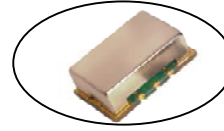


# Ultra-Low Phase Noise Voltage Controlled Crystal Oscillator

## Part Number CVHD-952 9x14 mm SMD, 3.3V, HCMOS

<b>Frequency Range:</b>	131.000 MHz to 210.000 MHz
<b>Frequency Pulling:</b>	±20 ppm APR Min
<b>Temperature Range:</b>	0°C to 70°C (standard)
<b>(Option X):</b>	-40°C to 85°C
<b>Storage:</b>	-45°C to 90°C
<b>Input Voltage:</b>	3.3 V ±0.3 V
<b>Control Voltage:</b>	1.65 V ±1.65 V
<b>Input Current:</b>	25 mA Typical, 35 mA Max
<b>Output:</b>	HCMOS
<b>Symmetry:</b>	45/55% Max @ 50% Vdd
<b>Rise/Fall Time:</b>	2ns Max @ 20% to 80% Vdd
<b>Linearity:</b>	±10% Max
<b>Logic:</b>	"0" = 10% Vdd Max "1" = 90% Vdd Min
<b>Load:</b>	15 pF
<b>Output current:</b>	±24 mA Max
<b>Disable Time:</b>	200 ns Max
<b>Enable Time:</b>	200 ns Max
<b>Jitter:</b>	12 kHz to 80 MHz 0.5 psec Typical, 1 psec RMS Max
<b>Phase Noise (Typical):</b>	1 Hz: -40 dBc/Hz 10 Hz: -70 dBc/Hz 100 Hz: -100 dBc/Hz 1 kHz: -130 dBc/Hz 10 kHz: -148 dBc/Hz 100 kHz: -150 dBc/Hz

**Sub-Harmonic @ Fo/2:** -35 dBc Max  
**Aging:** <3 ppm 1<sup>st</sup> year, <1 ppm every year thereafter



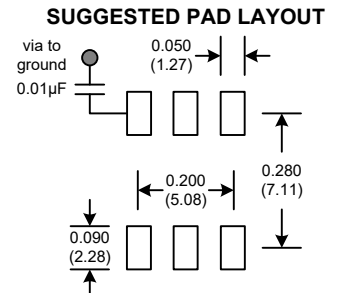
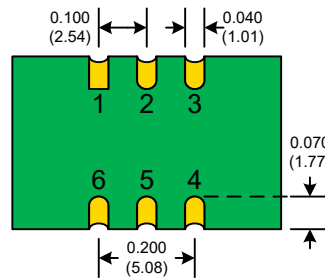
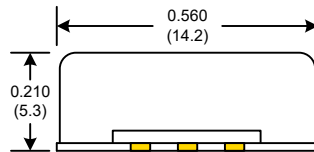
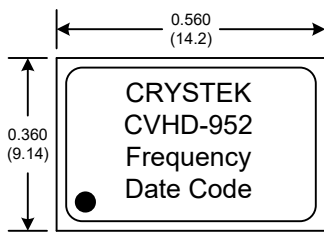
Available Frequencies (MHz):  
148.351600 148.500

### Applications:

HD Video Broadcast Equipment

PIN	Function
1	Control Volt
2	E/D
3	GND
4	OUT
5	No Connect
6	Vdd

Enable/Disable	
Pin 2 Input	Output Pin
Open	Active
"1" level 2.0V Min	Active
"0" level 0.8V Max	High Z



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

#### 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 900034 (See App Note listed on website)

<http://www.crystek.com/specification/reflow/900034.pdf>

\*\* APR= Absolute Pulling Range inclusive of all conditions  
Specifications subject to change without notice.

Rev: G  
Date: 07-Sep-2017  
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