CVPD-034 LVPECL
Voltage Controlled Crystal Oscillator
5×7mm SMD
3.3 Volts

Applications:
Digital Video
SONET/SDH/DWDM
Storage Area Networks
Broadband Access
Ethernet, Gigabit Ethernet

Actual CVPD-034X-50-155.520 MHz Plot
CVPD-034 LVPECL  
Voltage Controlled Crystal Oscillator  
5×7mm SMD  
3.3 Volts

**Frequency Range:** 77.760 MHz to 200.000 MHz

**Frequency Pulling (APR*) Min:** ±50ppm

**Temperature Range:** (standard)  
0°C to +70°C  
-20°C to +70°C  
-40°C to +85°C  
-45°C to +90°C

**Storage:**

**Input Voltage:** 3.3V ±5%

**Control Voltage:** 1.65V ±1.65V

**Input Current:** 55mA Typical, 88mA Max

**Output:** 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 Ω  
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”=1.490 Min, 1.745 Max  
“1”=2.215 Min, 2.420 Max  
Disable Time: 200ns Max  
Enable Time: 20us Max

**Phase Jitter:** 12 kHz~80 MHz  
0.5ps Typical, 1ps RMS Max

**Phase Noise:**  
10 Hz -70 dBC/Hz Typical  
100 Hz -98 dBC/Hz Typical  
1 kHz -125 dBC/Hz Typical  
10 kHz -145 dBC/Hz Typical  
100 kHz -149 dBC/Hz Typical

**Sub-harmonics:** None

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

* Inclusive of calibration, frequency stability, and aging

Specifications subject to change without notice.
**CVPD-034 LVPECL**

Voltage Controlled Crystal Oscillator

5×7mm SMD

3.3 Volts

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**Crystek Part Number Guide**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Frequency</th>
<th>DC Lot Code</th>
<th>Pullability Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVPD-034 X-50-155.520</td>
<td>77.760 MHz</td>
<td>3.3V, -40/85°C, ±50ppm (APR), 155.520 MHz</td>
<td></td>
</tr>
</tbody>
</table>

**Standard Frequencies**

(±50ppm, 0/70°C)

- 77.760 MHz
- 155.520 MHz
- 156.250 MHz
- 161.132800 MHz
- 200.000 MHz

**RECOMMENDED REFLOW SOLDERING PROFILE**

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Ramp-Up</th>
<th>Preheat</th>
<th>Ramp-Down</th>
</tr>
</thead>
<tbody>
<tr>
<td>217°C</td>
<td>3°C/Sec Max</td>
<td>180 Secs. Max</td>
<td>6°C/Sec.</td>
</tr>
<tr>
<td>200°C</td>
<td></td>
<td>8 Minutes Max</td>
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</tr>
<tr>
<td>150°C</td>
<td></td>
<td></td>
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</table>

**Mechanical:**

- Vibration: MIL-STD-883, Method 2007, Condition A
- Resistance to Soldering Heat: MIL-STD-202, Method 210, Condition I or J

**Environmental:**

- Thermal Shock: MIL-STD-883, Method 1011, Condition A
- Solvent Resistance: MIL-STD-202, Method 210, Condition I or J

**Dimensions**

All dimensions are Max unless otherwise specified.

- 0.055 Typ (1.40 Typ)
- 0.045 ±0.008 (1.14 ±0.20)
- 0.100 (2.54)
- 0.200 (5.08)

**SUGGESTED PAD LAYOUT**

0.01μF Bypass Capacitor Recommended

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**Rev:** AB

**Date:** 19-Jan-2017

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