

ISSUE 1; June 2019

Description

- This product is designed and manufactured by Statek Corporation in California, USA and distributed by IQD. IQD's miniature CX4 AT Statek crystals in a leadless ceramic package are designed for surface mounting on printed circuit boards or hybrid substrates. These crystals are low profile and have a very small land pattern.
- -C-SM1 Gold Plated (lead free) Ceramic Lid
- -C-SM4 Solder Plated (lead free) Ceramic Lid
- -C-SM5 Solder Dipped (lead free) Ceramic Lid
- -SM1 Gold Plated (lead free)
- -SM4 Solder Plated (lead free)
- -SM5 Solder Dipped (lead free)
- Please note that all data is only valid at 25°C unless otherwise stated.

Frequency Parameters

- Frequency 14.0MHz to 250.0MHz
- Frequency Tolerance $\pm 100.00\text{ppm}$
- Tolerance Condition @ 25°C
- Frequency Stability $\pm 10.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Ageing $\pm 5\text{ppm}$ max in 1st year @ 25°C
- Frequency Stability does not include Frequency Tolerance. The characteristics of the frequency stability over the operating temperature range follow that of the AT thickness-shear mode.
- Note:
 - Other Frequency Tolerances and Stabilities are available
 - Other Ageing characteristics are available
 - Other Load Capacitances are available
 - Please contact an IQD Sales Office for further information

Electrical Parameters

- Load Capacitance (CL) 10.0pF
- Shunt Capacitance (C0) 1.1pF typ @ 32MHz
- Drive Level 200 μW max $\leq 50\text{MHz}$, 100 μW max $> 50\text{MHz}$

Operating Temperature Ranges

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

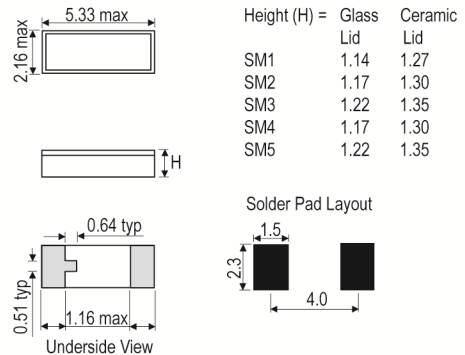
Environmental Parameters

- Shock: 5000G, 0.3ms, half sine wave
(Note: Higher stock models also available - please contact an IQD Sales Office for further information)
- Vibration: MIL-STD-202G Method 204D Condition D: 20G, 10-2000Hz swept sine
(Note: Random vibration testing also available - please contact an IQD Sales Office for further information)
- Storage Temperature Range: -55 to 125°C

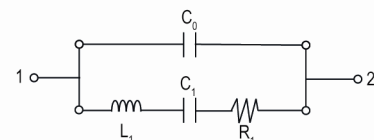
Manufacturing Details

- Max Process Temperature: 260°C for 20sec

Outline (mm) -SM1 = Gold Plated (lead free)



Equivalent Circuit



R_1 : Motional Resistance
 L_1 : Motional Inductance
 C_0 : Shunt Capacitance
 C_1 : Motional Capacitance

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Ordering Information

- Frequency*
- Model*
- Lid*
- Termination Variant*
- Frequency Tolerance (@ 25°C)*
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Load Capacitance*
- Overtone
- (*minimum required)
- Lid Options:
 - Glass - blank
 - Ceramic - C
- Termination Variants:
 - Gold Plated - SM1
 - Solder Plated - SM4
 - Solder Dipped - SM5
 - (Note: non-RoHS compliant terminations are available - please contact an IQD Sales Office for further information)
- Example:
 - 20.0MHz CX4 AT SM1
 - 100/50/-10 to 70/10 FUND

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
14.0MHz	250.0MHz	-10 to 70	±10	Fundamental	75
		-40 to 85	±20		75
		-55 to 125	±30		75

*Stability Maximum values ±100ppm

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