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.

**CVPD-914 Model**

9×14 mm SMD, 3.3V, LVPECL

- **Frequency Range:** 77.760 MHz to 200 MHz
- **Temperature Range:**
  - (Option M) 0°C to 70°C
  - (Option X) -20°C to 70°C
  - -40°C to 85°C
  - -45°C to 90°C
- **Storage:** -45°C to 90°C
- **Input Voltage:** 3.3V ±0.3V
- **Control Voltage:** 1.65V ±0.25V
- **Settability At Nominal:** 50mA Typical, 88mA Max
- **Output:** Differential LVPECL
- **Symmetry:** 45/55% Max @ zero crossing point
- **Rise/Fall Time:** 1nSec Max (20% to 80%)
- **Pulling Range:** ±50ppm APR Min (std)
- **Linearity:** ±10% Max
- **Temp. Enable/Disable Time:** 200nSec Max
- **Jitter:** 0.5pSec Typical, 1pSec RMS Max
- **Aging:** <5ppm 1st year, <2ppm every year thereafter

**Specifications subject to change without notice.**

---

**SUGGESTED PAD LAYOUT**

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

---

**Crystek Part Number Guide**

<table>
<thead>
<tr>
<th>#1</th>
<th>#2</th>
<th>#3</th>
<th>#4</th>
<th>#5</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVPD-914 - X - 50 - 155.520</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **#1 Crystek 9×14 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**

- **Table 1**

<table>
<thead>
<tr>
<th>Pulling (APR) Min.</th>
<th>0.200 (5.08)</th>
<th>0.200 (5.08)</th>
<th>0.200 (5.08)</th>
<th>0.200 (5.08)</th>
</tr>
</thead>
</table>
| 260°C Reflow Profile NOT recommended for this product

---

**Enable/Disable Function**

<table>
<thead>
<tr>
<th>PIN</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Volt Cont.</td>
</tr>
<tr>
<td>2</td>
<td>E/D</td>
</tr>
<tr>
<td>3</td>
<td>GND</td>
</tr>
<tr>
<td>4</td>
<td>OUT</td>
</tr>
<tr>
<td>5</td>
<td>COUT</td>
</tr>
<tr>
<td>6</td>
<td>Vcc</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>E/D Pin</th>
<th>Output Pin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open</td>
<td>Active</td>
</tr>
<tr>
<td>&quot;1&quot; level 0.7×Vcc Min</td>
<td>Active</td>
</tr>
<tr>
<td>&quot;0&quot; level 0.3×Vcc Max</td>
<td>High Z</td>
</tr>
</tbody>
</table>

---

**Crystek Part Number Guide**

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

---

**Revised:** N

**Date:** 14-Sep-2017

**Page:** 1 of 1