



Clock Oscillator



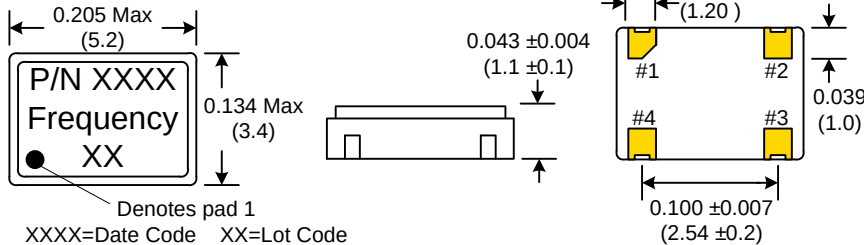
CUSO33xx Model

3.2×5.0 mm SMD, 3.3V, HCMOS

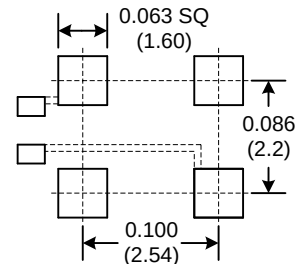
Frequency Range:	1.544 MHz to 160.000 MHz
Frequency Stability:	±25ppm to ±100ppm
Temperature Range:	
Operating:	0°C to 70°C
(Option M)	-20°C to 70°C
(Option E)	-40°C to 85°C
Storage:	-45°C to 120°C
Input Voltage:	3.3V ± 0.3V
Input Current:	<30 MHz 4-10mA (freq. dependent) >31 MHz 10-20mA (freq. dependent)
Standby Mode:	5uA Max
Output:	HCMOS
Symmetry:	45/55% Max @ 50% Vdd
Rise/Fall Time:	2ns Typ., 4ns Max
Logic:	"0" = 10% Vdd Max "1" = 90% Vdd Min
Load:	15pF Max
Jitter:	12kHz to 20MHz 0.5ps Typ, 1ps Max RMS
Aging:	<3ppm 1 st /yr, 1ppm every year thereafter

Designed to meet application requirements for smaller layout areas. The CUSO (Crystek Ultra Small Oscillator) Series utilizes fundamental and 3rd overtone crystal design thereby providing the proven performance of our larger 5×7mm package. Standby mode and Power-save Pull-up Resistance is standard. Packaged on tape and reel in quantities of 1K.

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

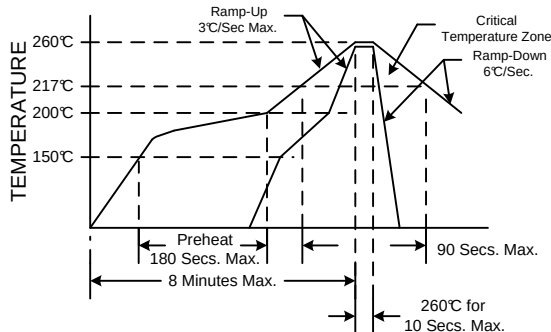


SUGGESTED PAD LAYOUT



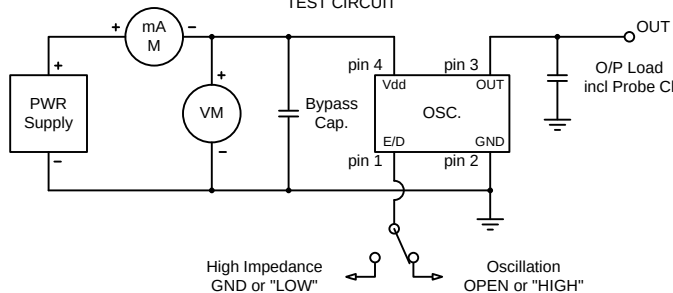
0.01uF Bypass Capacitor Recommended

RECOMMENDED REFLOW SOLDERING PROFILE



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

TEST CIRCUIT



Crystek Part Number Guide

Example: CUSO3392-44.736
Example: CUSOM3392-44.736
Example: CUSOE3392-44.736

Temperature			Frequency Stability
0/70°C	-20/70°C	-40/85°C	
CUSO3390	CUSOM3390	CUSOE3390	±100ppm
CUSO3392	CUSOM3392	CUSOE3392	±50ppm
CUSO3391	CUSOM3391	CUSOE3391	±25ppm

Standby Function

Function pin 1	Output pin	Oscillator State
Open	Active	Normal Operation
"1" level 0.7×Vdd Min	Active	Normal Operation
"0" level 0.3×Vdd Max	High Z	Stopped

Specifications subject to change without notice.

TD-021102 Rev. G