

ISSUE 1; June 2019

Description

- This product is designed and manufactured by Statek Corporation in California, USA and distributed by IQD. STATEK's miniature CX3 AT crystals in leadless ceramic packages are designed for surface mounting on printed circuit boards or hybrid substrates. These crystals are low profile and have a small land pattern.
- -C-SM1 Gold plated (lead free) with ceramic lid
- -C-SM4 Solder plated (lead free) with ceramic lid
- -C-SM5 Solder dipped (lead free) with ceramic lid
- -SM1 Gold plated (lead free) glass lid
- -SM4 Solder plated (lead free) glass lid
- -SM5 Solder dipped (lead free) glass lid
- Please note that all data is only valid at 25°C unless otherwise stated.

Frequency Parameters

- Frequency 9.6MHz to 250.0MHz
- Frequency Tolerance ±100.00ppm
- Tolerance Condition @ 25°C
- Frequency Stability ±10.00ppm to ±100.00ppm
- Ageing ±5pm max in 1st year @ 25°C

Electrical Parameters

- Load Capacitance (CL) 10.0pF to 20.0pF
- Drive Level 500µW max f≤50MHz, 200µW max f>50MHz
- Typical:

Fundamental Frequency	10MHz	32MHz	155.52MHz
Motional Resistance R1 (Ω)	60	25	10
Motional Capacitance C1 (fF)	2.8	6.2	4.0
Quality Factor Q (k)	95	30	30
Shunt Capacitance C0 (pF)	1.4	2.3	2.3

Operating Temperature Ranges

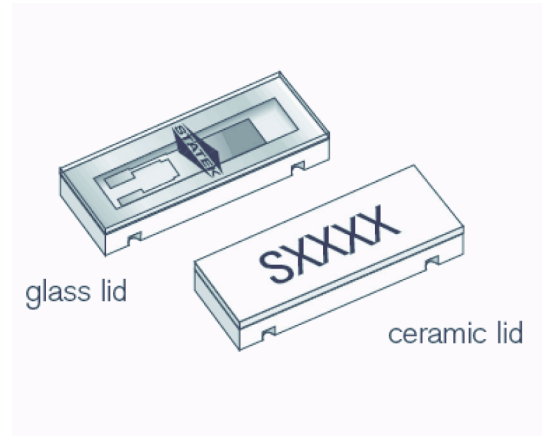
- -10 to 70°C
- -40 to 85°C
- -55 to 125°C

Environmental Parameters

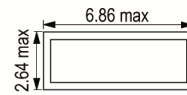
- Shock: 3000G, 0.3 ms, 1/2 sine
- Vibration: 20G, 10-2000Hz swept sine per MIL-STD-202G, Method 204D, Cond.D
- Storage Temperature Range: -55 to 125°C

Manufacturing Details

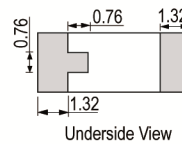
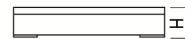
- Maximum Process Temperature: 260°C for 20 sec



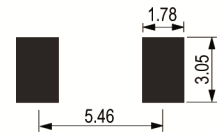
Outline (mm) -C-SM1 = Gold plated (lead free) with ceramic lid



	Height (H) =	
	Glass Lid	Ceramic Lid
SM1	1.35	1.70
SM2	1.40	1.75
SM3	1.47	1.83
SM4	1.40	1.75
SM5	1.47	1.83



Solder Pad Layout



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Ordering Information

- Minimum required*
Frequency*
Model*
Lid Type*
Termination*
Frequency Tolerance*
Frequency Stability (over operating temp range)
Operating Temperature Range*
Load Capacitance
- Example:
10.0MHz CX3 AT-SM1
±100ppm ±100ppm -40 to 85C 20 FUND
- Terminations:
SM1 Gold Plated
SM2 Solder Plated
SM3 Solder Dipped
SM4 Solder Plated (Lead Free)
SM5 Solder Dipped (Lead Free)

Compliance

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

Packaging Details

- Pack Style: Reel Tape & Reel
Pack Size: 1,000
- Pack Style: Tray Tray
Pack Size: 1

Electrical Specification - maximum limiting values

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Over Tone Order	ESR
		°C	ppm		Ω
9.6MHz	250.0MHz	-10 to 70	±10	Fundamental	- 0
		-40 to 85	±20		- 0
		-55 to 125	±30		- 0

*Stability Maximum values ±100ppm

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