

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**

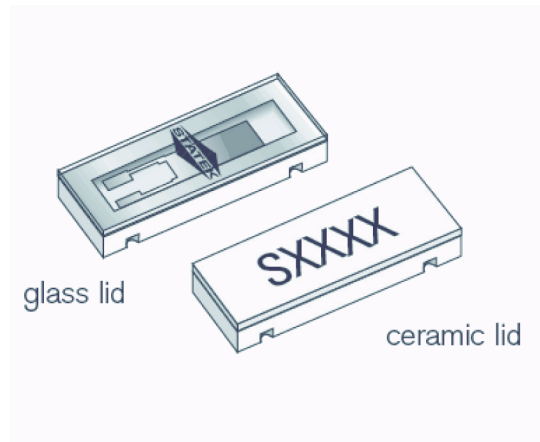
- -10 to 70°C
- -40 to 85°C
- -55 to 125°C

**Environmental Parameters**

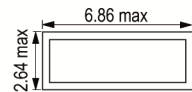
- Shock: 3000G, 0.3 ms, 1/2 sine
- Vibration: 20G, 10-2000Hz swept sine per MIL-STD-202G, Method 204D, Cond.D
- Storage Temperature Range: -55 to 125°C

**Manufacturing Details**

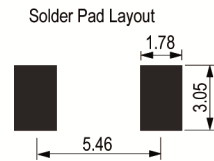
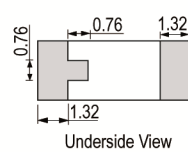
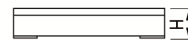
- Maximum Process Temperature: 260°C for 20 sec



**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



**Sales Office Contact Details:**

UK: +44 (0)1460 270200  
Germany: 0800 1808 443

France: 0800 901 383  
USA: +1.760.318.2824

Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)  
Web: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)

### 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.*  
[Click to view latest version on our website.](#)

### Sales Office Contact Details:

UK: +44 (0)1460 270200  
 Germany: 0800 1808 443

France: 0800 901 383  
 USA: +1.760.318.2824

Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)  
 Web: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)