

ISSUE 1; January 2016

### Description

- An increasing number of applications require the use of high temperature oscillators. For these applications IQD offers Statek's CXOXHT oscillator. This oscillator is designed to operate at temperatures up to 200°C with high shock survivability.
- -HG-SM1 HG-SM1 (Gold plated, RoHS compliant, 10000G)
- -HG-SM5 HG-SM5 (Solder dipped, RoHS compliant, 10000G)
- -SM1 SM1 (Gold plated, RoHS compliant, 3000G)
- -SM5 SM5 (Solder dipped, RoHS compliant, 3000G)
- 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.

### Frequency Parameters

- Frequency 1.0MHz to 50.0MHz
- Frequency Tolerance ±50.00ppm
- Tolerance Condition @ 25°C
- Frequency Stability ±100.00ppm to ±200.00ppm
- Ageing ±5ppm max in 1st year @ 25°C
- Ageing: ±100pm max @ 200°C
- Operable Temperature Range: -55 to 200°C

### Electrical Parameters

- Supply Voltage 3.3V ±10%
- Supply Current (typical):
  - 3.0mA @ 24MHz
  - 5.0mA @ 32MHz
  - 6.0mA @ 50MHz
- Supply Voltage (absolute maximum rating): -0.5V to 4.0V

### Operating Temperature Ranges

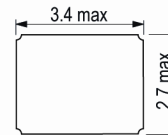
- 25 to 150°C
- 25 to 175°C
- 25 to 200°C

### Output Details

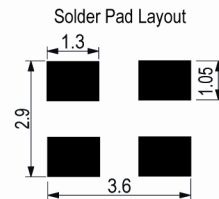
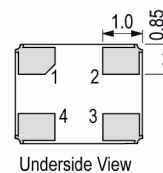
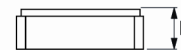
- Output Compatibility CMOS
- Drive Capability 15pF



**Outline (mm) -SM1 = SM1 (Gold plated, RoHS compliant, 3000G)**



Pad Connections	Height (H) =
1. NC/EN/TS	SM1 1.09 max
2. GND	SM3 1.21 max
3. Output	SM5 1.21 max
4. +Vs	



### Sales Office Contact Details:

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Email: [info@iqdfrequencyproducts.com](mailto:info@iqdfrequencyproducts.com)  
Web: [www.iqdfrequencyproducts.com](http://www.iqdfrequencyproducts.com)

#### Output Control

- Start Up Time: 5ms max
- Enable/Disable:  
Logic 1 to pad 1, output enabled  
Logic 0 to pad 1, output disabled, output goes to high impedance state, current consumption very low. Internal oscillator stops.
- No Connection (NC): Pad 1 No Connection
- Tri State:  
Logic 1 to pad 1, output enabled  
Logic 0 to pad 1, output disabled, output goes to high impedance state, current consumption low. Internal oscillator continues to function.

#### Environmental Parameters

- Shock (Std): 5000G, 0.3ms, 1/2 sine  
Shock (HG): 10000G, 0.3ms 1/2 sine
- Vibration: MIL-STD-202G, Method 204D, Condition D: 20G, 10-2000Hz swept sine
- Note: Random Vibration test is also available - please contact an IQD Sales Office
- Storage Temperature Range: -55 to 125°C
- Expected life at 200°C is in excess of 1500hrs

#### Manufacturing Details

- Maximum Process Temperature: 260°C max for 20sec max

#### Ordering Information

- Frequency\*
- Model\*
- Termination Variant\*
- Shock Rating\*
- Output
- Frequency Tolerance (@ 25°C)
- Frequency Stability\*
- Operating Temperature Range\*
- Pad 1 Function\*  
(\*minimum required)
- Termination Variants:  
SM1 = Gold Plated  
SM5 = Solder Dipped
- Stock Ratings:  
Standard = blank  
High Stock = HG
- Pad 1 Function Options:  
EN = Enable/Disable  
TS = Tri-State  
NC = No connection
- Example  
10.0MHz CXOXHT 3.3V-SM1  
CMOS ±50ppm ±175ppm 25 to 200C 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: Tray      Supplied on a tray  
Pack Size: 1
- Pack Style: Reel      Tape & reel in accordance with EIA-481-D  
Pack Size: 1,000

#### 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	%
1.0MHz	50.0MHz	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.*

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