

### FEATURES

- Ultra-low current consumption
- Typical start-up time of 200ms
- Typical Rise/Fall times of 25ns
- Hermetically sealed ceramic package
- Optional output enable/disable with Tri-state
- Full military testing per MIL PRF 55310 available



### DESCRIPTION

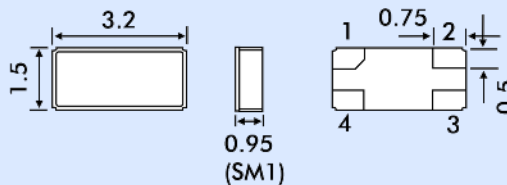
CXOL oscillators are ultra-miniature (32. x 1.5mm), ultra-low current quartz crystal oscillators with a typical start-up time of 200ms. Hermetically sealed in a highly reliable ceramic housing, these oscillators are available over a wide range of input voltages (1.2V ~ 5.0V).

### SPECIFICATION

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

Frequency Range:	32.0kHz to 100.0kHz
Supply Voltage:	+1.2 Volts to +5.0 Volts ±10%
Current Consumption:	32.768kHz: 2.8µA 32.768kHz: 0.4µA 100.0kHz: 8.0µA
Calibration Tolerance:	±20ppm, ±50ppm or ±100ppm
Voltage Coefficient:	±1ppm/V
Output Load:	10pF (CMOS)
Ageing First Year:	±2ppm
Shock, Survival:	Standard: 5000g, 0.3ms, ½ sine
Vibration Survival:	20g, 10~2000Hz swept sine
Start-up Time:	200ms
Operating Temperature:	-10°C to +70°C (Commercial) -40°C to +85°C (Industrial) -55°C to +125°C (Military)

### OUTLINE & DIMENSIONS



#### Pad Connections

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

### ENABLE/DISABLE OPTIONS

There are two Enable/Disable options available, 'T' and 'N'. The 'T' version has a Tri-State output and continues oscillating internally when the output is put into a high Z state. The 'N' version does not have PAD 3 connected internally and so has no Tri-State capability. The table below describes the Tri-State option 'T':

	Enable (Pad 3 High)	Disable (Pad 3 Low)
Output	Frequency Output	High Z state
Int. Oscillator	Oscillates	Oscillates
Current	Normal	Lower than normal

When Pad 3 is allowed to float it is held high by an internal pull-up resistor.

### PACKAGING OPTIONS

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

### HOW TO ORDER CXOL SMD CRYSTAL OSCILLATORS

