

**ISSUE 1; June 2019**

**Description**

- This product is designed and manufactured by Statek Corporation in California, USA and distributed by IQD. An increasing number of applications require the use of high temperature crystals. For these applications, IQD offers the Statek CX4HT EXT crystal. These crystals are designed to operate at temperatures up to 200°C, and feature an expected life in excess of 1,000 hours at these temperatures. The frequency range offered is 600kHz to 2.5MHz
- -SM1 Gold plated (RoHS)
- -SM5 Solder dipped (RoHS)
- Please note that all data is only valid at 25°C unless otherwise stated.

**Frequency Parameters**

- Frequency: 600.0kHz to 2.5MHz
- Frequency Tolerance: ±500.00ppm to ±10,000.00ppm
- Tolerance Condition: @ 25°C
- Ageing: ±5ppm max in 1st year
- Temperature Coefficient: -0.035ppm/°C<sup>2</sup>
- Note: Frequency f at temperature T is related to frequency fo at turning point temperature To by:  $f - f_o = k(T - T_o)^2$

**Electrical Parameters**

- Load Capacitance (CL): 9.0pF
- Shunt Capacitance (C0): 2pF max
- Drive Level: 3µW max
- Motional Resistance: 300Ω @ 600kHz  
Motional Capacitance: 2.3fF @ 32.768kHz  
Quality Factor: 18k @ 32.768kHz
- Motional Resistance: 500Ω @ 1.8432MHz  
Motional Capacitance: 1.0fF @ 100kHz  
Quality Factor: 31k @ 100kHz
- Turning Point: 35°C
- Functional Mode: Extensional

**Operating Temperature Ranges**

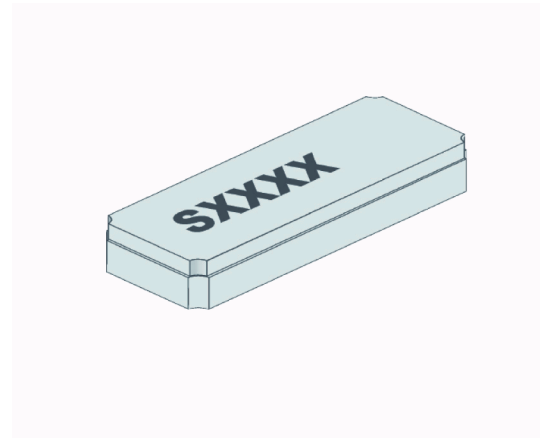
- 25 to 200°C

**Environmental Parameters**

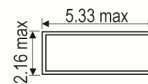
- Typical Expected Lifetime: 1000hrs @ 200°C
- Shock: 1500G, 0.3ms, 1/2 sine
- Vibration: 10G rms, 20-1000Hz, random
- Storage Temperature Range: -55 to 125°C

**Manufacturing Details**

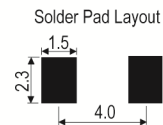
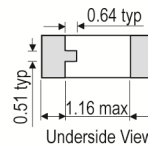
- Maximum Process Temperature: 260°C for 20sec



**Outline (mm) -SM1 = Gold plated (RoHS)**



Height (H) = Ceramic Lid	
SM1	1.27
SM5	1.35



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**Ordering Information**

- Minimum Required\*  
Frequency\*  
Model\*  
Termination\*  
Frequency Tolerance\*  
Operating Temperature Range  
Load Capacitance
- Example:  
1.0MHz CX4HT EXT-SM1  
±1000ppm 25 to 200C 9 FUND

**Compliance**

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

**Packaging Details**

- Pack Style: Tray      Tray pack  
Pack Size: 1
- Pack Style: Reel      Tape and reel in accordance with  
Pack Size: 1,000      EAI-481-D

**Electrical Specification - maximum limiting values**

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Over Tone Order	ESR
		°C	ppm		Ω
600.0kHz	2.5MHz	25 to 200		Fundamental	- 0

\*Stability Maximum values ±0ppm

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