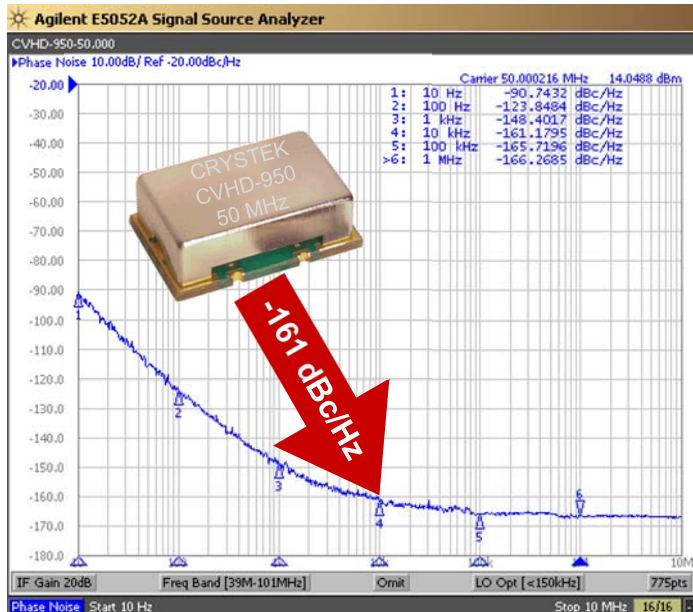


# CVHD-950 VCXO

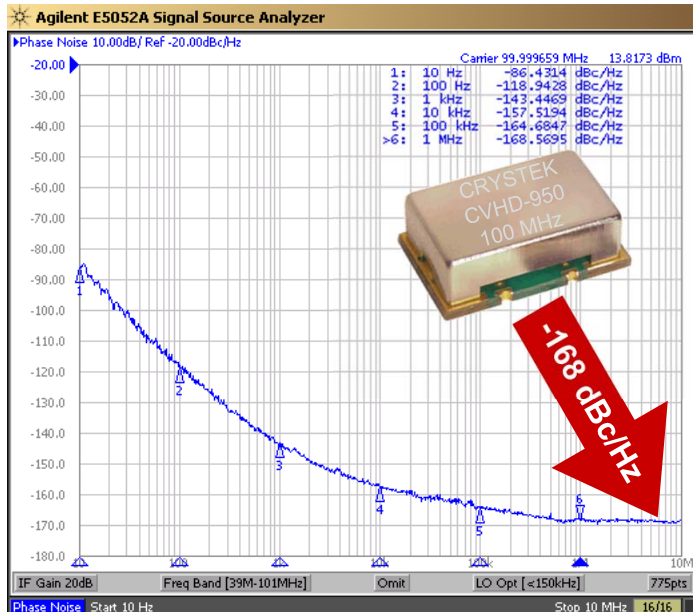
## Ultra-Low Phase Noise Oscillators

**CVHD-950 Model**  
9×14 mm SMD, 3.3V, CMOS

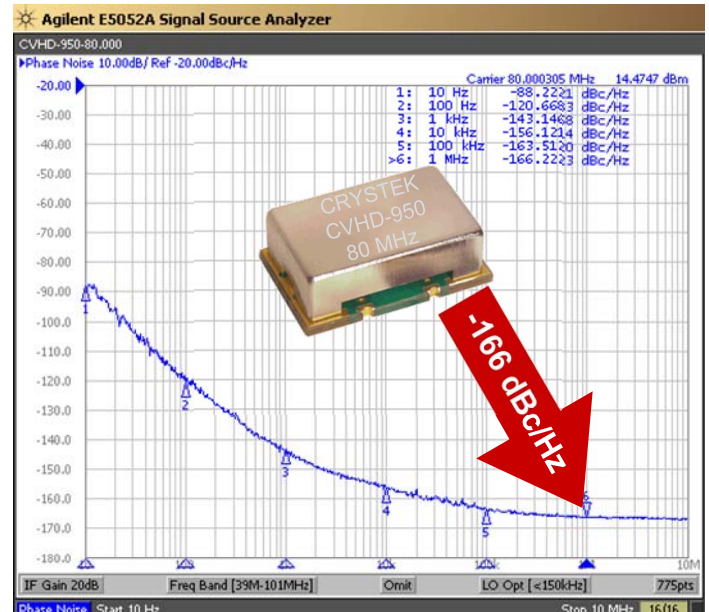
**50 MHz HCMOS 3.3V**



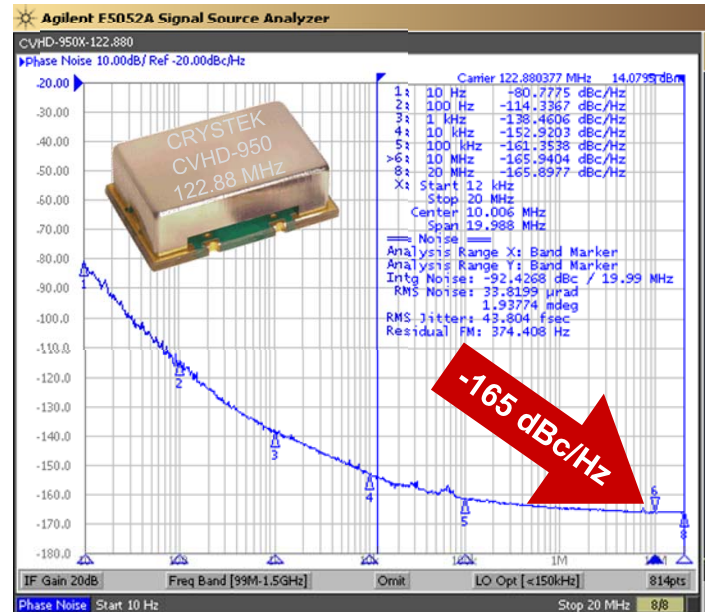
**100 MHz HCMOS 3.3V**



**80 MHz HCMOS 3.3V**



**122.880 MHz HCMOS 3.3V**



**Model CVHD-950 is a 40 MHz to 130 MHz CMOS Voltage Controlled Crystal Oscillator. High Q crystal and 3<sup>rd</sup> overtone technology provides Ultra-Low Phase Noise and Low-Jitter performance with a CMOS output. Features include -168 dBc/Hz phase noise floor with 3.3Vdc input voltage, -40°C to +85°C operating temperature, and 9×14 mm SMT package. The oscillator has no sub-harmonics.**

**Applications include High Definition TV, Avionics  
Low Phase Signal Sources, and Test and Measurement.**

Rev: Z  
Date: 26-Aug-2019  
Page 1 of 3

# CVHD-950 VCXO

## Ultra-Low Phase Noise Oscillators



**CVHD-950 Model**  
9×14 mm SMD, 3.3V, CMOS

<b>Frequency Range:</b>	40 MHz to 130 MHz
<b>Temperature Range:</b>	0°C to +70°C (standard)
(Option M)	-20°C to +70°C
(Option X)	-40°C to +85°C
<b>Storage:</b>	-45°C to 90°C
<b>Input Voltage:</b>	3.3V ±0.3V
<b>Supply Pushing:</b>	1.2ppm/V Typical
<b>Input Current:</b>	15mA Typical, 25mA Max
<b>Output:</b>	CMOS
<b>Symmetry:</b>	45/55% Max @ 50%Vdd
<b>Rise/Fall Time:</b>	3nsec Max @ 20% to 80% Vdd
<b>Logic:</b>	“0” = 10% Vdd Max “1” = 90% Vdd Min
<b>Load:</b>	15pF
<b>Output Current:</b>	±24mA Max
<b>Input:</b>	
<b>Modulation Bandwidth:</b>	>10kHz @ -3dB
<b>Input Impedance:</b>	51 kΩ
<b>Control Voltage:</b>	1.65V ±1.65V
<b>Tuning Sensitivity:</b>	+25ppm/V Typical
<b>Frequency Pulling:</b>	±20ppm APR Min (Inclusive of frequency stability, calibration, and aging.)
<b>Linearity:</b>	±5% Max
<b>Phase Jitter (12kHz~20MHz):</b>	40 fsec Typical @100MHz
<b>Typical Phase Noise (100MHz):</b>	
1kHz	-140 dBc/Hz
10kHz	-155 dBc/Hz
100kHz	-164 dBc/Hz
1MHz	-166 dBc/Hz
<b>Phase Noise Floor:</b>	-166 dBc/Hz Typical, -162 dBc/Hz Max
<b>Sub-harmonics:</b>	None
<b>Aging:</b>	<3ppm 1 <sup>st</sup> year, <1ppm thereafter
<b>Weight:</b>	1.2 g

Part Number Example: CVHD-950X-100.000 = 3.3V, 45/55, -40°C to +85°C (±20ppmAPR), 100 MHz

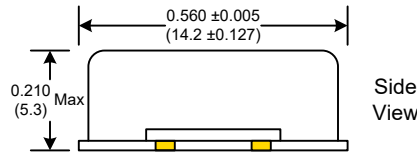
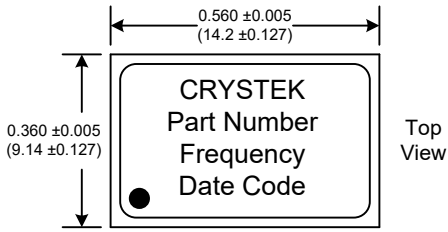
Absolute Maximum Ratings		
Parameter	Rating	Unit
Input Supply Voltage	+6.0	V
Input Control Voltage	+10.0	V

Rev: Z  
Date: 26-Aug-2019  
Page 2 of 3

# CVHD-950 VCXO

## Ultra-Low Phase Noise Oscillators

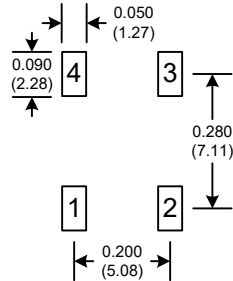
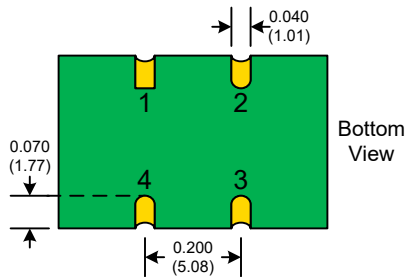
**CVHD-950 Model**  
9×14 mm SMD, 3.3V, CMOS



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

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

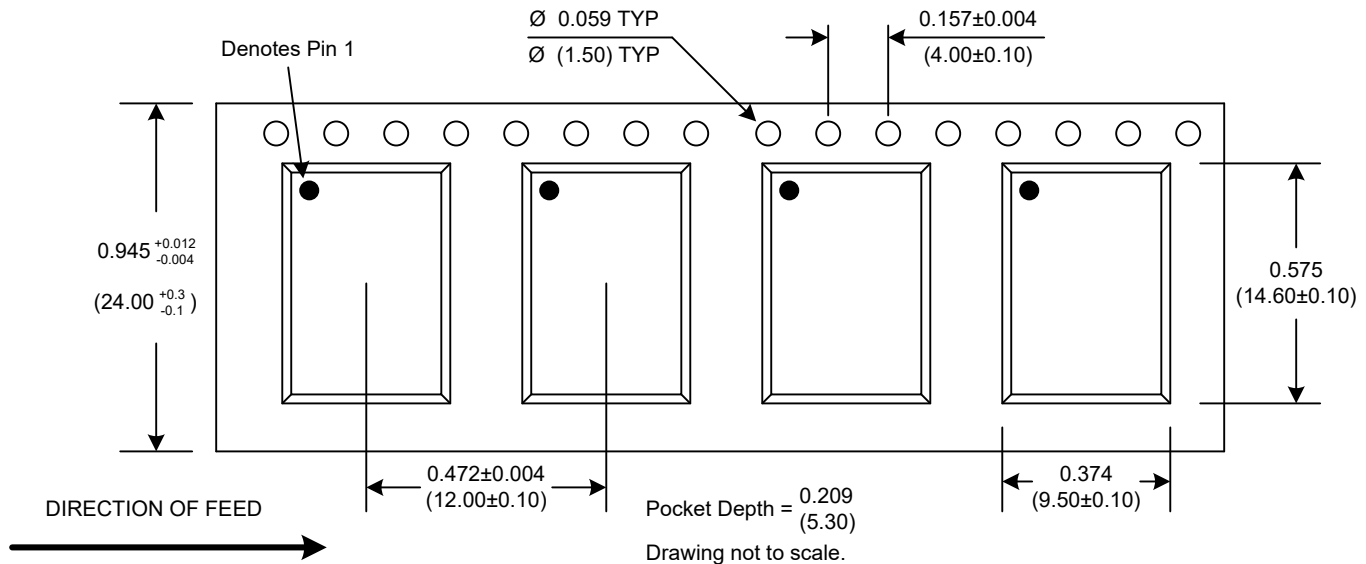
### SUGGESTED PAD LAYOUT



Pad	Connection
1	Volt Control
2	GND
3	OUT
4	Vdd

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

### TAPE AND REEL



#### 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

Rev: Z

Date: 26-Aug-2019

Page 3 of 3

Crystek Corporation reserves the right to make changes to its products and/or information contained herein without notice. No liability is assumed as a result of its use or application.

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [VCXO Oscillators](#) category:*

*Click to view products by [Crystek](#) manufacturer:*

Other Similar products are found below :

[3808AI-DF-33NG-80.0000](#) [SIT3808AI-CF-33EM-50.000000X](#) [603281](#) [YNETHE125](#) [FRSONT019](#) [SiT3701AC-43-33C-10.00000X](#)  
[315LB3I1250T](#) [CVSS-945-125.000](#) [VX-501-0245-160M0](#) [CVHD-950-122.880](#) [CVHD-950-80.000](#) [CVHD-950X-100.000](#) [CVPD-920-100.000](#) [ASG-P-V-A-1.000GHZ](#) [ECXV-P37C2M-640.000](#) [CVHD950X-125.000](#) [CVHD-957-22.57920](#) [ECXV-P37C2N-155.520](#) [ECXV-P37C2N-56.000](#) [ECXV-P37C2N-184.320](#) [ECXV-P37C2N-155.000](#) [ECXV-P35C2N-155.520](#) [LFVCXO067515Bulk](#) [ASG-D-V-A-1.000GHZ](#)  
[ASG-D-V-A-491.520MHz](#) [CVHD-950-74.25](#) [CVPD-920-74.25](#) [ABLNO-V-92.160MHZ](#) [ABLNO-V-120.000MHZ](#) [ABLNO-V-80.000MHZ](#)  
[ABLJO-V-100.000MHZ](#) [ABLJO-V-120.000MHZ](#) [ABLJO-V-122.880MHZ](#) [ABLJO-V-150.000MHZ](#) [ABLJO-V-155.520MHZ](#) [ABLJO-V-200.000MHZ](#) [ABLJO-V-200.000MHZ-T](#) [ABLJO-V-96.000MHZ](#) [ABLNO-V-100.000MHZ](#) [ABLNO-V-100.000MHZ-T2](#) [ABLNO-V-120.000MHZ-T2](#) [ABLNO-V-122.880MHZ](#) [ABLNO-V-125.000MHZ](#) [ABLNO-V-156.250MHZ](#) [ABLNO-V-96.000MHZ](#) [ABLNO-V-96.000MHZ-T2](#) [ABLNO-V-104.000MHZ](#) [ABLNO-V-125.000MHZ-T2](#) [ABLNO-V-155.520MHZ](#) [ASG2-D-V-A-1000.000MHZ](#)