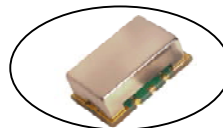


Ultra-Low Phase Noise Voltage Controlled Crystal Oscillator

Part Number CVHD-952
9x14 mm SMD, 3.3V, HCMOS

Frequency Range: 131.000 MHz to 200.000 MHz
Frequency Pulling: ± 20 ppm APR Min
Temperature Range: 0°C to 70°C (standard)
 (Option X): -40°C to 85°C
Storage: -45°C to 90°C
Input Voltage: 3.3 V ± 0.3 V
Control Voltage: 1.65 V ± 1.65 V
Input Current: 25 mA Typical, 35 mA Max
Output: HCMOS
 Symmetry: 45/55% Max @ 50% Vdd
 Rise/Fall Time: 2ns Max @ 20% to 80% Vdd
 Linearity: $\pm 10\%$ Max
 Logic: "0" = 10% Vdd Max
 "1" = 90% Vdd Min
 Load: 15 pF
 Output current: ± 24 mA Max
 Disable Time: 200 ns Max
 Enable Time: 200 ns Max
Jitter: 12 kHz to 80 MHz 0.5 psec Typical, 1 psec RMS Max
Phase Noise (Typical):
 1 Hz: -40 dBc/Hz
 10 Hz: -70 dBc/Hz
 100 Hz: -100 dBc/Hz
 1 kHz: -130 dBc/Hz
 10 kHz: -148 dBc/Hz
 100 kHz: -150 dBc/Hz

Sub-Harmonic @ Fo/2: -35 dBc Max
Aging: <3 ppm 1st year, <1 ppm every year thereafter



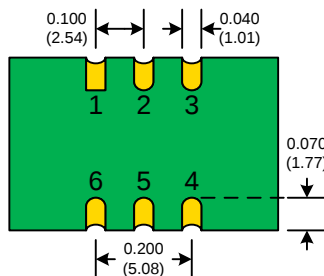
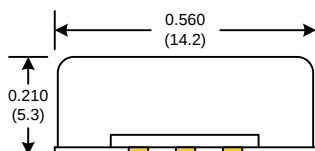
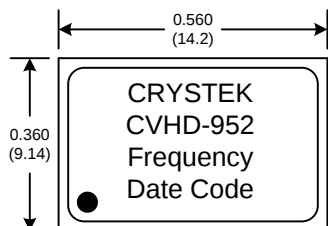
Available Frequencies (MHz):

148.351600 148.500

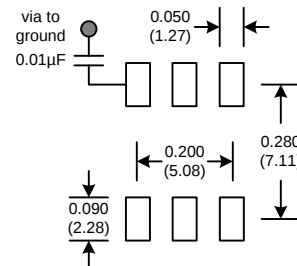
Applications:

HD Video Broadcast Equipment

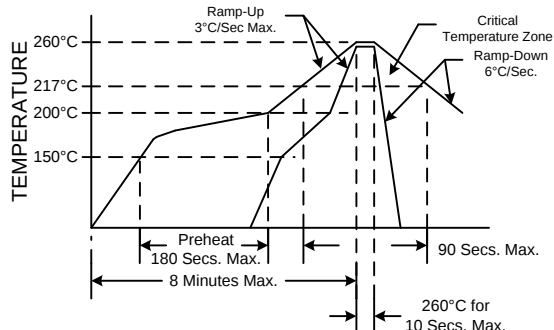
PIN	Function
1	Control Volt
2	E/D
3	GND
4	OUT
5	No Connect
6	Vdd



SUGGESTED PAD LAYOUT



RECOMMENDED REFLOW SOLDERING PROFILE



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

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

Rev: C

Date: 19-Sep-2013

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** APR= Absolute Pulling Range inclusive of all conditions