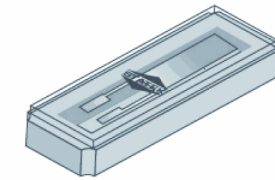


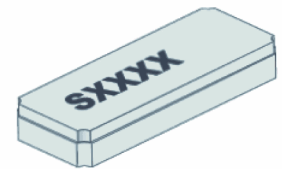
ISSUE 10; April 2018

**Description**

- Designed and manufactured in the USA, Statek's CX9 AT quartz crystal is the newest device available in frequencies ranging from 14MHz to 250MHz. This device has been specifically designed for applications requiring a very small foot print and low profile.
- -C-SM1 Gold Plated (RoHS) ceramic lid
- -C-SM2 Solder plated (non RoHS) ceramic lid
- -C-SM3 Solder dipped (non RoHS) ceramic lid
- -C-SM4 Solder Plated (RoHS) ceramic lid
- -C-SM5 Solder Dipped (RoHS) ceramic lid
- -SM1 Gold Plated (RoHS) glass lid
- Terminations are gold plated (RoHS compliant)
- -SM2 Solder plated (non RoHS) glass lid
- -SM3 Solder dipped (non RoHS) glass lid
- -SM4 Solder Plated (RoHS) glass lid
- Terminations are solder plated (RoHS compliant)
- -SM5 Solder Dipped (RoHS) ceramic lid
- Terminations are solder dipped (RoHS compliant)
- Please note that all data is only valid at 25°C unless otherwise stated.

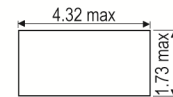


glass lid

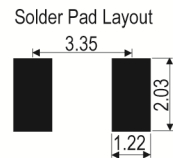
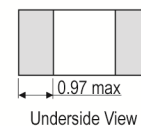
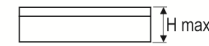


ceramic lid

**Outline (mm) -SM1 = Gold Plated (RoHS) glass lid**



Height (H) =	Glass	Ceramic
SM1	0.87	0.90
SM2/SM4	0.87	0.90
SM3/SM5	0.91	0.94



**Frequency Parameters**

- Frequency: 14.0MHz to 250.0MHz
- Frequency Tolerance: ±100.00ppm
- Tolerance Condition: @ 25°C
- Frequency Stability: ±10.00ppm to ±100.00ppm
- Ageing: ±5ppm max in 1st year (f<40MHz)

**Electrical Parameters**

- Load Capacitance (CL): 10.0pF
- Shunt Capacitance (C0): 1pF typ
- Drive Level: 200µW max f≤50MHz, 100µW max f>50MHz
- Typical Electrical Parameters:

Frequency	25MHz	49MHz	155.52MHz
ESR (Ω)	30	30	25
C1 (fF)	1.8	2.1	2.5
Q (k)	120	60	16
Co (pF)	1.0	1.0	1.4

**Operating Temperature Ranges**

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

**Environmental Parameters**

- Shock: 5000G, 0.3 ms, 1/2 sine
- Vibration: MIL-STD202G, Method 204D, Condition D: 20G, 10-2000 Hz, swept sine
- Storage Temp Range: -55 to 125°C

**Manufacturing Details**

- Max Process Temperature: 260°C for 20 sec.

**Sales Office Contact Details:**

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USA: +1.760.318.2824

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

### Ordering Information

- Terminations:
  - SM1 = Gold Plated (RoHS)
  - SM2 = Solder Plated (non RoHS)
  - SM3 = Solder Dipped (non RoHS)
  - SM4 = Solder Plated (RoHS)
  - SM5 = Solder Dipped (RoHS)
- Example:
  - 20.0MHz CX9 AT-C-SM1
  - 100/100/-55 to 125C/10 FUND
- Ordering Information (\*minimum required):
  - Frequency\*
  - Model\*
  - Lid:\* C=Ceramic, Blank=Glass
  - Variant:\* SM1, SM2, SM3, SM4, SM5
  - Frequency Tolerance @25°C\*
  - Frequency Stability over operating temperature range\*
  - Operating Temperature Range\*
  - Load Capacitance
  - Overtone

### Compliance

- RoHS Status (2011/65/EU)      Optional
- REACH Status                      Compliant
- MSL Rating (JDEC-STD-033):    Not Applicable

### Packaging Details

- Pack Style: Tray      Tray Pack  
Pack Size: 1
- Pack Style: Reel      Tape & reel in accordance with EIA-481-D  
Pack Size: 1,000

### 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	-
		-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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