

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/°C<sup>2</sup>
- Note: Frequency f at temperature T is related to frequency f<sub>0</sub> at turning point temperature T<sub>0</sub> by:  $f - f_0 = k(T - T_0)^2$

**Electrical Parameters**

- Load Capacitance (CL) 7.0pF
- Shunt Capacitance (C<sub>0</sub>) 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**

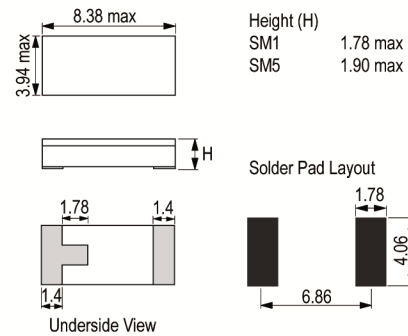
- Typical Expected Lifetime: 1000hrs @ 200°C
- Shock: 750G, 0.3ms, 1/2 sine
- Vibration: 10G rms, 20-1000Hz, random
- Storage Temperature Range: -55 to 125°C

**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

*This document was correct at the time of printing; please contact your local sales office for the latest version.  
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