

CX1 EXT CRYSTALS

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Description

The CX1 EXT quartz crystals are leadless devices designed for surface mounting on printed circuit boards or hybrid substrates. They are hermetically sealed in a rugged, miniature ceramic package. The CX1 EXT crystal is manufactured using the Statek-developed photo-lithographic process, and was designed utilizing the experience acquired by producing millions of crystals for industrial, commercial, military and medical applications. Maximum process temperature should not exceed 260°C

Features

- Extensional mode
- Ideal for use with microprocessors
- Designed for low power applications
- Compatible with hybrid or PC board packaging
- Low ageing
- Full military testing available
- Ideal for battery operated applications

General Specifications

- Load Capacitance (C_L): 7pF standard
- Drive Level: 3µW max
- Ageing: ±5ppm max in 1st year
- Shunt Capacitance (C_0): 1.2pF typ
- Motional Capacitance (C_1): 2.5 typ
- Quality Factor (Q): 70000 min

Terminations

- SM1 = Gold Plated (RoHS Compliant)
- SM2 = Solder Plated (non RoHS Compliant)
- SM3 = Solder Dipped (non RoHS Compliant)
- SM4 = Solder Plated (RoHS Compliant)
- SM5 = Solder Dipped (RoHS Compliant)

Standard Frequency Tolerances

- ±500ppm, ±1000ppm ±10000ppm

Operating Temperature Ranges

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

Storage Temperature Range

- -55 to 125°C

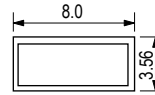
Environmental

- Shock: 750G, 0.3ms, 1/2 sine wave
- Vibration: 1.5mm amplitude, 10Hz-55Hz, 1min in 3 mutually perpendicular planes, duration 2hrs each plane

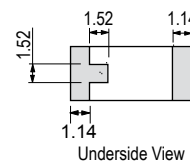
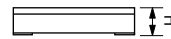
Packaging

- Tray pack
- Tape and reel in accordance with EIA-481-D, 1kpcs per reel (please see pages 372 & 373)

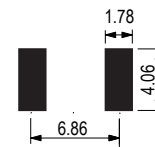
Outline (mm) typ



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



Solder Pad Layout



Ordering Information (*minimum required)

- Frequency*
- Model*
- Termination Variant*
- Frequency Tolerance (@25°C)*
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Load Capacitance*
- Overtone*

Example

- 1.0MHz CX1 EXT SM1
500/-/-10 to 70C/7 FUND



Electrical Specifications - maximum limiting values

Example Frequencies	Frequency Tolerance @25°C	Operating Temperature Range	Typical Frequency Stability Coefficient (ref 35°C)	ESR Typical	Vibration Mode
555.0kHz	±500ppm ±1000ppm ±10000ppm	-10 to 70°C -40 to 85°C -55 to 125°C	-0.035/°C ²	600Ω	Fundamental
614.0kHz				275Ω	
1.0MHz				500Ω	
1.4MHz				775Ω	
1.8432MHz				300Ω	Overtone
2.1MHz				475Ω	

Note: For other frequency / specification combinations, please contact our sales offices

