

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

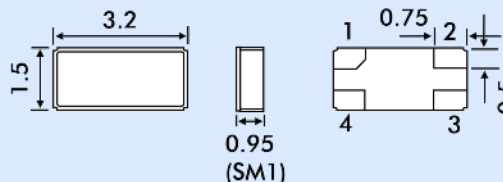
CXOL oscillators are ultra-miniature (32. x 1.5mm), ultra-low current quartz crystal oscillators with a typical start-up time of 200ms. Hermetically sealed in a highly reliable ceramic housing, these oscillators are available over a wide range of input voltages (1.2V ~ 5.0V).

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 $\pm 10\%$
Current Consumption:	32.768kHz: 2.8 μ A 32.768kHz: 0.4 μ A 100.0kHz: 8.0 μ A
Calibration Tolerance:	± 20 ppm, ± 50 ppm or ± 100 ppm
Voltage Coefficient:	± 1 ppm/V
Output Load:	10pF (CMOS)
Ageing First Year:	± 2 ppm
Shock, Survival:	Standard: 5000g, 0.3ms, 1/2 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

CXOL	3	S	N	-	SM3	-	32.768k	,	50	/	C
Supply Voltage 1 = 1.8V 2 = 2.5V 3 = 3.0V 4 = 3.3V 5 = 5.0V	Blank = standard S = special or custom	T = Tri state N = No connection	Terminations Blank = SM1 = Gold plated (Lead free) SM2 = Solder plated SM3 = Solder dipped SM4 = Solder plated (Lead free) SM5 = Solder dipped (Lead free)	Frequency k = kHz	Calibration Tolerance at 25°C (in ±ppm)	Temp. Range C = -10° ~ +70°C I = -40° ~ +85°C M = -55° ~ +125°C					