low jitter voltage controlled clock oscillator for demanding telecom and other applications.

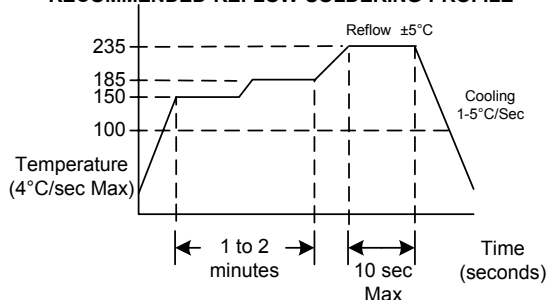
|                                |                                   |
|--------------------------------|-----------------------------------|
| <b>Frequency Range:</b>        | 77.760MHz to 200MHz               |
| <b>Temperature Range:</b>      | 0°C to 70°C                       |
| (Option M)                     | -20°C to 70°C                     |
| (Option X)                     | -40°C to 85°C                     |
| <b>Storage:</b>                | -55°C to 120°C                    |
| <b>Input Voltage:</b>          | 3.3V ± 0.3V                       |
| <b>Control Voltage:</b>        | 1.65V ± 1.65V                     |
| <b>Settability At Nominal:</b> | 1.65V ± 0.25V                     |
| <b>Input Current:</b>          | 50mA Typ, 88mA Max                |
| <b>Output:</b>                 | Differential LVPECL               |
| Symmetry:                      | 45/55% Max @ 50% Vdd              |
| Rise/Fall Time:                | 1ns Max @ 20% to 80% Vdd          |
| Pulling Range:                 | ±50ppm APR Min. (std)             |
| Linearity:                     | ± 10% Max                         |
| Logic:                         | Terminated to Vdd-2V into 50 ohms |
| Temp. 0°C to 85°C              | "0" = 1.490 Min, 1.680 Max        |
|                                | "1" = 2.275 Min, 2.420 Max        |
| Temp. -40°C to 0°C             | "0" = 1.470 Min, 1.745 Max        |
|                                | "1" = 2.215 Min, 2.420 Max        |
| Enable/Disable Time            | 200ns Max                         |
| <b>Jitter:</b> 12KHz to 80MHz  | 0.5psec Typ., 1psec RMS Max       |

**Aging:** <5ppm 1st/yr, <2ppm every year thereafter

### SUGGESTED PAD LAYOUT



### RECOMMENDED REFLOW SOLDERING PROFILE



260°C Reflow Profile NOT recommended for this product

### Crystek Part Number Guide

**CVPD-914 X - 50 - 155.520**

#1 Crystek 9x14 SMD PECL VCXO  
#2 Model 033 = 3.3V  
#3 Temp. Range: Blank = 0/70°C, M = -20/70°C, X = -40/85°C  
#4 Pulling: (see Table 1)  
#5 Frequency in MHz: 3 or 6 decimal places

#### Pulling (APR) Min.

|          |          |
|----------|----------|
| Blank    | ± 100ppm |
| 50 (std) | ± 50ppm  |
| 25       | ± 25ppm  |
| 20       | ± 20ppm  |

Table 1

Example:

CVPD-914X-50-155.520 = 3.3V, 45/55, -40/85°C, 50ppm APR, 155.520 MHz

| Pad | Connection |
|-----|------------|
| 1   | Volt Cont. |
| 2   | E/D        |
| 3   | GND        |
| 4   | OUT        |
| 5   | COUT       |
| 6   | Vdd        |

#### Standard Frequencies

|         |          |
|---------|----------|
| 77.760  | 161.1328 |
| 155.520 | 166.6286 |
| 156.250 | 167.3316 |

#### Enable/Disable Function

| E/D pin              | Output pin |
|----------------------|------------|
| Open                 | Active     |
| "1" level 0.7Vcc Min | Active     |
| "0" level 0.3Vcc Max | High Z     |

Specifications subject to change without notice.

TD-030401 Rev. G



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