

ISSUE 1; January 2016

**Description**

- When miniaturization is paramount, IQD's low profile CX16 AT Statek quartz crystal is an excellent choice. This crystal has a typical footprint of 2.0 mm x 1.2 mm, and a typical height of 0.4 mm. The resonator is manufactured using Statek's photolithographic and chemical milling processes and then sealed within a ceramic package for high stability and low ageing. Available with tight calibration tolerances and high stability over temperature and fast start-up times, this crystal is well suited for applications that have a space restraint and require a crystal with a low profile.
- C-SM1 Ceramic Lid, Gold Plated (Lead Free)
- Please note that all data is only valid at 25°C unless otherwise stated.

**Frequency Parameters**

- Frequency: 24.0MHz to 50.0MHz
- Frequency Tolerance: ±100.00ppm
- Frequency Stability: ±10.00ppm to ±100.00ppm
- Ageing: ±3ppm max in 1st year

**Electrical Parameters**

- Load Capacitance (CL): 10.0pF
- Shunt Capacitance (C0): 0.6pF typ
- Drive Level: 200µW max
- Motional Resistance R1: 100Ω typ @ 24MHz / 90Ω typ @ 26.5MHz
- Motional Capacitance C1: 1.3fF typ @ 24MHz / 1.4fF typ @ 26.5MHz
- Quality Factor Q: 30000 typ

**Operating Temperature Ranges**

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

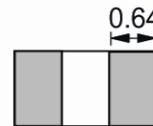
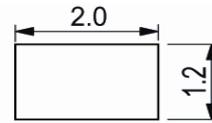
**Environmental Parameters**

- Shock: 5000G, 0.3ms, 1/2 sine
- Vibration: MIL-STD-202G, Method 204D, Condition D: 20G, 10-2000Hz swept sine
- Storage Temperature Range: -55 to 125°C

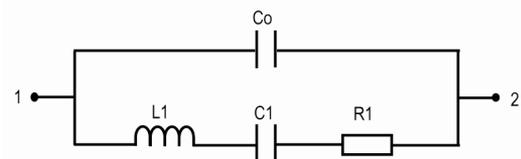
**Manufacturing Details**

- Maximum Process Temperature: 260°C for 20s

Outline (mm) -C-SM1 = Ceramic Lid, Gold Plated (Lead Free)



Underside View  
Equivalent Circuit



R1 Motional Resistance      L1 Motional Inductance  
C1 Motional Capacitance      Co Shunt Capacitance

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**Ordering Information**

- Frequency\*
- Model\*
- Lid
- Termination
- Frequency Tolerance (@25°C)\*
- Frequency Stability (over operating temperature range)\*
- Operating Temperature Range\*
- Load Capacitance\*
- Overtone
- (\*minimum required)
- Example:  
30.0MHz CX16 AT-C-SM1  
100/100/-40 to 85C/10 FUND
- Other options are available for:  
Frequency Tolerance  
Frequency Stability  
Frequency Stability inclusive of Frequency Tolerance  
Operating Temperature Range  
Load Capacitance  
Ageing  
Random Vibration Testing  
Please contact our sales offices

**Compliance**

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

**Packaging Details**

- Pack Style: Tray      Supplied on a tray  
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
24.0MHz	50.0MHz	-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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