

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

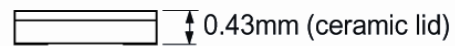
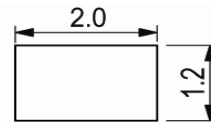
### Environmental Parameters

- 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

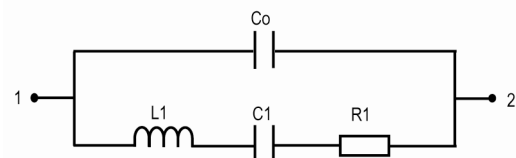
### Manufacturing Details

- 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

### 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**

- 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.*

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

**Sales Office Contact Details:**

UK: +44 (0)1460 270200

France: 0800 901 383

Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)

Germany: 0800 1808 443

USA: +1.760.318.2824

Web: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)