

CMOS

Voltage Controlled Crystal Oscillator

CVHD-037X Model 5x7 mm SMD, 3.3V, CMOS

Frequency Range: 30.000 to 170.000 MHz
Operating Temperature Range: -40°C to 85°C
Storage Temperature Range: -45°C to 90°C
Input Voltage: 3.3V ± 5%
Control Voltage: 1.65V ± 1.65V
Input Current: 15mA Max
Output: CMOS
 Symmetry: 45/55% Max @ 50% Vdd
 Rise/Fall Time: 3ns Max @ 10% to 90%
 Pullability APR: ±50ppm Min
 Linearity: 10%
 Load: 15pF Max
 Logic "1" Level: 0.9×Vdd Min
 Logic "0" Level: 0.1×Vdd Max

Input Impedance: 5-10 MΩ
Enable Delay Time: 2ms Max
Disable Delay Time: 200ns Max

Phase Noise (Typical):
 10 Hz Offset: -75 dBc/Hz
 100 Hz Offset: -100 dBc/Hz
 1 kHz Offset: -130 dBc/Hz
 10 kHz Offset: -145 dBc/Hz
 100 kHz Offset: -155 dBc/Hz
 1 MHz Offset: -160 dBc/Hz
 10 MHz Offset: -160 dBc/Hz

Aging: 5ppm 1st year, <3ppm every year thereafter



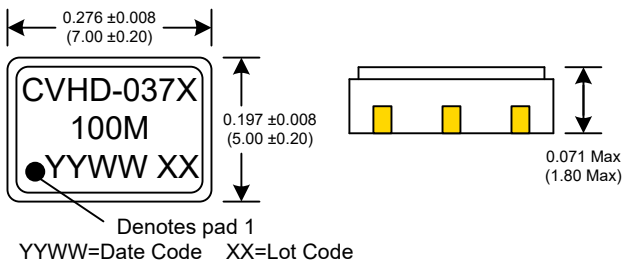
Standard Frequencies (MHz)
80.000
100.000
122.880
125.000

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

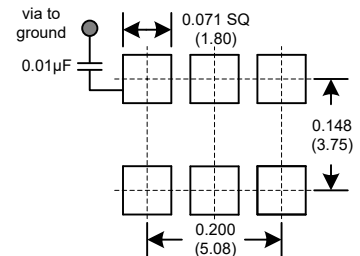
Part Number Example: CVHD-037X-100.000 = 3.3V, ±50ppm APR, 100 MHz

Dimensions inches (mm)

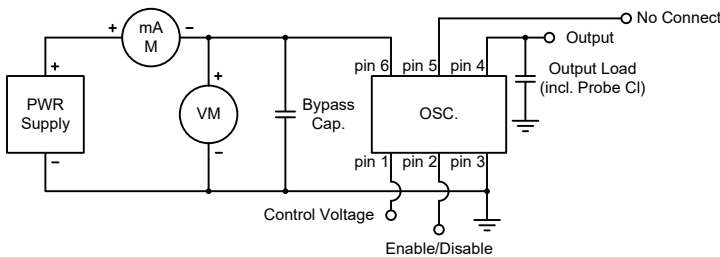
All dimensions are Max unless otherwise specified.



SUGGESTED PAD LAYOUT



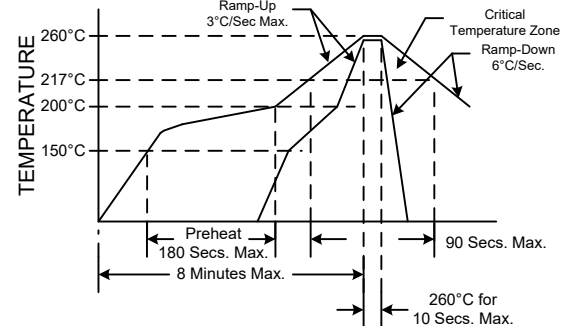
0.01µF Bypass Capacitor Recommended



PIN	Connection
1	Cont. Volt
2	E/D
3	GND
4	Output
5	NC
6	Vcc

Enable/Disable	
Function pin 2	Output pin
Open	Active
"1" level 0.7×Vdd Min	Active
"0" level 0.3×Vdd Max	High Z

RECOMMENDED REFLOW SOLDERING PROFILE



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


Available on 16mm Tape and Reel in quantities of 1,000 pcs.

Rev: J
Date: 22-Feb-2024
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