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.
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:
Symmetry: CMOS
45/55% Max @ 50% Vdd
Rise/Fall Time: 3ns Max @ 20% to 80% Vdd
Logic:
“0” = 10% Vdd Max
“1” = 90% Vdd Min.
Load: 15pF
Output Current: ±24mA Max

Phase Noise Typ.:
1KHz -131 dBC/Hz
10KHz -155 dBC/Hz
100KHz -160 dBC/Hz
1MHz -162 dBC/Hz

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

Jitter: 12KHz-80MHz
0.5ps Typ., 1ps 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 (±20ppm APR), 100MHz

Recommended Reflow Soldering Profile

Phase Noise Typ.

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

Suggested Pad Layout