

**ISSUE 7; June 2019**

**Description**

- This product is designed and manufactured by Statek Corporation in California, USA and distributed by IQD. IQD's ultra-miniature CX4V TF Statek quartz crystals are hermetically sealed in surface mount ceramic packages and custom laser-tuned to frequencies ranging from 30 kHz to 250 kHz. This high quality tuning fork resonator is intended for use in Pierce (single inverter) oscillators with a maximum process temperature not to exceed 260°C.
- -C SM1 Ceramic Lid, Gold Plated, Pb Free
- -C SM4 Ceramic lid, Solder Plated, Pb Free
- -C SM5 Ceramic lid, Solder Dipped, Pb Free
- -SM1 Glass Lid, Gold Plated, Pb Free
- -SM4 Glass Lid, Solder Plated, Pb Free
- -SM5 Glass Lid, Solder Dipped, Pb Free
- Please note that all data is only valid at 25°C unless otherwise stated.

**Frequency Parameters**

- Frequency 30.0kHz to 250.0kHz
- Frequency Tolerance ±30.00ppm to ±10,000.00ppm
- Tolerance Condition @ 25°C
- Ageing ±3ppm max in 1st year
- Temperature Coefficient (k): -0.035 ppm/°C<sup>2</sup>  
Note: Frequency f at temperature T is related to frequency f<sub>0</sub> at turning point temperature T<sub>0</sub> by:  $(f - f_0)/f_0 = k(T - T_0)^2$

**Electrical Parameters**

- Load Capacitance (CL) 4.0pF to 11.0pF
- Shunt Capacitance (C0) 0.7pF typ
- Drive Level 0.5µW max
- Parameters
 

Frequency (kHz)	32.768	100	200
Motional Resistance R1 (kΩ)	50	18	2.4
Motional Capacitance C1 (fF)	2.3	1.07	2.2
Quality Factor Q (k)	40	85	140
Shunt Capacitance C0 (pF)	1.1	0.7	1.2
Load Capacitance (pF)	9	8	5
Turning Point (°C)	25	10	29

**Operating Temperature Ranges**

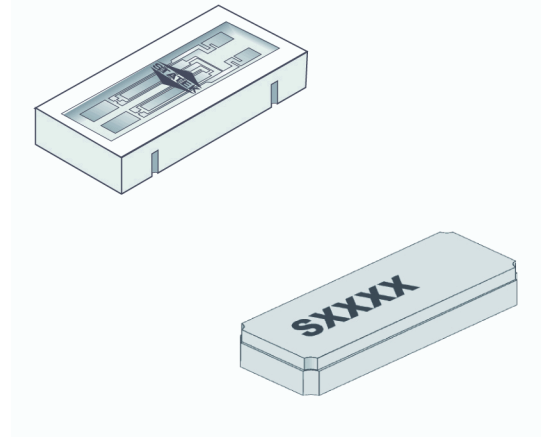
- -10 to 70°C
- -40 to 85°C
- -55 to 125°C

**Environmental Parameters**

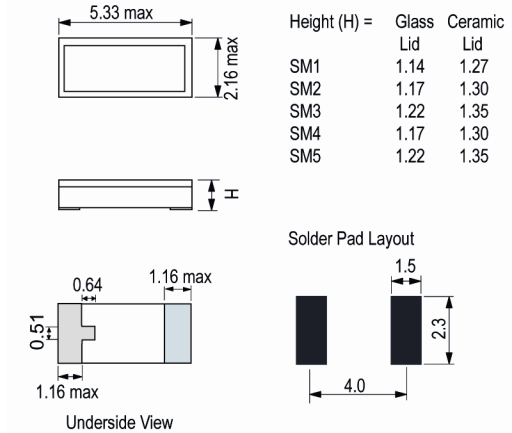
- Shock: 5000 G, 0.3 ms, 1/2 sine
- Vibration: 20 G RMS, 10-2000 Hz random
- Storage Temperature Range: -55 to 125°C

**Manufacturing Details**

- Process Temperature: 260°C max for no more than 20 sec



**Outline (mm) -SM1 = Glass Lid, Gold Plated, Pb Free**



**Sales Office Contact Details:**

UK: +44 (0)1460 270200

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 Variant\*
- Frequency Tolerance (@ 25°C)\*
- Operating Temperature Range\*
- Load Capacitance\*
- Overtone
- Example:  
32.768kHz CX4V TF C SM1  
100/-/-55 to 125C/9 FUND  
Note: C=Ceramic Lid, Blank=Glass Lid

**Compliance**

- RoHS Status (2015/863/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
30.00kHz	250.00kHz	-10 to 70		Fundamental	- 0
		-40 to 85			- 0
		-55 to 125			- 0

\*Stability Maximum values ±0ppm

*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

USA: +1 760 318 2824

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

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