

**FEATURES**

- High temperature operation <200°C
- Excellent stability over temperature
- High shock resistance
- CMOS Output
- Through-hole leaded package
- Reduces mechanical and thermal mounting stresses
- Robust TO-39 package
- 32.768kHz option available
  - Low current (500µA at 25°C)
  - Fast start-up (0.8ms typical)

**DESCRIPTION**

SQXO2ATHG oscillators are miniature oscillators produced in the space-efficient and ultra-reliable TO-39 package. The oscillator is designed for extended high temperature operation <200°C. The part has excellent calibration and stability over a wide temperature range and has excellent shock resistance. Designed and manufactured in USA by Statek Inc.

**APPLICATIONS**

**Industrial, Computer & Communications**

- Downhole instrumentation
- Rotary shaft sensors
- Underground boring tools
- Avionics applications

**SPECIFICATION**

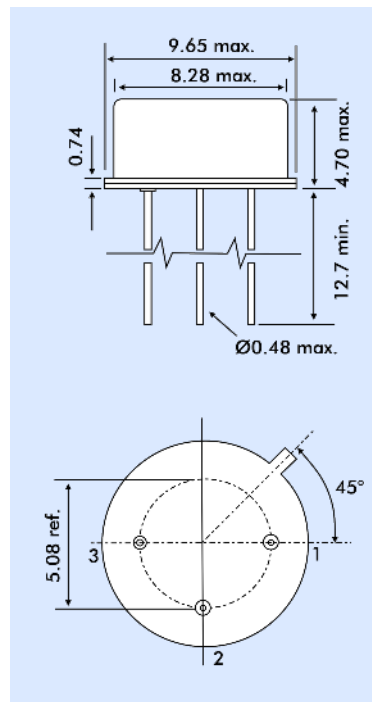
Specifications are typical at 25°C unless otherwise indicated. Tighter specifications are available, contact Euroquartz technical sales.

Frequency Range:	32.768kHz to 50.0MHz
Supply Voltage <sup>1</sup> :	2.5 Volts ±10% (+175°C max.) 3.3 Volts ±10% (+200°C max.) 5.0 Volts ±10% (+200°C max.)
Calibration Tolerance:	±50ppm, or tighter as required
Frequency Stability:	±100ppm for 25°C to 150°C
Over Temperature Range:	±150ppm for 25°C to 175°C ±175ppm for 25°C to 200°C
Total Tolerance <sup>2</sup> :	±200ppm for 25°C to +200°C
Start-up Time:	5ms maximum
Rise/Fall Time:	100ns maximum (32.768kHz)
Duty Cycle:	40% min., 60% max.
Ageing First Year:	±5ppm maximum at 25°C
Shock, Survival <sup>3</sup> :	8000g, 5ms, ½ sine
Vibration Survival <sup>4</sup> :	20g, 10~2000Hz swept sine
Operating Temperature <sup>5</sup> :	-55° to +200°C

1. Not all voltages and temperature ranges are available for all frequencies. Contact factory.
2. Total Tolerance = Calibration Tolerance = Frequency Stability over temperature.
3. 25°C.
4. Per MIL-STD-202G Method 204D, Condition D. Random vibration testing also available.
5. Expected life at 200°C is in excess of 1500 hours



**OUTLINE & DIMENSIONS**



**PACKAGING**

SQXO2ATHG oscillators are supplied tray packed as standard.

**SUPPLY CURRENT**

Frequency	Supply Current Vdd = 3.3V	Supply Current Vdd = 5.0V
32.768kHz	500µA	-
24MHz	3.0mA	8.0mA
32MHz	5.0mA	10.0mA
50MHz	6.0mA	14.0mA

**ABSOLUTE MAXIMUM RATINGS**

Supply Voltage:	-0.5V to +4.0V (3.3V)
	-0.5V to +7.0V (5.0V)
Maximum Process Temperature:	260°C for 10 seconds
Storage Temperature:	-55° to +125°C

**HOW TO ORDER SQXO2ATHG CRYSTAL OSCILLATORS**

