



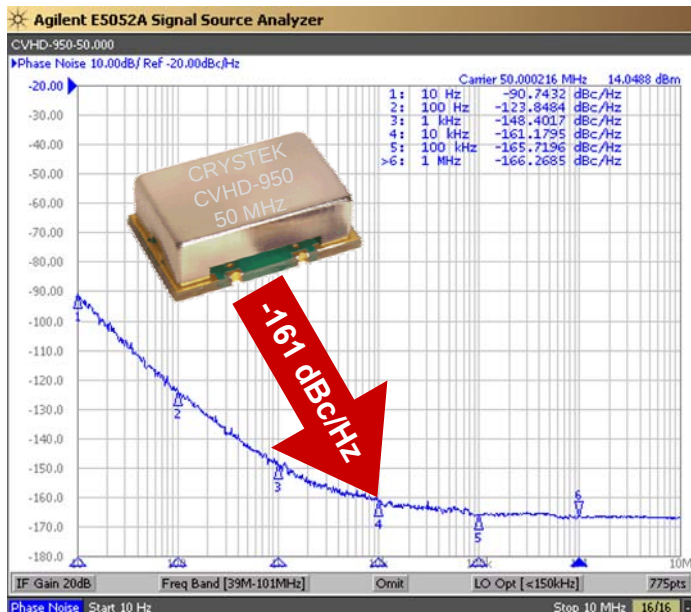
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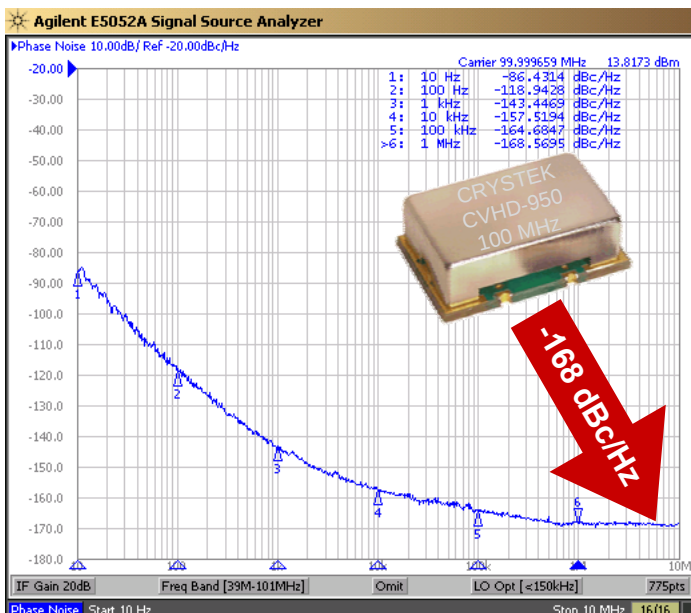
CVHD-950 VCXO Ultra-Low Phase Noise Oscillators

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

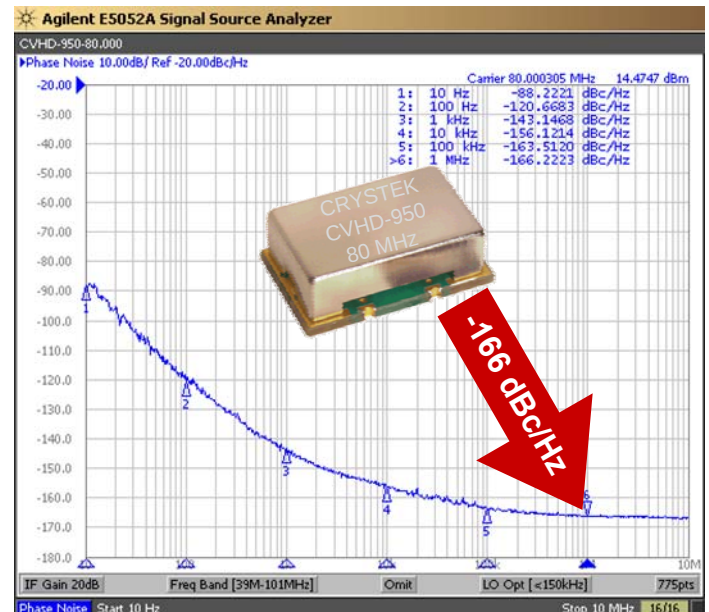
50 MHz HCMOS 3.3V



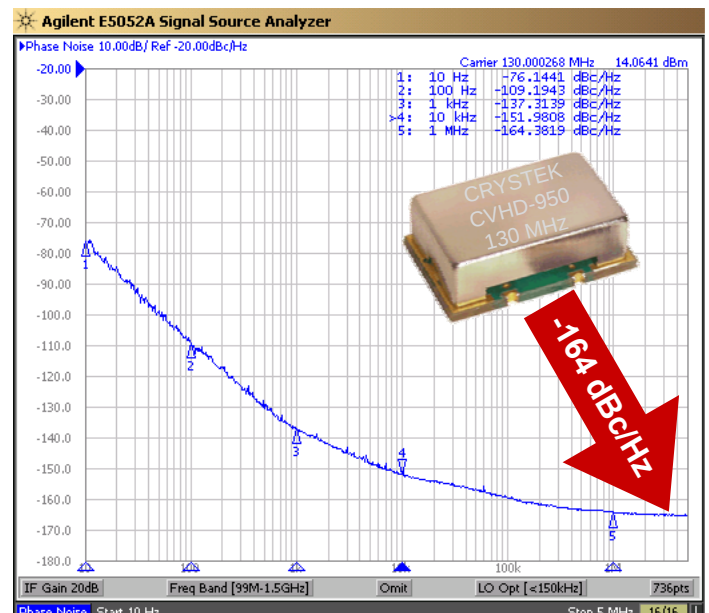
100 MHz HCMOS 3.3V



80 MHz HCMOS 3.3V



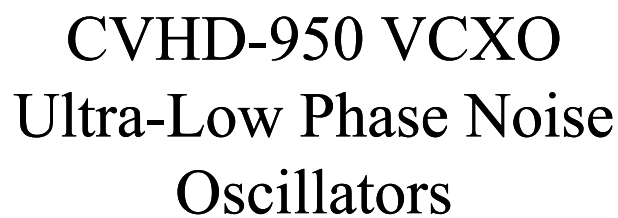
130 MHz HCMOS 3.3V



Model CVHD-950 is a 50 MHz to 130 MHz CMOS Voltage Controlled Crystal Oscillator. High Q crystal and 3rd overtone technology provides Ultra-Low Phase Noise and Low-Jitter performance with a CMOS output. Features include -165 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.

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

Frequency Range:	50 MHz to 130 MHz
Temperature Range:	0°C to +70°C (standard)
	(Option M)
	(Option X)
Storage:	-20°C to +70°C
	-40°C to +85°C
Input Voltage:	-45°C to 90°C
Supply Pushing:	3.3V ±0.3V
Input Current:	1.2ppm/V Typical
Output:	15mA Typical, 25mA Max
	CMOS
	Symmetry: 45/55% Max @ 50% Vdd
	Rise/Fall Time: 3nsec 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: +25ppm/V Typical
Frequency Pulling:	+20ppm APR Min
	(Inclusive of frequency stabilization)
Linearity:	±10% Max
Phase Jitter (12kHz~80MHz):	0.13psec Typical @100MHz
Typical Phase Noise:	
	1kHz -135 dBc/Hz
	10kHz -155 dBc/Hz
	100kHz -164 dBc/Hz
	1MHz -165 dBc/Hz
Phase Noise Floor:	-165dBc/Hz Typical, -160dBc/Hz
Sub-harmonics:	None
Aging:	<3ppm 1 st year, <1ppm thereafter

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

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

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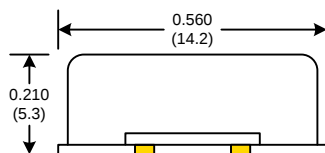
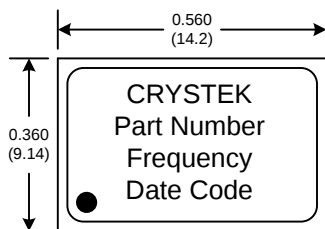
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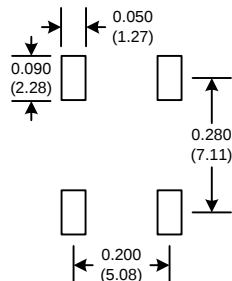
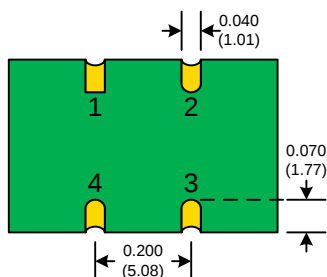
CVHD-950 VCXO

Ultra-Low Phase Noise Oscillators

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

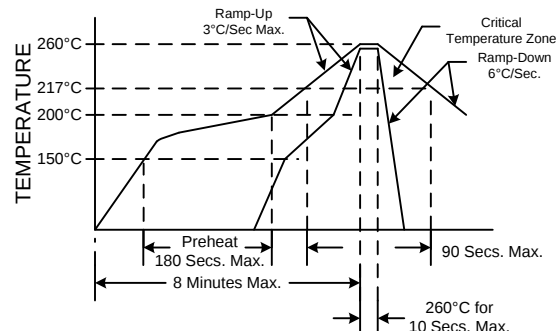


SUGGESTED PAD LAYOUT



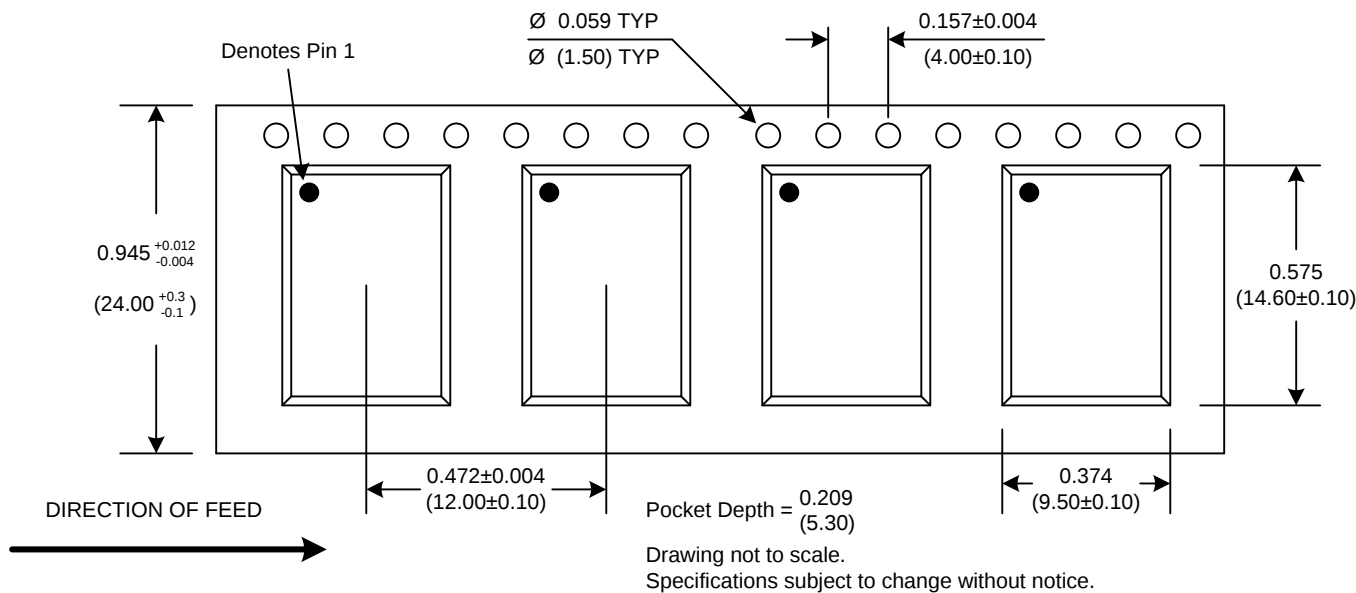
Pad	Connection
1	Volt Cntrl.
2	GND
3	OUT
4	Vdd

RECOMMENDED REFLOW SOLDERING PROFILE



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

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

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