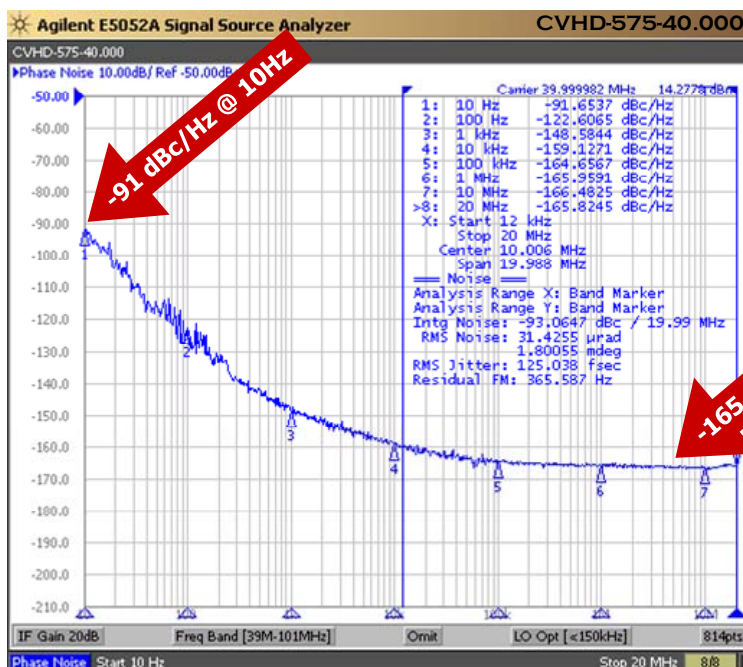
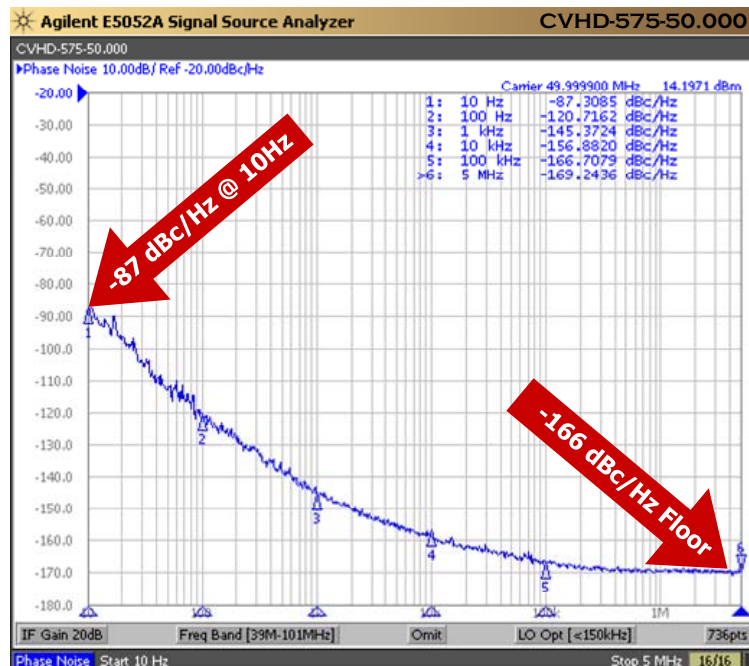
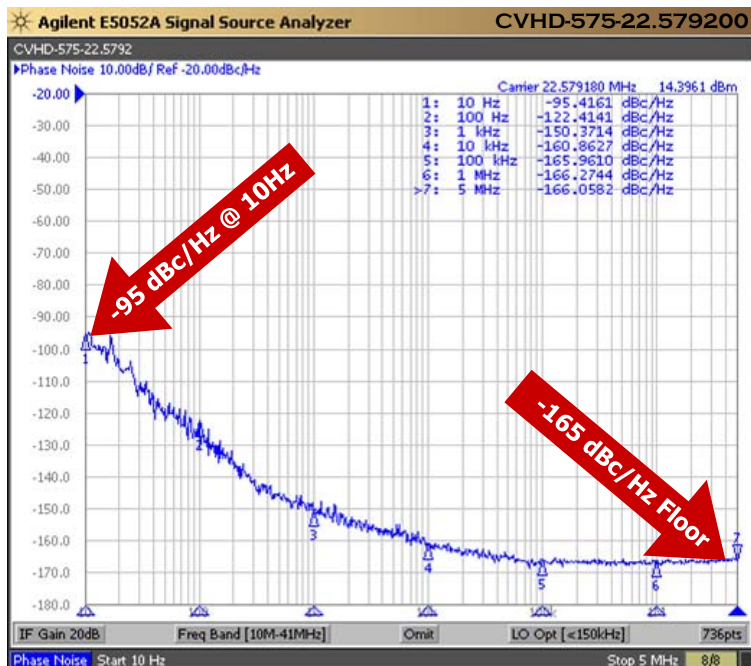




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A DIVISION OF CRYSTEK CORPORATION

CVHD-575 Ultra-Low Phase Noise VCXO

CVHD-575 Model
5×7.5 mm SMD, 3.3V, HCMOS



Model CVHD-575 is the industry's lowest phase noise VCXO in a 5×7.5 mm package. Close-in phase noise is -90 dBc/Hz @ 10 Hz while its floor is at -165 dBc/Hz. This oscillator may be small in size but it packs a punch inside. Its output driver is capable of driving ±24mA.

Applications include
Digital Video, DACs, ADCs for HD Audio,
Low Phase Signal Sources, Test and Measurement

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CVHD-575

Ultra-Low Phase Noise

VCXO



CVHD-575 Model
5×7.5 mm SMD, 3.3V, HCMOS

Frequency Range:	20 MHz to 54.240 MHz*
Temperature Range:	0°C to +70°C (standard)
(Option M)	-20°C to +70°C
(Option X)	-40°C to +85°C
Storage:	-45°C to 90°C
Input Voltage:	3.3V ±0.3V
Input Current:	15mA Typical, 25mA Max
Output:	HCMOS
Symmetry:	45/55% Max @ zero crossing point
Rise/Fall Time:	2ns Max @ 20% to 80% Vdd
Logic:	"0" = 10% Vdd Max "1" = 90% Vdd Min
Load:	15pF
Output Current:	±24mA Max
Input:	
Modulation Bandwidth:	>10kHz @ -3dB
Input Impedance:	51 kΩ
Control Voltage:	1.65V ±1.65V
Tuning Sensitivity:	+22ppm/V Typical
Frequency Pulling:	±20ppm APR Min
(Inclusive of frequency stability, calibration, and aging.)	
Linearity:	±10% Max
Phase Jitter: (12kHz~20MHz)	125fs Typical @ 40 MHz
Phase Noise Typical:	See plot
Phase Noise Floor:	-165 dBc/Hz Typical, -162 dBc/Hz Max
Sub-harmonics:	None
Aging:	<3ppm 1 st year, <1ppm thereafter

Part Number Example:
CVHD-575X-50.000 = 3.3V, 45/55, -40°C to +85°C, 50 MHz



*Standard Frequencies (MHz)

22.579200	49.152
24.576	50.000
27.000	54.000
40.000	54.240
45.158400	

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

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Specifications subject to change without notice.



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CVHD-575

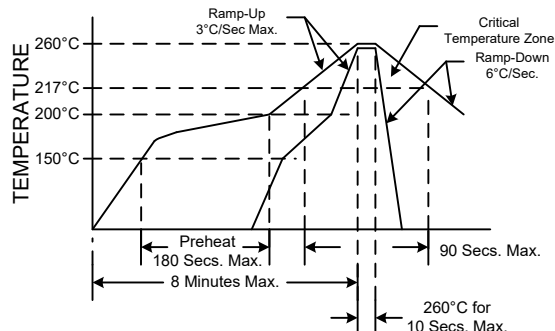
Ultra-Low Phase Noise

VCXO



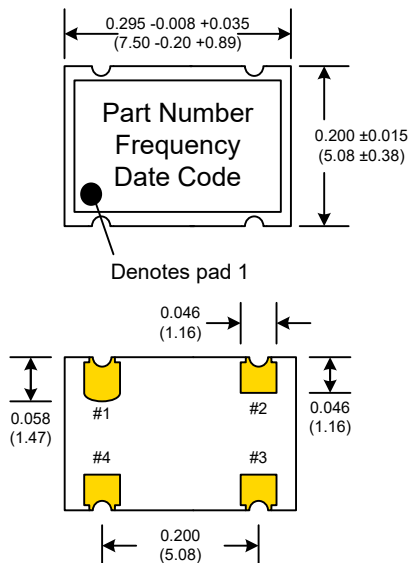
CVHD-575 Model
5×7.5 mm SMD, 3.3V, HCMOS

RECOMMENDED REFLOW SOLDERING PROFILE

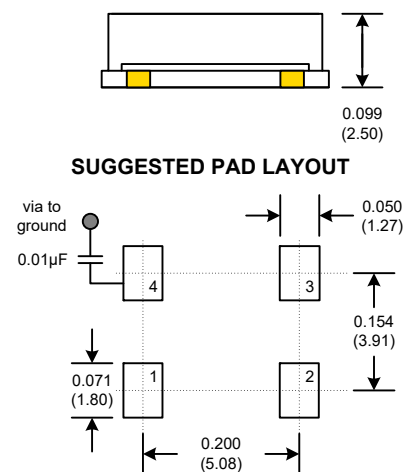


NOTE: Reflow Profile with 240°C peak also acceptable.

Pad	Connection
1	Vc
2	GND
3	Output
4	Vdd



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

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