

ISSUE 1; January 2016

Description

- 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

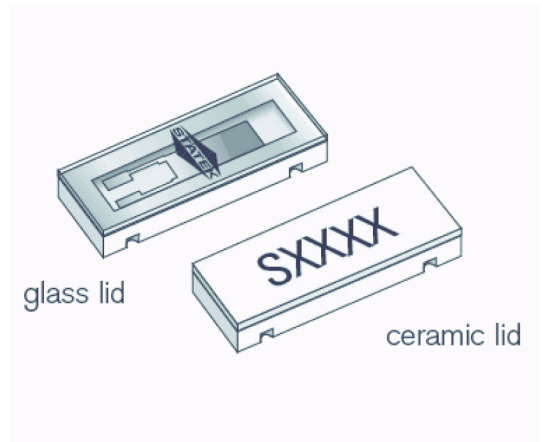
- -10 to 70°C
- -40 to 85°C
- -55 to 125°C

Environmental Parameters

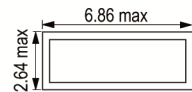
- Shock: 3000G, 0.3 ms, 1/2 sine
- Vibration: 20G, 10-2000Hz swept sine per MIL-STD-202G, Method 204D, Cond.D
- Storage Temperature Range: -55 to 125°C

Manufacturing Details

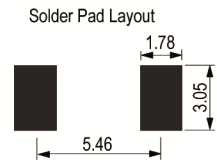
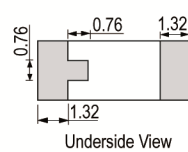
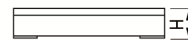
- Maximum Process Temperature: 260°C for 20 sec



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



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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 (2011/65/EU) Optional
- REACH Status Compliant
- MSL Rating (JEDEC-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	-
		-40 to 85	±20		-
		-55 to 125	±30		-

*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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