

**FEATURES**

- CMOS/TTL Compatible
- High shock resistance
- Optional Enable/Disable with Tri-State
- Low EMI emission
- Full military testing available
- Hermetically sealed package

**DESCRIPTION**

CXOMK oscillators are miniature, surface mount units packaged in a 6.5 x 5.0 x 1.5mm package. Utilizing the latest advancements in production technology, the CXOMK oscillator is capable of achieving close tolerance frequency calibration and high stability over a wide temperature range. High shock resistance. The part is available with full 'MIL' testing if required.

**APPLICATIONS**
**Military & Aerospace**

- Smart munitions
- Cockpit systems
- Navigation

**Industrial, Computer & Communications**

- Industrial controls
- Instrumentation
- Microprocessor clocks

**Medical**

- Infusion pumps

**SPECIFICATION**

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

Frequency Range: 200.0kHz to 220.0MHz

Supply Voltage<sup>1</sup>: +0.9 to 5.0Volts ±10%

Calibration Tolerance<sup>2</sup>: ±30ppm

Frequency Stability

over Operating Temperature Range<sup>3</sup>

Commercial (0° ~ +70°C): ±15 to ±50ppm

Industrial(-40° ~ +85°C): ±30 to ±100ppm

Military (-55° ~ +125°C): ±40 to ±100ppm

Supply Current: See table

Output Load (CMOS)<sup>4</sup>: 15pF

Start-up Time: 5ms maximum

Rise/Fall Time: 6ns maximum

Duty Cycle: 40% min., 60% max.

Ageing First Year: ±10ppm

Shock, Survival<sup>5</sup>: 5000g, 0.3ms, ½ sine

Vibration Survival<sup>6</sup>: 20g, 10~2000Hz swept sine

Operating Temperature Ranges

Commercial: -10° to +60°C

Industrial: -40° to +85°C

Military: -55° to +125°C

1. Voltages available: 0.9, 1.8, 2.5, 3.0, 3.3 and 5.0V

Not all voltages are available for all frequencies. Contact factory.

2. Tighter tolerances available.

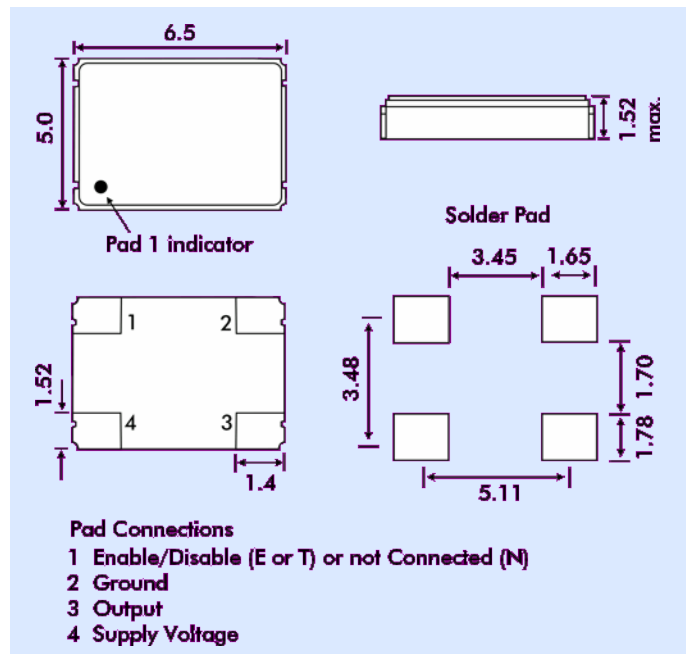
3. Doesn't include calibration tolerance. Tighter tol. may be available.

4. Higher CMOS and TTL loads available. Contact factory.

5. Highr shock version available. Contact factory.

6. Per MIL-STD-202G Method 204D, Condition D.

Random vibration testing also available.


**OUTLINE & DIMENSIONS**

**PACKAGING OPTIONS**

CXOMK oscillators are available either tray packed (<250pcs) or tape and reel (>250 pieces).

16mm tape, 178mm or 330mm reels (EIA 418).

**SUPPLY CURRENT**

Frequency	Supply Current Vdd = 3.3V	Supply Current Vdd = 5.0V
10MHz	2mA	4mA
24MHz	4mA	8mA
30MHz	6mA	10mA
40MHz	8mA	12mA
50MHz	10mA	14mA

### ABSOLUTE MAXIMUM RATINGS

Supply Voltage:	-0.5V to +7.0V*
Maximum Process Temperature:	260°C for 20 seconds
Storage Temperature:	-55° to +125°C

\* The supply voltage range is -0.5V to +4.0Volts for some products. Contact factory.

### COMPARISON OF ENABLE/DISABLE OPTIONS

There are three Enable/Disable options available, E, T and N. Both the E and T versions have Tri-state outputs. In the E version the oscillator stops, in the T version the oscillator continues to run. The N version (no tristate function) does not have pin 1 connected internally.

	E	T
<b>Enable (Pin 1 High)</b>		
Output:	Frequency Output	Frequency Output
Oscillator:	Oscillates	Oscillates
Current:	Normal	Normal
<b>Disable (Pin 1 Low)</b>		
Output:	High Z state	High Z state
Oscillator:	Stops	Oscillates
Current:	Very low	Lower than normal

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

### HOW TO ORDER CXOMK SMD CRYSTAL OSCILLATORS

