

CX1 AT CRYSTALS

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Description

Statek's miniature CX1 AT crystals in leadless ceramic packages are designed for surface mounting on printed circuit boards or hybrid substrates. Due to its robust design, this product has gained wide acceptance in the frequency product industry

Features

- Designed for surface mount applications using infrared, vapor phase, or epoxy mount techniques
- Low profile hermetically sealed ceramic package
- Excellent ageing characteristics
- Available with glass or ceramic lid
- High shock and vibration resistance
- Custom designs available
- Full military testing available

Applications

Medical

- Infusion Pumps
- Monitoring Equipment

Industrial, Computer & Communications

- Instrumentation
- Process Control
- Environmental Control
- Telemetry

Military & Aerospace

- Communications
- Satellite Command and Control
- Cockpit Electronics
- Smart Munitions
- Timing Devices (Fuzes)

General Specifications

- Load Capacitance (C_L): 20pF \leq 50MHz, 10pF $>$ 50MHz
- Drive Level: 500 μ W max \leq 50MHz, 200 μ W max $>$ 50MHz
- Ageing: \pm 5ppm max in 1st year
- Shunt Capacitance (C_0): 2.3pF typ
- Motional Capacitance (C_1): 5.5fF typ
- Quality Factor (Q): 30000 min

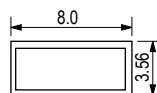
Terminations

- 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)

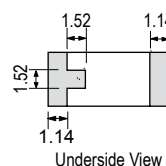
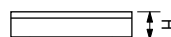
Standard Frequency Tolerance

- \pm 100ppm

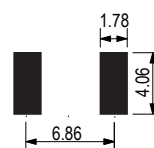
Outline (mm) typ



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



Standard Frequency Stabilities

- \pm 10ppm, \pm 20ppm, \pm 30ppm, \pm 50ppm, \pm 100ppm

Operating Temperature Ranges

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

Storage Temperature Range

- -55 to 125°C

Environmental

- Shock: 3000G, 0.3ms, 1/2 sine wave
- Vibration: MIL-STD-202G, Method 204D, Test Condition D: 20G (10Hz-2000Hz), swept sine wave

Packaging

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

Ordering Information (*minimum required)

- Frequency*
- Model*
- Termination Variant*
- Frequency Tolerance ($@25^{\circ}\text{C}$)*
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Load Capacitance*
- Overtone

Example

- 10.0MHz CX1 AT SM1
100/50/-10 to 70C/20 FUND



Electrical Specifications - maximum limiting values

Example Frequencies	Frequency Tolerance @25°C	Operating Temperature Range	Frequency Stability Available Over Operating Temperature Range		ESR Typical	Vibration Mode
			Minimum	Maximum		
10.0MHz	±100ppm	−10 to 70°C	±10ppm	±50ppm	30Ω	Fundamental AT cut
32.0MHz		−40 to 85°C	±20ppm	±100ppm	25Ω	
155.52MHz		−55 to125°C	±30ppm	±100ppm	15Ω	
Note: For other frequency / specification combinations, please contact our sales offices						

