Quartz Crystal Specification
CX1HT AT

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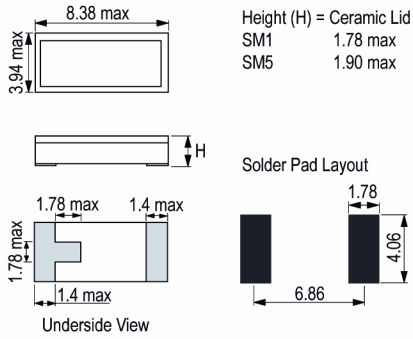
Description

- An increasing number of applications require the use of high temperature crystals. For these applications we offer the CX1HT AT. These crystals are designed to operate at temperatures up to and including 225ºC. The frequency range offered is 6MHz to 250MHz.
  The expected life at 200ºC is in excess of 1,000 hours.
- -C-SM1 Gold Plated (RoHS)
- -C-SM4 Solder Plated (RoHS)
- -C-SM5 Solder Dipped (RoHS)
- FEATURES:
  High temperature operation up to 225°C
  High shock resistance
  Hermetically sealed ceramic package
- APPLICATIONS:
  Industrial -
  Downhole instrumentation
  Rotary shaft sensors
  Underground boring tools
- Please note that all data is only valid at 25°C unless otherwise stated.



Outline (mm) -C-SM1 = Gold Plated (RoHS)



Frequency Parameters

Frequency	6.0MHz to 250.0MHz
Frequency Tolerance	±100.00ppm
Tolerance Condition	@ 25°C
Frequency Stability	±125.00ppm to ±300.00ppm
Ageing	±5ppm max in 1st year @ 25°C

- Note: Tighter Frequency Tolerances are available - please contact an IQD Sales Office

Electrical Parameters

Load Capacitance (CL)	10.0pF
Drive Level	500µW max <50MHz, 200µW max ≥50MHz

- Typical Motional Parameters:
  Freq 10MHz: R 30Ω, C1 5.5fF, Co 2.2pF Q 100k
  Freq 32MHz: R 25Ω, C1 6.2fF, Co 2.3pF Q 30k

Operating Temperature Ranges

- -55 to 150°C
- -55 to 175°C
- -55 to 200°C
- 25 to 200°C
- -55 to 225°C
- 25 to 225°C

Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- Shock: 1000G, 1ms, 1/2 sine
- Vibration: 20G rms, 10-2000Hz
- Note: Higher Shock and Vibration requirements are available - please contact an IQD Sales Office

Manufacturing Details

- Maximum Process Temperature: 260°C (20secs max)

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Ordering Information

- Frequency*
  Model*
  Termination Variant*
  Frequency Tolerance (@ 25°C)*
  Frequency Stability (over operating temperature range)*
  Operating Temperature Range*
  Load Capacitance
  (*minimum required)
- Termination Variants:
  SM1 = Gold Plated
  SM4 = Solder Plated
  SM5 = Solder Dipped
- Example
  10.0MHz CX1HT AT-C-SM1
  ±100ppm ±175ppm -55 to 200C FUND

Compliance

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

Packaging Details

- Pack Style: Tray 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*	Overtone Order	ESR
		°C	ppm		Ω
6.0MHz	250.0MHz	25 to 200	±200	Fundamental	-
		25 to 225	±300		-
		-55 to 150	±125		-
		-55 to 175	±150		-
		-55 to 200	±175		-
		-55 to 225	±250		-

**Stability Maximum values ±300ppm*

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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