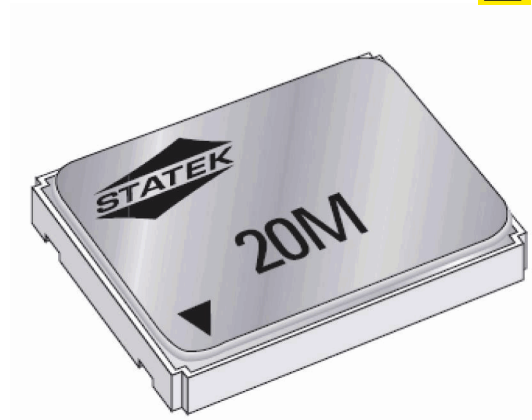


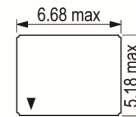
ISSUE 1; March 2016

### Description

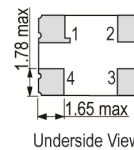
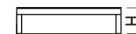
- An increasing number of applications require the use of high temperature oscillators. For these applications, IQD offers Statek's CXOMKHT oscillator. This oscillator is designed to operate at temperatures up to 200°C with high shock survivability.
- -HG-SM1 High Shock SM1 (Gold plated, RoHS compliant)
- -HG-SM5 High Shock SM5 (Solder dipped, RoHS compliant)
- -SM1 SM1 (Gold plated, RoHS compliant)
- -SM5 SM5 (Solder dipped, RoHS compliant)
- FEATURES:
  - High temperature operation up to 200°C
  - Excellent stability 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.



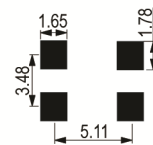
**Outline (mm) -SM1 = SM1 (Gold plated, RoHS compliant)**



Pad Connections	Height (H) =
1. EN/NC	SM1 1.52 max
2. GND	SM3 1.65 max
3. Output	SM5 1.65 max
4. +V <sub>S</sub>	



Solder Pad Layout



### Frequency Parameters

- Frequency: 200.0kHz to 70.0MHz
- Frequency Tolerance: ±50.00ppm
- Tolerance Condition: @ 25°C
- Frequency Stability: ±100.00ppm to ±200.00ppm
- Ageing: ±5ppm max in 1st year @ 25°C
- Ageing: ±100ppm max @ 200°C
- Operable Temperature Range: -55 to 200°C  
(Expected life at 200°C is in excess of 1500 hours)

### Electrical Parameters

- Supply Voltage: 5.0V ±10%
- Supply Current (typ):
  - 24MHz - 8mA
  - 32MHz - 10mA
  - 65MHz - 16mA
- Absolute Maximum Supply Voltage: -0.5V to 7.0V

### Operating Temperature Ranges

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

### Output Details

- Output Compatibility: CMOS
- Drive Capability: 15pF

### Sales Office Contact Details:

UK: +44 (0)1460 270200

France: 0800 901 383

Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)

Germany: 0800 1808 443

USA: +1.760.318.2824

Web: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)

### 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 CXOMKHT SM1  
CMOS ±50ppm ±175ppm 25 to 200C 5.0V TS

### Compliance

- |                              |                |
|------------------------------|----------------|
| ■ RoHS Status (2011/65/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 5.0V ±10%

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
200.0kHz	70.0MHz	25 to 150	±100.0	-	10	40/60
		25 to 175	±150.0	-	10	40/60
		25 to 200	±175.0	-	10	40/60

*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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