

**FEATURES**

- Extended high temperature operation up to 250°C
- 3.3V or 5.0V supply voltages
- Excellent stability over temperature
- Fast start-up
- CMOS output
- Optional Enable/Disable function
- Low EMI emission

**DESCRIPTION**

HTXO oscillators are designed to operate at ambient temperatures <250°C. The rugged design consists of a high-shock crystal and a high temperature CMOS integrated circuit packaged in a 7.5 x 5.0mm surface-mount ceramic package.

**APPLICATIONS**

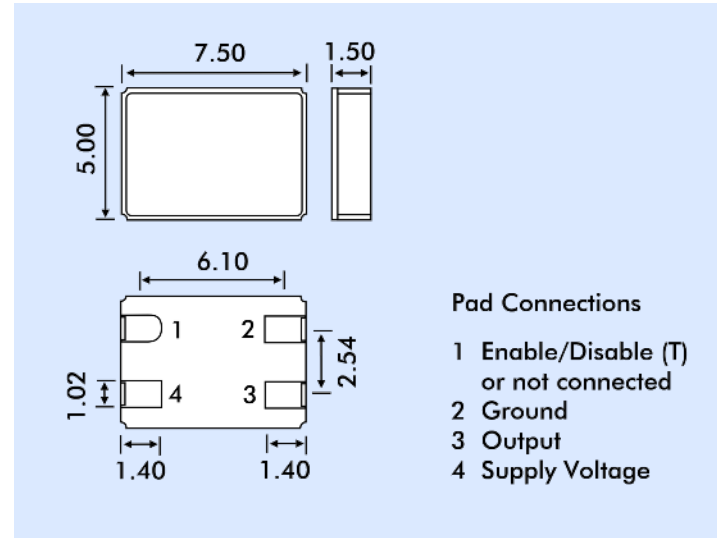
- Oil & gas downhole instrumentation
- Rotary shaft sensors
- Underground boring tools
- Avionics applications

**SPECIFICATION**

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

Frequency Range <sup>1</sup> :	1.5MHz to 50.0MHz
Supply Voltage:	+5.0Volts ±10% or +3.3Volts ±5%
Calibration Tolerance <sup>2</sup> :	±100ppm (or tighter as required)
Frequency Stability over Temperature <sup>3</sup> :	+250 ppm for 25°C to 250°C
Total Tolerance <sup>4</sup> :	±350ppm for 25°C to 250°C
Output Load (CMOS):	15pF
Start-up Time:	5ms max.
Rise/Fall Time:	10ns max.
Duty Cycle:	40% min., 60% max.
Shock, survival <sup>5</sup> :	Up to 30,000g, 0.5ms, ½ sine
Vibration, survival <sup>6</sup> :	20g, 10-2000Hz, swept sine
Operating Temperature Range <sup>7</sup> :	-55° up to 225°C

1. 30MHz maximum with 3.3V supply.
2. Does not include ageing.
3. Does not include calibration tolerance.
4. Frequency over temperature relative to nominal frequency.
5. 25°C.
6. Per MIL-STD-202G Method 204D, Condition D. Random vibration testing also available.
7. Expected life at 225°C is a minimum of 1000 hours.


**OUTLINE & DIMENSIONS**

**PACKAGING OPTIONS**

HTXO oscillators are available either tray packed (<250pcs) or tape and reel (>250 pieces). 16mm tape, 178mm or 330mm reels per EIA 418).

**SUPPLY CURRENT**

Current consumption typically 2mA at 8MHz, 3.3V, 250°C and C<sub>Load</sub> = 10pF

**ABSOLUTE MAXIMUM RATINGS**

Supply Voltage:	-0.5V to +6.0V (5.V V <sub>DD</sub> )
Storage Temperature:	-55° to +125°C

**ENABLE/DISABLE OPTIONS**

There are two Enable/Disable options available, T and N. The T-version has a tri-state output and oscillates internally when the output is put into the High Z state. The N-version does not have Pin 1 connected internally and has no enable/disable capability. The following table describes the Enable/Disable option T.

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

**HOW TO ORDER HTXO SMD CRYSTAL OSCILLATORS**

