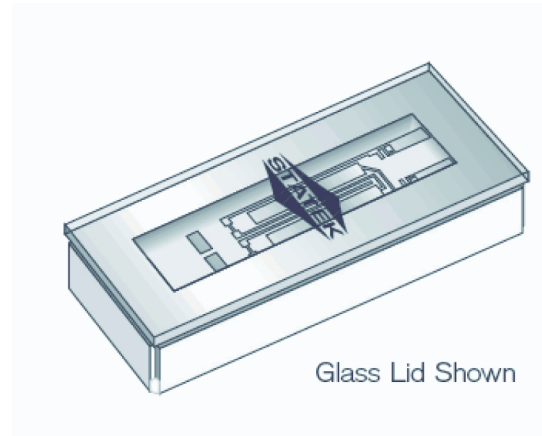


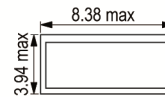
ISSUE 7; June 2016

Description

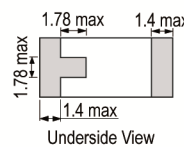
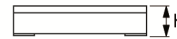
- The CX1V TF quartz crystal is a high quality surface mount tuning fork resonator for use in Pierce (single inverter) oscillators. This crystal is a hermetically sealed, rugged, miniature ceramic package. They are manufactured using the Statek developed photolithographic process and were designed utilising the experience acquired by producing millions of crystals for industrial, commercial, military and medical applications.
- -C SM1 SM1 (Gold Plated, ceramic lid)
- -C SM4 SM4 (Solder Plated, ceramic lid)
- -C SM5 SM5 (Solder Dipped, ceramic lid)
- -SM1 SM1 (Gold Plated, glass lid)
- -SM4 SM4 (Solder Plated, glass lid)
- -SM5 SM5 (Solder Dipped, glass lid)
- FEATURES:
 - Miniature tuning fork design
 - High shock resistance
 - Low ageing
 - Designed for low power applications
 - Ideal for battery operated applications
 - Compatible with hybrid or PC board packaging
 - Full military testing available
- Please note that all data is only valid at 25°C unless otherwise stated.



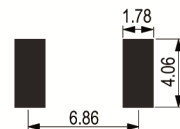
Outline (mm) -SM1 = SM1 (Gold Plated, glass lid)



Height (H) =	Glass Lid	Ceramic Lid
SM1	1.65 max	1.78 max
SM2	1.70 max	1.83 max
SM3	1.78 max	1.90 max
SM4	1.70 max	1.83 max
SM5	1.78 max	1.90 max



Solder Pad Layout



Frequency Parameters

- Frequency: 10.0kHz to 600.0kHz
- Frequency Tolerance: ±30.00ppm to ±5,000.00ppm
- Tolerance Condition: @ 25°C
- Ageing: ±5ppm max in 1st year @ 25°C
- Temperature Coefficient (k): -0.035ppm/°C²
- Note: Frequency f at temperature T is related to frequency fo at turning point temperature To by: $(f-f_0)/f_0 = k(T-T_0)^2$

Electrical Parameters

- Load Capacitance (CL): 4.0pF to 11.0pF
- Shunt Capacitance (C0): 2pF max
- Drive Level: 10-24.9kHz 0.5µW max, 25-600kHz 1.0µW max

Operating Temperature Ranges

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

Environmental Parameters

- Shock: 1000G, 1ms, 1/2 sine
- Vibration: 20G rms, 10-2000Hz
- Storage Temperature Range: -55 to 125°C

Manufacturing Details

- Maximum Process Temperature: 260°C for 20sec max

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
Web: www.iqdfrequencyproducts.com

Ordering Information

- Frequency*
- Model*
- Lid Variant*
- Termination Variant*
- Frequency Tolerance (@ 25°C)*
- Operating Temperature Range*
- Load Capacitance
(*minimum required)
- Lid Variants:
Blank = Glass
C = Ceramic
- Termination Variants:
SM1 = Gold Plated
SM4 = Solder Plated
SM5 = Solder Dipped
Note: non-RoHS compliant terminations SM2 & SM3 are available - please contact an IQD Sales Office
- Example:
100.0kHz CX1V TF-C SM1
100/-/40 to 85C/5 FUND

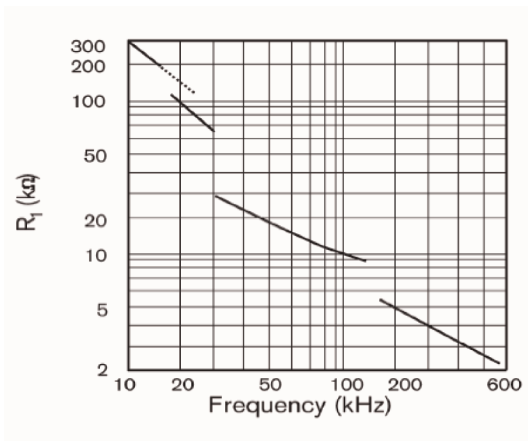
Compliance

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

Packaging Details

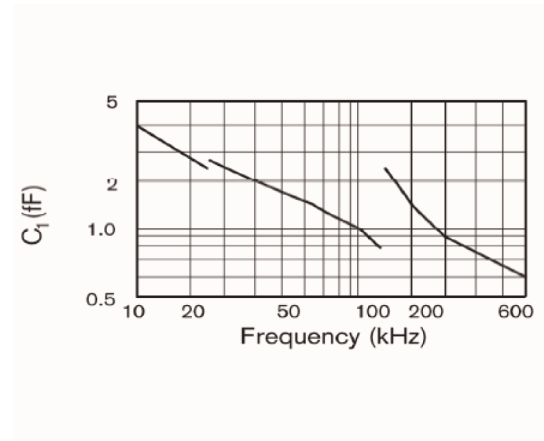
- Pack Style: Reel Tape & reel in accordance with EIA-481-D
Pack Size: 1,000
- Pack Style: Tray Tray pack
Pack Size: 1

CX1V TF typical Motional Resistance



CX1V TF typical Quality Factor

CX1V TF typical Motional Capacitance



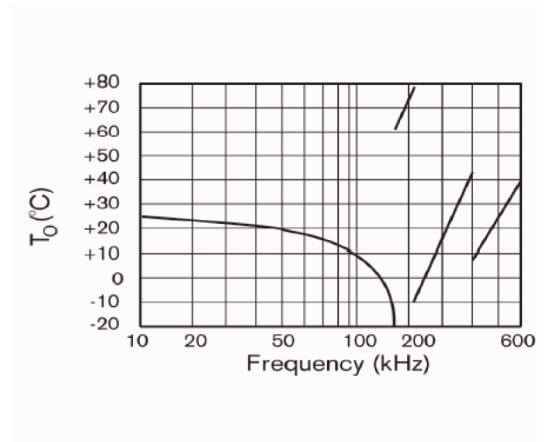
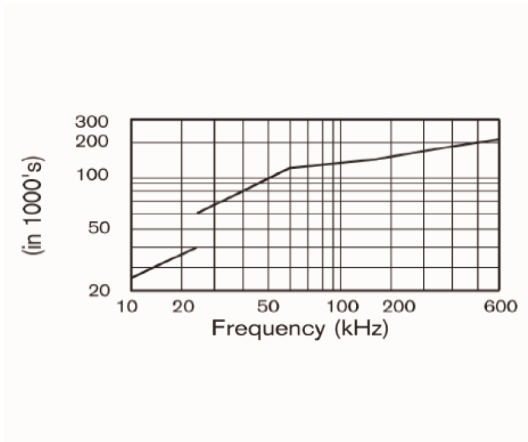
CX1V TF typical Turning Point Temperature

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Electrical Specification - maximum limiting values

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Over Tone Order	ESR
		°C	ppm		Ω
10.00kHz	600.0kHz	-10 to 70		Fundamental	-
		-40 to 85			-
		-55 to 125			-

*Stability Maximum values $\pm 0\text{ppm}$

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.](#)

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