

Ultra-Miniature SMD Crystal Oscillator

1MHz to 160MHz

FEATURES

- Frequency Range 1MHz to 160MHz
- Low power consumption
- High shock resistance (HG version)
- Low EMI emission
- Full military testing available
- Hermetically sealed package

Actual Size

Top View Side View



DESCRIPTION

CXOX oscillators are ultra-miniature, surface mount units packaged in a 3.40mm x 2.70mm x 1.21mm package. The oscillators consist of a CMOS/TTL compatible hybrid circuit and a state-of-the-art, miniature, fundamental-mode crystal. The part may also be order in a high shock withstand version CXOXHG.

SPECIFICATION

Specifications are typical at 25°C unless otherwise indicated. Tighter specifications are available, contact Euroquartz technical sales.

Frequency Range*:	1.0MHz to 160.0MHz		
Supply Voltage:	1.8V to +5.0 Volts ±10%		
Calibration Tolerance:	±100ppm		
Frequency Stability over Operating Temperature Range			
Commercial (0° ~ +70°C):	±50ppm		
Industrial(-40° ~ +85°C):	±100ppm		
Military (-55° ~ +125°C):	±100ppm		
Typical Current Consumption	+1.8V	+3.3V	+5.0V
24MHz:	1.5mA	3.0mA	8.0mA
32MHz:	2.0mA	5.0mA	10.0mA
50MHz:	3.0mA	6.0mA	13.0mA
130MHz:	12.0mA	23.0mA	39.0mA
Output Load:	15pF (Higher loads available)		
Rise and Fall Time:	6ns maximum		
Duty Cycle:	60/40%		
Ageing First Year:	±10ppm maximum.		
Shock, Survival:	Standard: 5000g, 0.3ms, ½ sine HG: 10,000g, 0.3ms, ½ sine		
Vibration Survival:	20g, 10~2000Hz swept sine		
Maximum Process Temperature:	260°C for 20 seconds		

* Not all frequencies are available at all supply voltages. Contact Euroquartz sales for details.

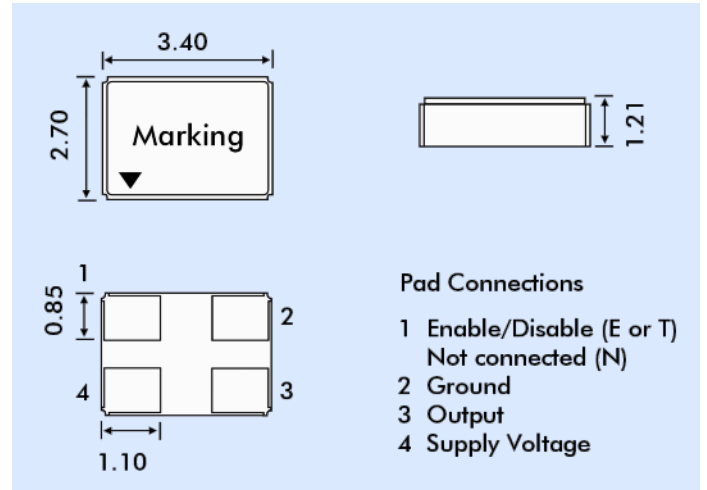
PACKAGING OPTIONS

CXOX oscillators are available either tray packed (<250pcs) or tape and reel (>250 pieces).
12mm tape, 178mm or 330mm reels (EIA 418).

HOW TO ORDER CXOX SMD CRYSTAL OSCILLATORS

CXOX	HG	4	S	N	- SM3 -	40.0M,	100	/ 100	/ - / I
Shock Level Blank = Std. HG = High Shock	Supply Voltage 1 = 1.8V 2 = 2.5V 3 = 3.0V 4 = 3.3V 5 = 5.0V	Enable/Disable option, E or N Blank = standard S = special or custom	Terminations Blank = SM1 = Gold plated SM3 = Solder dipped SM5 = Solder dipped (SM1 and SM5 are pB free)	Frequency in MHz	Calibration Tolerance at 25°C (in ±ppm)	Frequency Stability over Temp. Range (in ppm)	Temp. Range C = -10° ~ +70°C I = -40° ~ +85°C M = -55° ~ +125°C S = Customer specified		

OUTLINE & DIMENSIONS



Pad Connections

- 1 Enable/Disable (E or T)
Not connected (N)
- 2 Ground
- 3 Output
- 4 Supply Voltage

ENABLE/DISABLE OPTIONS

There are two Enable/Disable options available, 'E' and 'N'. The 'E' option stops oscillating when the output is put into the High Z state. the 'N' version does not have Pad 1 connected internally. the table below describes the 'E' Enable/Disable option.

	Enable (Pad 1 High)	Disable (Pad 1 Low)
Output Oscillator	Frequency Output Oscillates	High Z state Stops
Current	Normal	Very Low

When Pad 1 is allowed to float it is held high by an internal pull-up resistor.