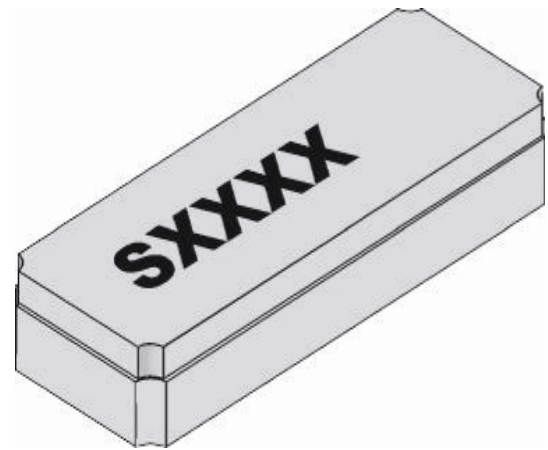


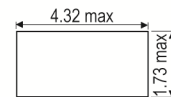
**ISSUE 1; June 2019**

**Description**

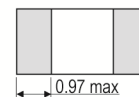
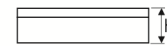
- This product is designed and manufactured by Statek Corporation in California, USA and distributed by IQD. An increasing number of applications require the use of high temperature crystals. For these applications we offer the CX9HT AT. These crystals are designed to operate at temperatures up to and including 225°C. The frequency range offered is 14MHz to 250MHz. The expected life at 200°C is in excess of 1,000 hours.
- -C-SM1 Gold plated (RoHS)
- -C-SM4 Solder Plated (RoHS)
- -C-SM5 Solder dipped (RoHS)
- FEATURES:  
High temperature operation up to 225°C  
High shock resistance  
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.



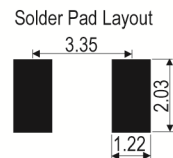
**Outline (mm) -C-SM5 = Solder dipped (RoHS)**



Height (H) = Ceramic Lid  
SM1 0.97 max  
SM5 1.02 max



Underside View



Solder Pad Layout

**Frequency Parameters**

- Frequency 14.0MHz to 250.0MHz
- Frequency Tolerance ±100.00ppm
- Tolerance Condition @ 25°C
- Frequency Stability ±125.00ppm to ±300.00ppm
- Ageing ±5ppm max in 1st year @ 25°C
- Note: Tighter Frequency Tolerances are available - please contact an IQD Sales Office

**Electrical Parameters**

- Load Capacitance (CL) 10.0pF
- Drive Level 200µW max <50MHz, 100µW max ≥50MHz
- Typical Motional Parameters:  
Freq 25MHz: R 30Ω, C1 1.8fF, Co 1.0pF Q 120k  
Freq 49MHz: R 30Ω, C1 2.1fF, Co 1.0pF Q 60k

**Operating Temperature Ranges**

- 25 to 200°C
- 25 to 225°C
- -55 to 150°C
- -55 to 175°C
- -55 to 200°C
- -55 to 225°C

**Environmental Parameters**

- Storage Temperature Range: -55 to 125°C
- Shock: 5000G, 0.3ms, 1/2 sine
- Vibration: 20G rms, 10-2000Hz
- Note: Higher Shock and Vibration requirements are available - please contact an IQD Sales Office

**Sales Office Contact Details:**

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USA: +1 760 318 2824

Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)

Web: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)

**Manufacturing Details**

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

**Ordering Information**

- Frequency\*
- Model\*
- Termination Variant\*
- Frequency Tolerance (@ 25°C)\*
- Frequency Stability (over operating temperature range)\*
- Operating Temperature Range\*
- Load Capacitance  
(\*minimum required)
- Termination Variants:
  - SM1 = Gold Plated
  - SM4 = Solder Plated
  - SM5 = Solder Dipped
- Example  
20.0MHz CX9HT AT-C-SM1  
±100ppm ±175ppm -55 to 200C FUND

**Compliance**

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

**Packaging Details**

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

**Electrical Specification - maximum limiting values**

Frequency Min	Frequency Max	Temperature Range	Stability Min*	Overtone Order	ESR
		°C	ppm		Ω
14.0MHz	250.0MHz	25 to 200	±200	Fundamental	- 0
		25 to 225	±300		- 0
		-55 to 150	±125		- 0
		-55 to 175	±150		- 0
		-55 to 200	±175		- 0
		-55 to 225	±250		- 0

\*Stability Maximum values ±300ppm

*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.](#)*

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