CRYSTEK CRYSTALS
A Division of Crystek Corporation

CMOS Voltage Controlled Crystal Oscillator

CVHD-037X Model
5×7 mm SMD, **3.3V, CMOS**

RoHS Compliant

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:

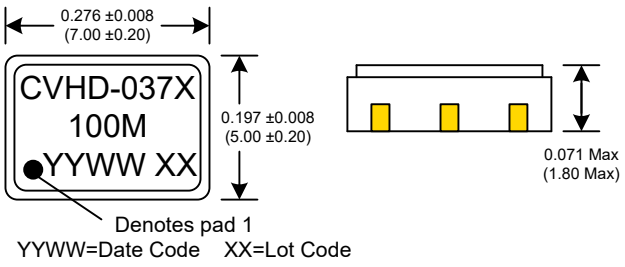
Shock:	MIL-STD-883, Method 2002, Condition B
Solderability:	MIL-STD-883, Method 2003
Vibration:	MIL-STD-883, Method 2007, Condition A
Solvent Resistance:	MIL-STD-202, Method 215
Resistance to Soldering Heat:	MIL-STD-202, Method 210, Condition I or J

Environmental:

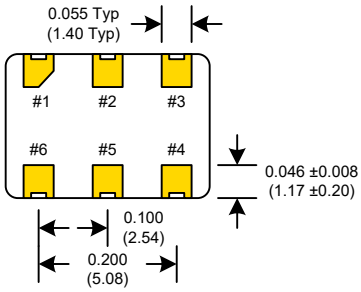
Thermal Shock:	MIL-STD-883, Method 1011, Condition A
Moisture Resistance:	MIL-STD-883, Method 1004

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

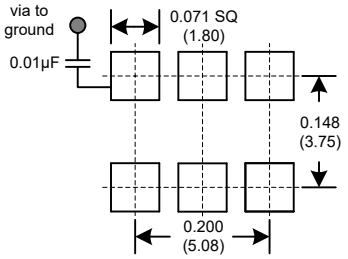
Dimensions inches (mm)
All dimensions are Max unless otherwise specified.



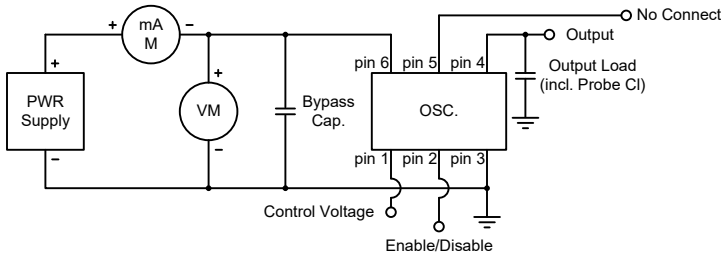
YYWW=Date Code XX=Lot Code



SUGGESTED PAD LAYOUT



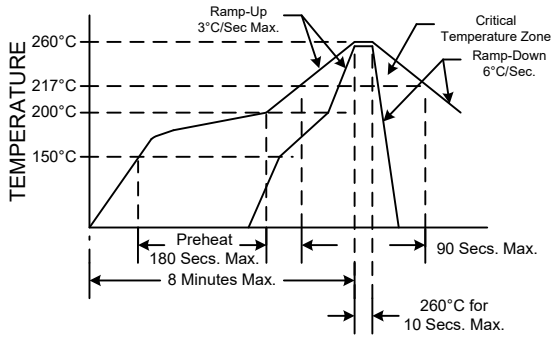
0.01uF Bypass Capacitor Recommended



PIN	Connection
1	Cont. Volt
2	E/D
3	GND
4	Ouput
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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CRYSTEK CORPORATION
16850 Oriole Road • Fort Myers, Florida 33912
Phone: 239-561-3311 • 800-237-3061
www.crystek.com