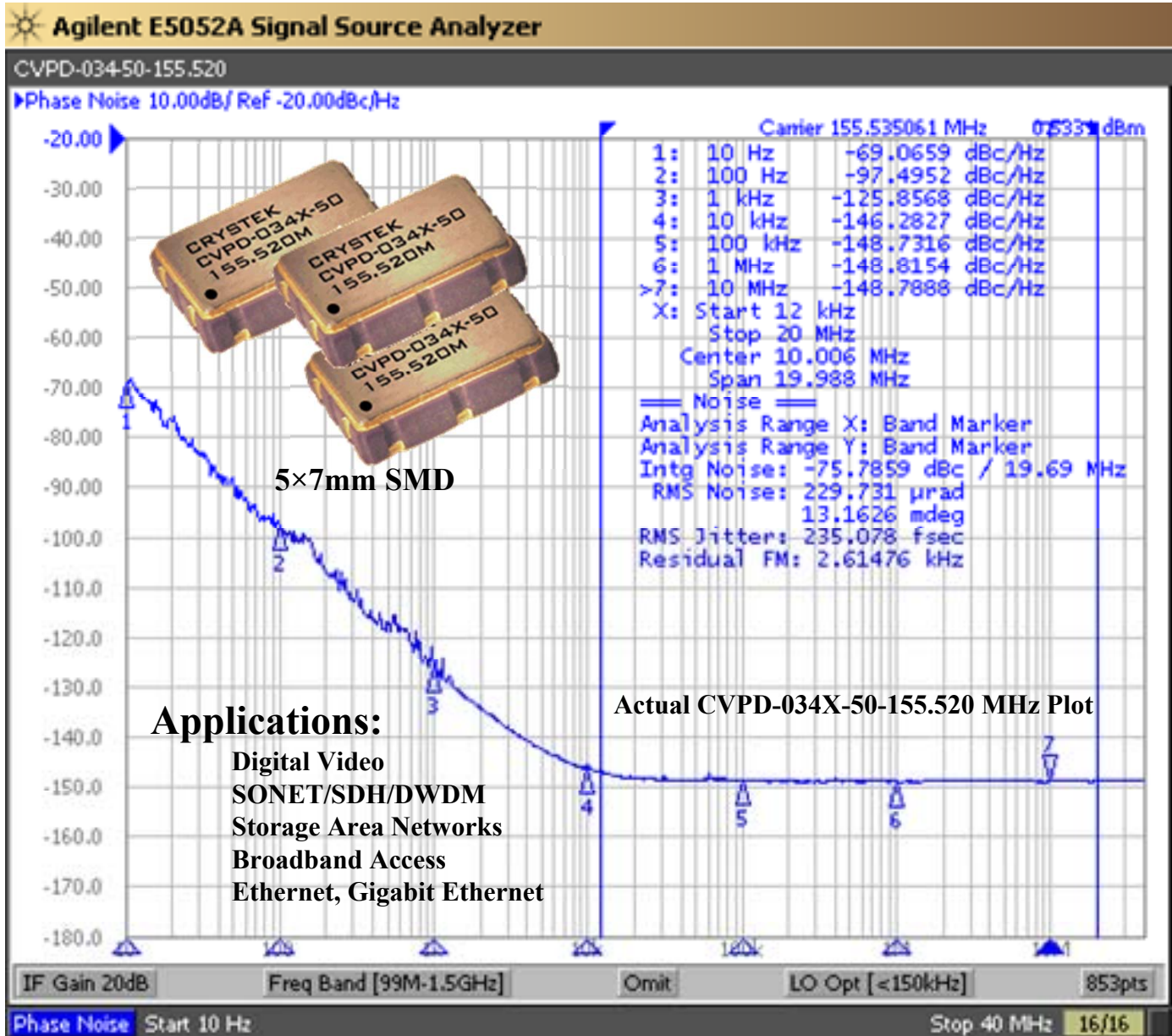


# CVPD-034 LVPECL

## Voltage Controlled Crystal Oscillator

### 5×7mm SMD

### 3.3 Volts



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



<b>Frequency Range:</b>	<b>77.760 MHz to 200.000 MHz</b>
<b>Frequency Pulling (APR*) Min:</b>	<b>±50ppm</b>
<b>Temperature Range: (standard)</b>	<b>0°C to +70°C</b>
<b>(Option M)</b>	<b>-20°C to +70°C</b>
<b>(Option X)</b>	<b>-40°C to +85°C</b>
<b>Storage:</b>	<b>-45°C to +90°C</b>
<b>Input Voltage:</b>	<b>3.3V ±5%</b>
<b>Control Voltage:</b>	<b>1.65V ±1.65V</b>
<b>Input Current:</b>	<b>55mA Typical, 88mA Max</b>
<b>Output:</b>	<b>Differential LVPECL</b>
<b>Symmetry:</b>	<b>45/55% Max @ zero crossing point</b>
<b>Rise/Fall Time:</b>	<b>1ns Max (20% to 80%)</b>
<b>Linearity:</b>	<b>±10% Max</b>
<b>Logic: Terminated to Vdd-2V into 50 Ω</b>	
Temp. 0°C to 85°C	<b>"0"=1.490 Min, 1.680 Max</b>
	<b>"1"=2.275 Min, 2.420 Max</b>
Temp. -40°C to 0°C	<b>"0"=1.490 Min, 1.745 Max</b>
	<b>"1"=2.215 Min, 2.420 Max</b>
<b>Disable Time:</b>	<b>200ns Max</b>
<b>Enable Time:</b>	<b>20us Max</b>
<b>Phase Jitter: 12 kHz~80 MHz</b>	<b>0.5ps Typical, 1ps RMS Max</b>
<b>Phase Noise: 10 Hz</b>	<b>-70 dBc/Hz Typical</b>
<b>100 Hz</b>	<b>-98 dBc/Hz Typical</b>
<b>1 kHz</b>	<b>-125 dBc/Hz Typical</b>
<b>10 kHz</b>	<b>-145 dBc/Hz Typical</b>
<b>100 kHz</b>	<b>-149 dBc/Hz Typical</b>
<b>Sub-harmonics:</b>	<b>None</b>
<b>Aging:</b>	<b>&lt;5ppm 1<sup>st</sup> year, &lt;2ppm every year thereafter</b>

\* Inclusive of calibration, frequency stability, and aging

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# CVPD-034 LVPECL

## Voltage Controlled Crystal Oscillator

### 5×7mm SMD

### 3.3 Volts



### Crystek Part Number Guide

CVPD - 034 X - 50 - 155.520

#1 #2 #3 #4 #5

#1 Crystek PECL VCXO  
#2 Model 034  
#3 Temp Range: Blank = 0/70°C, M = -20/70°C, X = -40/85°C  
#4 Pullability: (see Table 1)  
#5 Frequency in MHz: 3 or 6 decimal places

Pullability Indicator

50 ± 50ppm

Table 1

Example:

CVPD-034X-50-155.520

3.3V, -40/85°C, ±50ppm (APR), 155.520 MHz

### Standard Frequencies

(±50ppm, 0/70°C)

77.760 MHz  
155.520 MHz  
156.250 MHz  
161.132800 MHz  
200.000 MHz

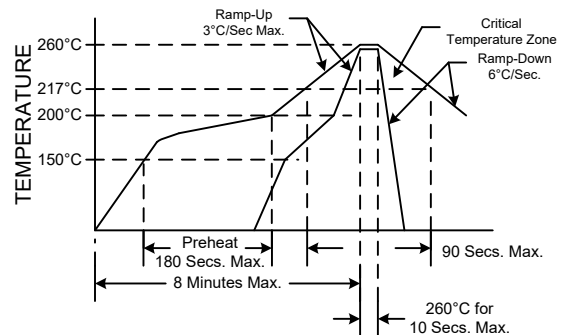
### Mechanical:

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

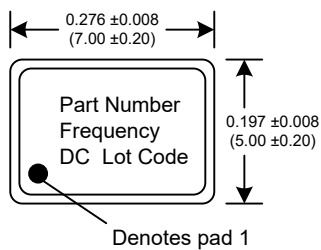
### Environmental:

Thermal Shock: MIL-STD-883, Method 1011, Condition A  
Moisture Resistance: MIL-STD-883, Method 1004

### RECOMMENDED REFLOW SOLDERING PROFILE

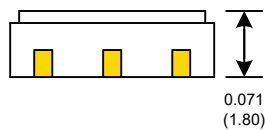


NOTE: Reflow Profile with 240°C peak also acceptable.



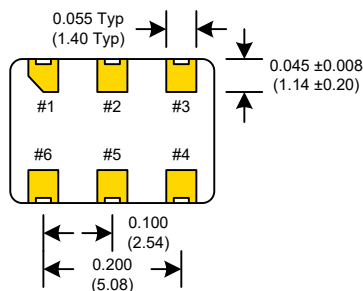
Dimensions inches (mm)

All dimensions are Max unless otherwise specified.

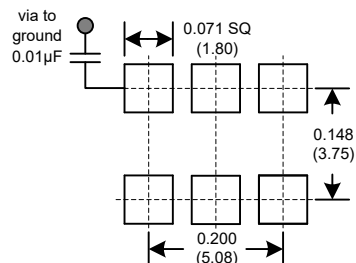


### Enable/Disable

Function pin 2	Output pin
Open or N/C	Active
"1" level 0.7×V <sub>dd</sub> Min	Active
"0" level 0.3×V <sub>dd</sub> Max	High Z



### SUGGESTED PAD LAYOUT



0.01µF Bypass Capacitor Recommended

PIN	Connection
1	Volt Control
2	Enable/Disable
3	GND
4	Output
5	Comp Output
6	V <sub>cc</sub>

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