

**ISSUE 2; June 2019**

**Description**

- This product is designed and manufactured by Statek Corporation in California, USA and distributed by IQD. Not recommended for new designs, please see model CXOMKHT 3.3V

An increasing number of applications require the use of high temperature oscillators. For these applications IQD offers Statek's CXOMHT oscillator. This oscillator is designed to operate at temperatures up to 225°C with high shock survivability.

- HG-SM1 SM1 high shock (Gold plated, RoHS compliant)
- HG-SM5 SM5 high shock (Solder dipped, RoHS compliant)
- SM1 SM1 std shock (Gold plated, RoHS compliant)
- SM5 SM5 std shock (Solder dipped, RoHS compliant)

- FEATURES:**
  - High temperature operation up to 225°C
  - Excellent over temperature
  - Fast start-up
  - High shock resistance
  - CMOS and TTL compatible
  - Optional output enable/disable
  - Low EMI emission
  - 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.

**Frequency Parameters**

- Frequency: 320.0kHz to 50.0MHz
- Frequency Tolerance: ±50.00ppm
- Tolerance Condition: @ 25°C
- Frequency Stability: ±100.00ppm to ±250.00ppm
- Ageing: ±5ppm max in 1st year at 25°C
- Ageing: ±100pm max @ 200°C
- Operable Temperature Range: -55 to 225°C

**Electrical Parameters**

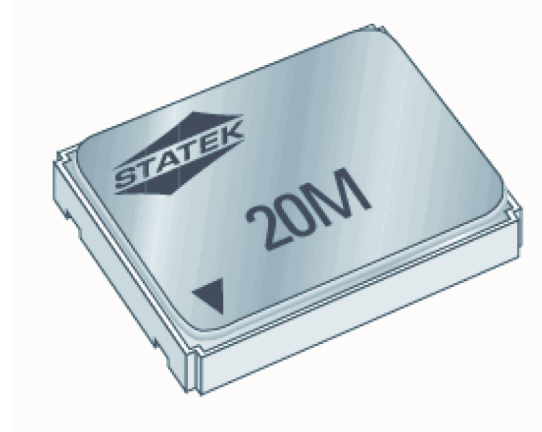
- Supply Voltage: 3.3V ±10%
- Absolute Maximum Supply Voltage: -0.5V to 7.0V

**Operating Temperature Ranges**

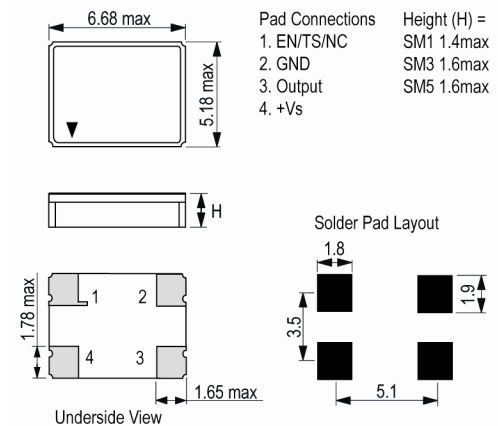
- 25 to 150°C
- 25 to 175°C
- 25 to 200°C
- 25 to 225°C

**Output Details**

- Output Compatibility: CMOS
- Drive Capability: 15pF



**Outline (mm) -SM1 = SM1 std shock (Gold plated, RoHS compliant)**



**Sales Office Contact Details:**

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#### Output Control

- Enable/Disable (EN):  
Logic 1 to pad 1, output enabled  
Logic 0 to pad 1, output disabled, output goes to high impedance state, internal oscillator stops, therefore current consumption is very low but output recovery is delayed.
- No Connection (NC): Pad 1 No Connection
- Tri State (TS):  
Logic 1 to pad 1, output enabled  
Logic 0 to pad 1, output disabled, output goes to high impedance state, internal oscillator continues to function, therefore current consumption is lower than normal but output recovery is immediate.
- Start Up Time: 5ms max

#### Environmental Parameters

- Shock:  
Standard version: 3000G, 0.3ms, 1/2 sine  
High Shock version (HG): 10000G, 0.3ms, 1/2 sine
- Vibration MIL-STD-202G, Method 204D, Condition D: 20G, 10-2000Hz swept sine
- Storage Temperature Range: -55 to 125°C

#### Manufacturing Details

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

#### Ordering Information

- Frequency\*  
Model\*  
Shock Option\*  
Termination Variant\*  
Output  
Frequency Tolerance (@ 25°C)\*  
Frequency Stability (over operating temperature range)\*  
Operating Temperature Range\*  
Supply Voltage  
Pad 1 function\*  
(\*minimum required)
- Shock Options:  
Blank = Standard Shock  
-HG = High Shock
- Termination Variants:  
SM1 = Gold Plated  
SM5 = Solder Dipped  
Note: non-RoHS compliant terminations are available - please contact an IQD Sales Office
- Pad 1 Function Options:  
EN = Enable/Disable  
NC = No Connection  
TS = Tri State
- Example:  
10.0MHz CXOMHT 3.3V SM1  
CMOS ±50ppm ±175ppm 25 to 200C 3.3V TS

#### Compliance

- RoHS Status (2015/863/EU)      Optional
- REACH Status                              Compliant
- MSL Rating (JDEC-STD-033):      Not Applicable

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**Packaging Details**

- Pack Style: Reel      Tape & reel in accordance with EIA-481-D  
Pack Size: 1,000
- Pack Style: Tray      Supplied on a tray  
Pack Size: 1

**Electrical Specification - maximum limiting values 3.3V ±10%**

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
320.0kHz	50.0MHz	25 to 225	-	6	10	40/60%
		25 to 150	-	6	10	40/60%
		25 to 175	-	6	10	40/60%
		25 to 200	-	6	10	40/60%

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