

ISSUE 1; January 2016

Description

- An increasing number of applications require the use of high temperature crystals. For these applications, IQD offers the Statek CX1HT EXT crystal. These crystals are designed to operate at temperatures up to 200°C, and feature an expected life in excess of 1,000 hours at these temperatures. The frequency range offered is 530kHz to 2.1MHz
- -SM1 Gold plated (RoHS)
- -SM5 Solder dipped (RoHS)
- Please note that all data is only valid at 25°C unless otherwise stated.

Frequency Parameters

- Frequency 530.0kHz to 2.1MHz
- Frequency Tolerance ±500.00ppm to ±10,000.00ppm
- Tolerance Condition @ 25°C
- Ageing ±5ppm max in 1st year
- Temperature Coefficient: -0.035ppm/°C²
- Note: Frequency f at temperature T is related to frequency f₀ at turning point temperature T₀ by: $f - f_0 = k(T - T_0)^2$

Electrical Parameters

- Load Capacitance (CL) 7.0pF
- Shunt Capacitance (C₀) 1.1pF typ @ 1.0MHz
- Drive Level 3µW max
- Motional Resistance: 500Ω @ 1.0MHz
Motional Capacitance: 2.0fF @ 1.0MHz
Quality Factor: 190k @ 1.0MHz
- Motional Resistance: 300Ω @ 1.8432MHz
Motional Capacitance: 2.8fF @ 1.8432MHz
Quality Factor: 110k @ 1.8432MHz
- Turning Point: 35°C
- Functional Mode: Extensional

Operating Temperature Ranges

- 25 to 200°C

Environmental Parameters

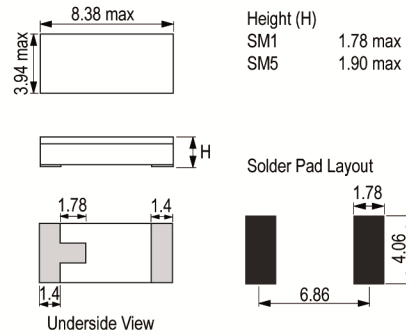
- Typical Expected Lifetime: 1000hrs @ 200°C
- Shock: 750G, 0.3ms, 1/2 sine
- Vibration: 10G rms, 20-1000Hz, random
- Storage Temperature Range: -55 to 125°C

Manufacturing Details

- Maximum Process Temperature: 260°C for 20sec



Outline (mm) -SM1 = Gold plated (RoHS)



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Ordering Information

- Minimum Required*
Frequency*
Model*
Termination*
Frequency Tolerance*
Operating Temperature Range
Load Capacitance
- Example:
1.0MHz CX1HT EXT-SM1
±1000ppm 25 to 200C FUND

Compliance

- RoHS Status (2011/65/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 and reel in accordance with
Pack Size: 1,000 EAI-481-D

Electrical Specification - maximum limiting values

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Over Tone Order	ESR
		°C	ppm		Ω
530.00kHz	2.1MHz	25 to 200		Fundamental	-

*Stability Maximum values ±0ppm

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