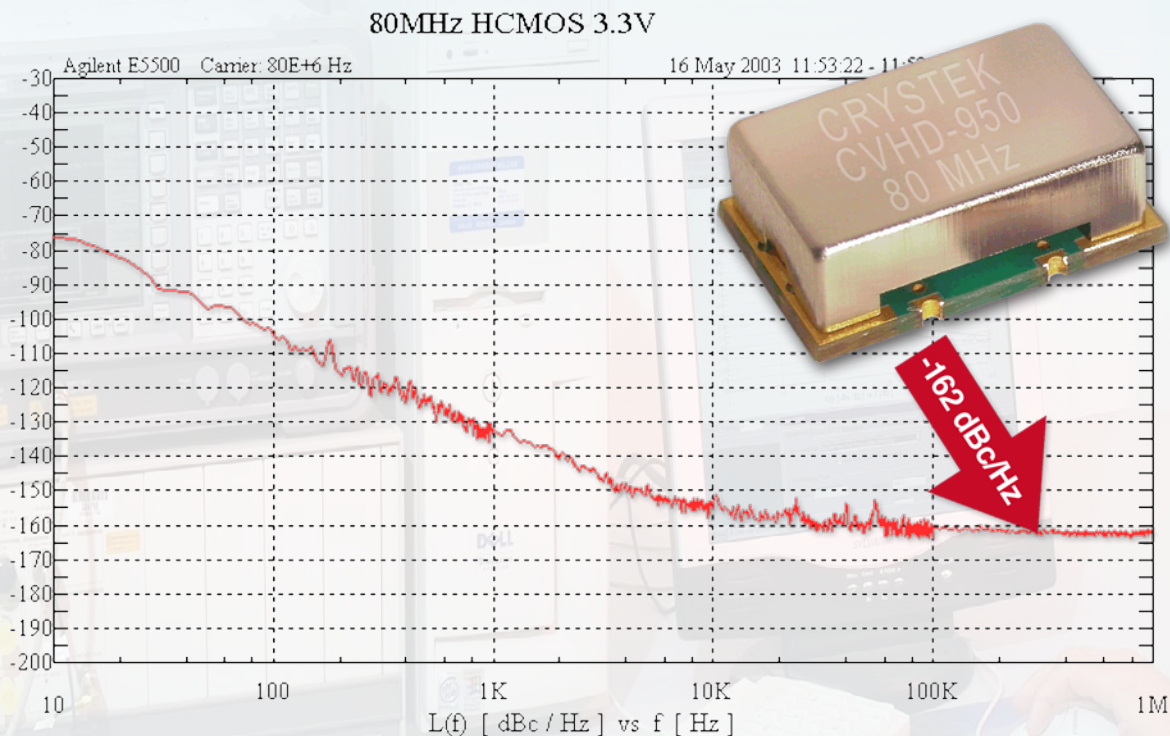




CRYSTEK
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CCHD/CVHD-950 Ultra-Low Phase Noise Oscillators



Model CCHD/CVHD-950 is a 50Mhz to 125Mhz CMOS Clock Oscillator or 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 -162dBc/Hz phase noise floor with 3.3Vdc input voltage, -40 to +85C operating temperature, and 9x14 mm SMT package. The oscillator has no sub-harmonics.

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



CRYSTEK

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CCHD/CVHD-950

Ultra-Low Phase Noise Oscillators



Frequency Range: 50Mhz to 125Mhz
Temperature Range: 0°C to +70°C
 (Option M) -20°C to +70°C
 (Option X) -40°C to +85°C
Storage: -55°C to 90°C
Input Voltage: 3.3V ± 0.3V
Input Current: 15mA Typ., 25mA Max
Output: 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
Jitter: 12KHz~80MHz 0.5psec Typ., 1psec RMS Max
Phase Noise Floor: -160dBc Typ., -155dBc Max
Sub-harmonics: None
Aging: <3ppm 1st/yr, <1ppm thereafter

Phase Noise Typ.:

1KHz -131 dBc/Hz
 10KHz -155 dBc/Hz
 100KHz -160 dBc/Hz
 1MHz -162 dBc/Hz

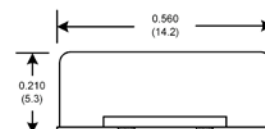
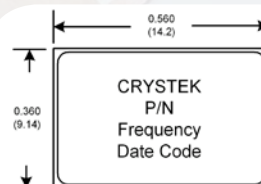
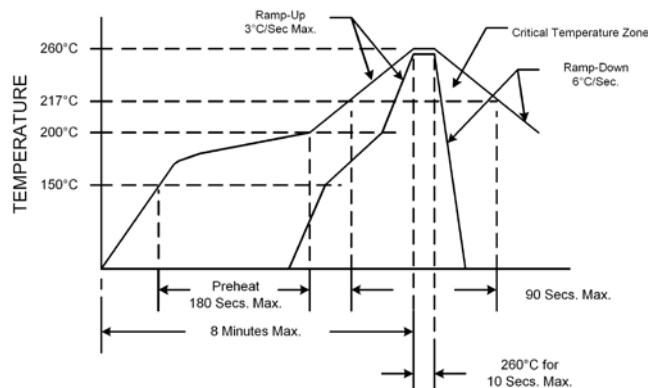
CCHD-950 Options **Temperature Range:** 0°C to +70°C (±20ppm, ±25ppm, ±50ppm)
 -20°C to +70°C (±25ppm, ±50ppm)
 -40°C to +85°C (±25ppm, ±50ppm)
CVHD-950 **Frequency Pulling:** ±20ppm APR Min.
Control Voltage: 1.65V ± 1.65V
Linearity: ±10% Max

Part Number Example

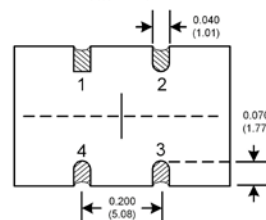
CCHD-950X-25-100.000 = 3.3V, 45/55, -40°C to +85°C (±25ppm), 100MHz
 CVHD-950X-100.000 = 3.3V, 45/55, -40°C to +85°C (±20ppmAPR), 100MHz

Pad	Connection
1	NC or Volt. Cntrl.
2	GND
3	Output
4	Vdd

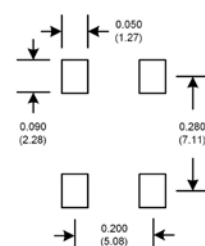
RECOMMENDED REFLOW SOLDERING PROFILE



Bottom View



SUGGESTED PAD LAYOUT



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 FAX: 239-561-1025 • WWW.CRYSTEK.COM

Rev.: C
 Date: 12-9-05