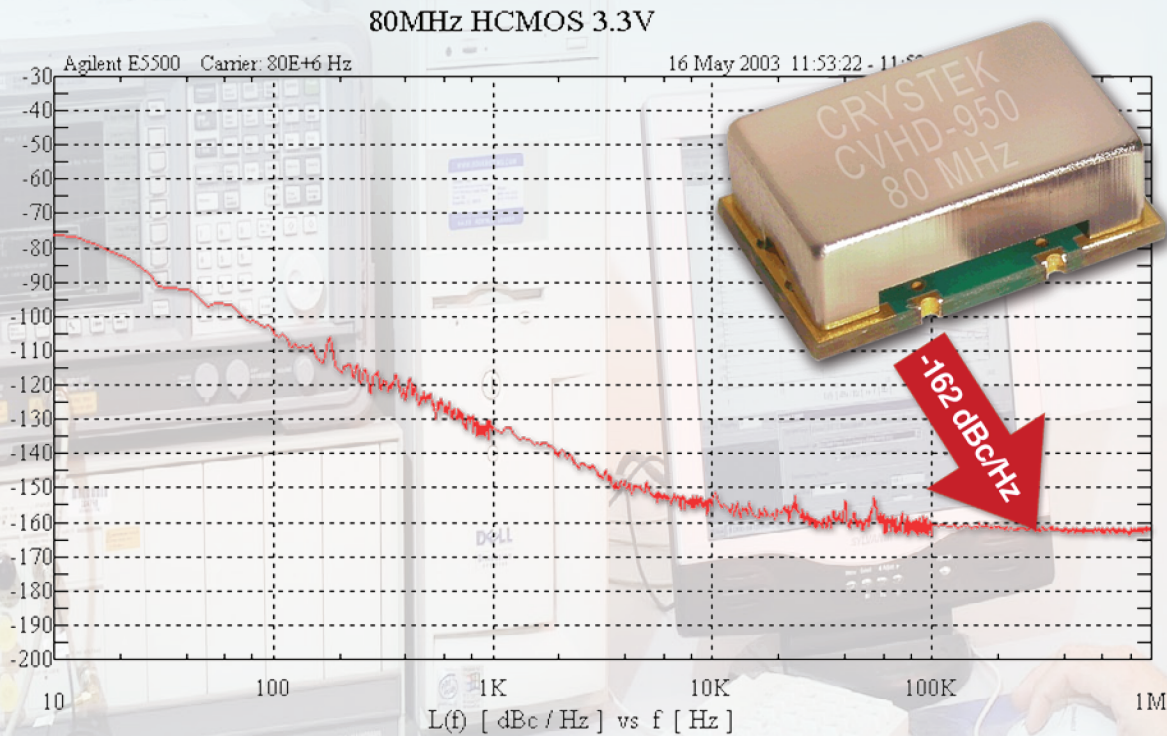




**CRYSTEK**  
**CRYSTALS**  
A DIVISION OF CRYSTEK CORPORATION

## CVHD-950 VCXO Ultra-Low Phase Noise Oscillators



**Model CVHD-950 is a 50MHz to 125MHz 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

## CRYSTALS

A DIVISION OF CRYSTEK CORPORATION

# CVHD-950 VCXO

## 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  
**Frequency Pulling:** ±20ppm APR Min.  
**Control Voltage:** 1.65V ± 1.65V  
**Linearity:** ±10% Max

### Phase Noise Typ.:

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

**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

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

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

