

ISSUE 1; February 2020

Description

- This product is designed and manufactured by Statek Corporation in California, USA and distributed by IQD. For high temperature, high stability and fast start-up applications IQD offers the AT-cut crystal-based 32.768kHz CXOMKHTS 5 volt Statek oscillator. This oscillator is designed to operate at temperatures up to 200°C. A high shock version is also offered that features 10000G shock survivability. Other features include fast start-up time (0.8ms typical) and low current operation (500µA at 25°C).
- SM1 SM1 (Gold Plated, RoHS compliant)
- SM5 SM5 (Solder Dipped, RoHS compliant)
- Please note that all data is only valid at 25°C unless otherwise stated.

Frequency Parameters

- Frequency 32.768kHz
- Frequency Tolerance ±100.00ppm
- Tolerance Condition @ 25°C
- Frequency Stability ±100.00ppm to ±175.00ppm
- Ageing ±10ppm max in 1st year @ 25°C
- Ageing (1000hrs): ±100ppm max @ 200°C

Electrical Parameters

- Supply Voltage 5.0V ±10%
- Supply Current: 500µA typ
- Supply Voltage (absolute maximum rating): -0.3V to 5.5V
- Operable Temperature Range: -55 to 200°C
- Expected Life @ 200°C: 1500hrs min

Operating Temperature Ranges

- 25 to 150°C
- 25 to 175°C
- 25 to 200°C

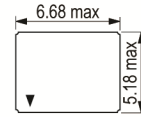
Output Details

- Output Compatibility CMOS
- Drive Capability 15pF
- Start Up Tme: 0.8ms typ
- Rise Time: 85ns typ
- Fall Time: 45ns typ

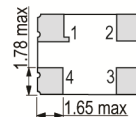
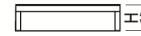
Output Control

- Enable/Disable (EN):
Logic 1 to pad 1, output enabled
Logic 0 to pad 1, output disabled, output goes to high impedance state, current consumption very low, internal oscillator stops
When pad 1 is allowed to float, it is held by an internal pull-up resistor
- No Connection (NC): Pad 1 No Connection

Outline (mm) -SM1 = SM1 (Gold Plated, RoHS compliant)

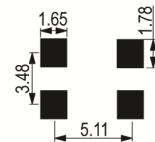


Pad Connections	Height (H) =
1. EN/NC	SM1 1.52 max
2. GND	SM3 1.65 max
3. Output	SM5 1.65 max
4. +Vs	



Underside View

Solder Pad Layout



Sales Office Contact Details:

UK: +44 (0)1460 270200

USA: +1 760 318 2824

Email: info@iqdfrequencyproducts.com

Web: www.iqdfrequencyproducts.com

Environmental Parameters

- Shock: 3000G, 0.3ms, 1/2 sine
- Vibration: MIL-STD-202G, Method 204D, Test Condition D: 20G, 10Hz-2000Hz, swept sinewave
(Random vibration testing is available, please contact an IQD Sales Office for further details)
- Storage Temperature Range: -55 to 125°C

Manufacturing Details

- Features:
 - High temperature operation up to 200°C
 - Overall five times improvement in total frequency stability when compared to a typical tuning fork design
 - A high shock version that features 10000G shock survivability is also available (please contact an IQD Sales Office for further details)
 - Excellent stability over temperature
 - Fast start-up
 - CMOS and TTL compatible
 - Optional output enable/disable
 - Low current
 - Hermetically sealed ceramic package
- Applications:
 - Industrial -
 - Downhole instrumentation
 - Rotary shaft sensors
 - Underground boring tools
- Maximum Process Temperature: 260°C for no longer than 20sec

Ordering Information

- Frequency
 - Model*
 - Termination Variant*
 - Output
 - Frequency Tolerance (@ 25°C)*
 - Frequency Stability (over operating temperature range*)
 - Operating Temperature Range*
 - Supply Voltage
 - Pad 1 function*
 - (*minimum required)
- Termination Variants:
 - Gold Plated - SM1
 - Solder Dipped - SM5
 - (Note: Non-RoHS compliant terminations are available, please contact an IQD Sales Office for further details)
- Example:
 - 32.768kHz CXOMKHTS SM1
 - CMOS ±100ppm ±175ppm 25 to 200C 5V EN

Compliance

- RoHS Status (2015/863/EU) Optional
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Packaging Details

- Pack Style: Reel Tape & reel in accordance with EIA-481-D
Pack Size: 1,000
- Pack Style: Tray Supplied on a tray
Pack Size: 1

Sales Office Contact Details:

UK: +44 (0)1460 270200

USA: +1 760 318 2824

Email: info@iqdfrequencyproducts.com

Web: www.iqdfrequencyproducts.com

Electrical Specification - maximum limiting values 5.00V ±10%

Frequency	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
	°C	ppm	mA	ns	%
32.768kHz	25 to 200	±100.00	-	-	40/60%

This document was correct at the time of printing; please contact your local sales office for the latest version.

[Click to view latest version on our website.](#)

Sales Office Contact Details:

UK: +44 (0)1460 270200

USA: +1 760 318 2824

Email: info@iqdfrequencyproducts.comWeb: www.iqdfrequencyproducts.com