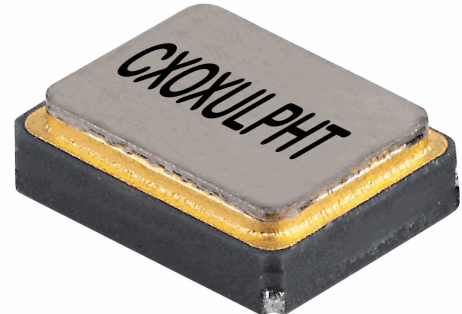


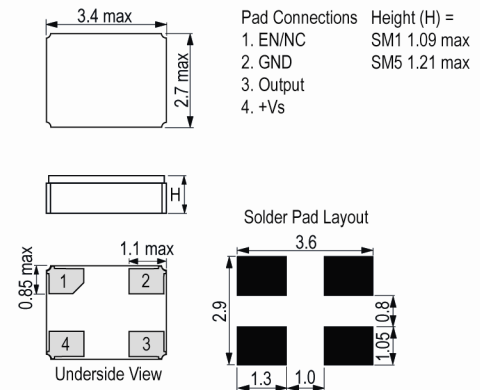
ISSUE 1; March 2019

Description

- This product is designed and manufactured by Statek Corporation in California, USA and distributed by IQD. The CXOXULPHT 32.768 kHz oscillator achieves the low power comparable with a tuning fork design and the fast start-up and tight frequency stability attained by an AT cut crystal design. Designed for applications requiring ultra low current (55µA), fast start-up time (2ms) and a tight frequency stability (200ppm) for high temperature operation up to 200°C. These oscillators are also capable of withstanding significantly higher shock than a standard tuning fork design.
- -HG-SM1 Gold Plated (RoHS), High Shock
- -HG-SM5 Solder Dipped (RoHS), High Shock
- -SM1 Gold Plated (RoHS)
- -SM5 Solder Dipped (RoHS)
- FEATURES:
 - High temperature operation up to 200°C
 - Ultra-low current (typical 55µA)
 - Fast start-up (typical 2ms)
 - High shock resistance up to 10000G
 - Low ageing
 - CMOS output
 - Optional Output Enable/Disable with Tri-State
 - Low EMI emission
 - Hermetically sealed ceramic package
- APPLICATIONS:
 - Industrial -
 - Downhole instrumentation
 - Rotary shaft sensors
 - Underground boring tools
- Please note that all data is only valid at 25°C unless otherwise stated.



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



Frequency Parameters

- Frequency: 32.768kHz
- Frequency Tolerance: ±100.00ppm
- Tolerance Condition: @ 25°C
- Frequency Stability: ±100.00ppm to ±200.00ppm
- Ageing: ±10ppm max in 1st year @ 25°C
- Ageing (1000hrs): ±100ppm max @ 200°C
- Frequency Stability does not include Frequency Tolerance @ 25°C
- Note: Other Frequency Tolerances and Stabilities are available, including stabilities that are inclusive of tolerance (e.g. ±200ppm over 25 to 200°C) - please contact an IQD Sales Office

Electrical Parameters

- Supply Voltage: 3.3V ±10%
- Note: Other Supply Voltages are available - please contact an IQD Sales Office
- Supply Current: 55µA typ
- Supply Voltage (absolute maximum rating): -0.3V to 5.0V
- All parameters are measured @ 25°C with a 10MΩ and 15pF load with Vs=3.3V

Sales Office Contact Details:

UK: +44 (0)1460 270200

USA: +1.760.318.2824

Email: info@iqdfrequencyproducts.com

Web: www.iqdfrequencyproducts.com

Operating Temperature Ranges

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

Output Details

- Output Compatibility CMOS
- Drive Capability 15pF
- Output Level High Voh: 90%Vs min
Output Level Low Vol: 10%Vs max
- Rise Time (10%-90%): 4ns typ
Fall Time (90%-10%): 5ns typ

Output Control

- Start Up Time: 2ms typ

Environmental Parameters

- Operable Temperature Range: -55 to 200°C
- Expected life @ 200°C is in excess of 1500hrs
- Storage Temperature Range: -55 to 125°C
- Shock (std): 5000G, 0.3ms, 1/2 sine
Shock (HG): 10000G, 0.3ms, 1/2 sine
(shocked @ 25°C)
- Note: Higher Shock versions are available - please contact an IQD Sales Office
- Vibration: MIL-STD-202G, Method 204D, Condition D: 20G, 10Hz-2000Hz swept sine (vibrated @ 25°C)
- Note: Random Vibration test is also available - please contact an IQD Sales Office

Manufacturing Details

- Maximum Process Temperature: 260°C (for 20secs max)

Ordering Information

- Frequency
Model*
Shock Level*
Termination Variant*
Output
Frequency Tolerance (@ 25°C)*
Frequency Stability (over operating temperature range)*
Operating Temperature Range*
Pad 1 Function*
(minimum required*)
- Shock Options:
Blank = Standard (5000G)
HG = High Shock (10000G)
- Termination Variants:
SM1 = Gold Plated (RoHS)
SM5 = Solder Dipped (RoHS)
- Pad 1 Function Options:
EN = Enable/Disable
NC = No connection
- Example
32.768kHz CXOXULPHT 3.3V SM1
CMOS ±100ppm ±175ppm 25 to 200C NC

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Compliance

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

Packaging Details

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

Electrical Specification - maximum limiting values 3.30V ±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	-	-	45/55%

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

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