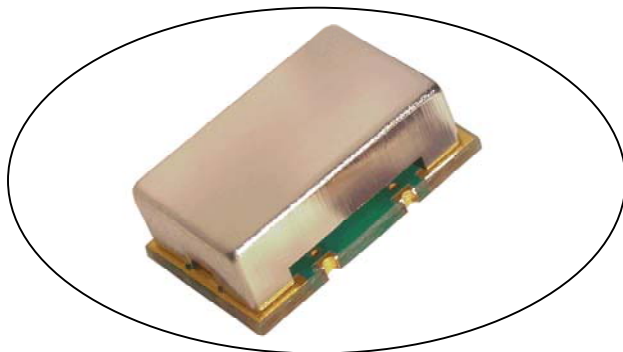


# High Performance HCMOS VCXO



**CVHD-930 Model**  
9x14 mm SMD, 3.3V, HCMOS

<b>Frequency Range:</b>	10 MHz to 49.152 MHz
<b>Temperature Range:</b> (Option X)	0°C to 70°C -40°C to 85°C
<b>Storage:</b>	-45°C to 90°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>	25mA Max
<b>Output:</b>	HCMOS
Symmetry:	47.5/52.5 Typical, 45/55% Max
Rise/Fall Time:	5ns Max @ 20% to 80% Vcc
Pullability APR:	±50ppm Min
Linearity:	±10% Max
Load:	30pF Max
Logic "1" Level:	90% Vdd Max
Logic "0" Level:	10% Vdd Min
Start-up time:	2ms Typical, 5ms Max
<b>Modulation BW:</b>	>10kHz @ -3dB
<b>Sub-harmonics:</b>	none
<b>Period Jitter:</b> (20,000 periods)	<5ps RMS (1-sigma) Max
<b>Phase Jitter:</b> 12kHz~20MHz	<1ps RMS (1-sigma) Max
50kHz~80MHz	<1ps RMS (1-sigma) Max
<b>Phase Noise Typical:</b>	
10Hz	-80 dBc/Hz
100Hz	-110 dBc/Hz
1kHz	-140 dBc/Hz
10kHz	-152 dBc/Hz
100kHz	-155 dBc/Hz
<b>Aging:</b>	<3ppm 1 <sup>st</sup> year, <1ppm every year thereafter



#### Applications:

- Broadband Networks
- SONET/SDH/DWD
- ATM
- Network/switch
- Telecom

Designed using FR5 PCB & Fundamental AT crystal technology to provide a Low Noise, Low Jitter Voltage Controlled Crystal Oscillator solution at a competitive price.

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# High Performance HCMOS VCXO



**CVHD-930 Model**  
9×14 mm SMD, 3.3V, HCMOS

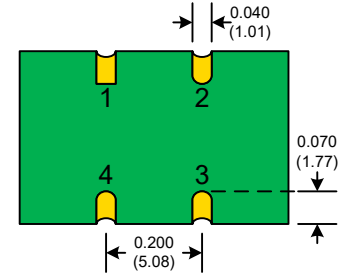
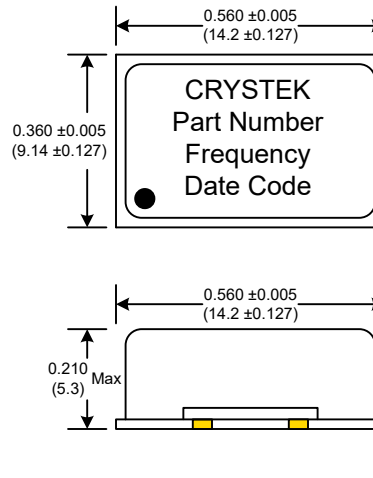
### Crystek Part Number Guide

CVHD - 930 X - 49.152

#1 #2 #3 #4

- #1 Crystek 9×14 SMD HCMOS VCXO
- #2 Model 930 = High Performance 3.3V
- #3 Temp. Range: Blank = 0/70°C, X = -40/85°C
- #4 Frequency in MHz: 3 or 6 decimal places

Example:  
CVHD-930X-49.152 = 3.3V, -40/85°C, 49.152 MHz



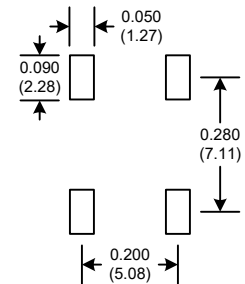
**PAD FINISH:** Immersion Gold (ENIG); 5 micro inches maximum

### RECOMMENDED REFLOW SOLDERING PROFILE 900034 (See App Note listed on website)

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

PIN	Function
1	Vcont
2	GND
3	OUT
4	VDD

### SUGGESTED PAD LAYOUT



### 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

### Packaging:

Tape/Reel: 100ea, 250ea, 500ea 24mm Tape

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