

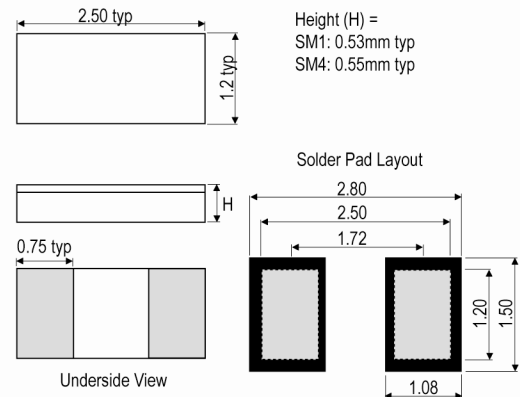
**ISSUE 1; June 2019**

**Description**

- This product is designed and manufactured by Statek Corporation in California, USA and distributed by IQD. When miniaturisation is paramount, the CX20 quartz crystal is an excellent choice. Available in frequencies from 16MHz to 50MHz, this crystal has a typical footprint of 2.5 x 1.2mm, and a typical height of 0.5mm.
- -C-SM1 Ceramic Lid, Gold Plated (Lead Free)
- -C-SM4 Solder plated (Pb free)
- FEATURES:
  - Ultra-miniature footprint (2.5 x 1.2mm typical)
  - Low profile (0.5mm typical)
  - Hermetically sealed ceramic package
  - High shock and vibration survival
  - Excellent ageing characteristics
  - Full military testing available
- APPLICATIONS:
  - Ultra-Low Power Wireless Communications
  - Implantable Transceivers
  - Bluetooth Low Energy (BLE)
  - Medical Implant Communication Service (MICS)
  - Smart Munitions
  - Guidance and Navigation
  - Communication
  - Communications
  - Transmitters
  - Pulse Generators
  - Tracking Beacons
  - Wildlife Telemetry
- Please note that all data is only valid at 25°C unless otherwise stated.



**Outline (mm) -C-SM4 = Solder plated (Pb free)**



**Frequency Parameters**

- Frequency 16.0MHz to 50.0MHz
- Frequency Tolerance ±30.00ppm
- Tolerance Condition @ 25°C
- Frequency Stability ±10.00ppm to ±100.00ppm
- Ageing ±3ppm max in 1st year

**Electrical Parameters**

- Load Capacitance (CL) 9.0pF
- Drive Level 200µW max
- Motional Resistance R1: 150Ω typ @ 16MHz / 50Ω typ @ 24MHz
- Motional Capacitance C1: 1.2fF typ @ 16MHz / 1.6fF typ @ 24MHz
- Quality Factor Q: 60000 typ @ 16MHz / 80000 typ @ 24MHz
- Shunt Capacitance Co: 0.7pF typ @ 16MHz / 0.8pF typ @ 24MHz

**Operating Temperature Ranges**

- -10 to 70°C
- -40 to 85°C
- -55 to 125°C

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**Environmental Parameters**

- Shock: 5000G, 0.3ms, 1/2 sine
- Vibration: MIL-STD-202G, Method 204D, Condition D: 20G, 10-2000Hz swept sine.
- Storage Temperature Range: -55 to 125°C

**Manufacturing Details**

- Maximum Process Temperature: 260°C for 20s

**Ordering Information**

- Frequency\*
- Model\*
- Lid
- Termination
- Frequency Tolerance (@25°C)\*
- Frequency Stability (over operating temperature range)\*
- Operating Temperature Range\*
- Load Capacitance\*
- Overtone
- (\*minimum required)
- Example:  
30.0MHz CX20-C-SM1  
30/50/-40 to 85C/9 FUND
- Other options are available for:  
Frequency Tolerance  
Frequency Stability  
Frequency Stability inclusive of Frequency Tolerance  
Operating Temperature Range  
Load Capacitance  
Random Vibration Testing  
Please contact our sales offices.

**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

**Electrical Specification - maximum limiting values**

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Over Tone Order	ESR
		°C	ppm		Ω
16.0MHz	50.0MHz	-10 to 70	±10	Fundamental	- 0
		-40 to 85	±20		- 0
		-55 to 125	±30		- 0

\*Stability Maximum values ±100ppm

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

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