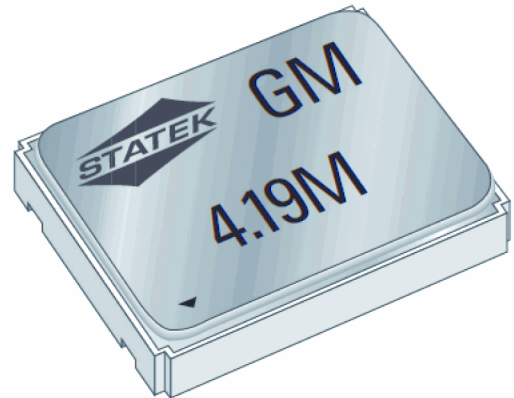


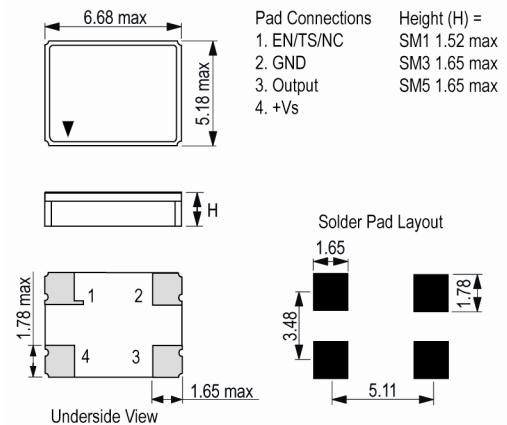
ISSUE 1; March 2016

### Description

- The surface-mount CXOMK series oscillators consist of a miniature quartz crystal and a CMOS/TTL compatible hybrid circuit in a hermetically sealed ceramic package. Manufacture by Statek utilizing the latest advancements in production technology, the CXOMK oscillator is capable of achieving tight frequency calibration tolerance and high stability over wide temperature ranges. Available either as standard or high shock (HG) variants.
- HG-SM1 High G (Gold plated, RoHS compliant)
- HG-SM5 High G ( Solder dipped, RoHS compliant )
- -SM1 (Gold plated, RoHS compliant)
- -SM5 ( Solder dipped, RoHS compliant )
- FEATURES
  - CMOS and TTL compatible
  - Optional Output Enable/Disable with Tri-State
  - High shock resistance
  - Low EMI emission
  - Full military testing available
- APPLICATIONS
  - Military & Aerospace -
    - Smart Munitions
    - Cockpit Systems
    - Navigation
  - Industrial, Computer & Communications -
    - Industrial Controls
    - Instrumentation
    - Microprocessor Clocks
  - Medical -
    - Infusion Pumps
- Please note that all data is only valid at 25°C unless otherwise stated.



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



### Frequency Parameters

- Frequency 200.0kHz to 220.0MHz
- Frequency Tolerance  $\pm 30.00$ ppm
- Tolerance Condition @ 25°C
- Frequency Stability  $\pm 15.00$ ppm to  $\pm 100.00$ ppm
- (note: Frequency Stability does not include Frequency Tolerance)
- Ageing:  $\pm 10$ ppm max in 1st year @ 25°C
- Note: Tighter frequency tolerances and stabilities are available - please contact an IQD Sales Office

### Electrical Parameters

- Supply Voltage 5.0V  $\pm 10\%$
- Supply Current (typical)
  - 4mA @ 10MHz
  - 8mA @ 24MHz
  - 10mA @ 30MHz
  - 12mA @ 40MHz
  - 14mA @ 50MHz
- Absolute Maximum Supply Voltage Range: -0.5V to 7.0V
- Note: Alternative supply voltages are available - please contact an IQD Sales Office

### Sales Office Contact Details:

UK: +44 (0)1460 270200  
 Germany: 0800 1808 443

France: 0800 901 383  
 USA: +1.760.318.2824

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

#### Operating Temperature Ranges

- -10 to 70°C
- -40 to 85°C
- -55 to 125°C

#### Output Details

- Output Compatibility CMOS
- Drive Capability 15pF
- Note: Higher loads are available - please contact an IQD Sales Office
- Start Up Time: 5ms max

#### 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 and 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 but internal oscillator continues to function, therefore current consumption is lower than normal but output recovery is immediate.

#### Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- Shock:  
Standard: 5000G, 0.3ms, 1/2 sine.  
High G: 10000G, 0.3ms, 1/2 sine.
- Vibration: MIL-STD-202G, Method 204D, Condition D: 20G, 10-2000Hz, swept sine.
- Note: Random vibration testing is also available - please contact an IQD Sales Office

#### Manufacturing Details

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

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### Ordering Information

- Frequency\*  
Model\*  
Shock Level\*  
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  
40.0MHz CXOMK SM1  
CMOS ±30ppm ±50ppm -10 to 70C 5.0V TS

### Compliance

- RoHS Status (2011/65/EU)      Compliant
- REACH Status                      Compliant
- MSL Rating (JEDEC-STD-033):    Not Applicable

### 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
- Pack Style: Bulk      Bulk pack  
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      | 220.0MHz      | -10 to 70         | ±15.0           | -            | 6                  | 40/60%     |
|               |               | -40 to 85         | ±30.0           | -            | 6                  | 40/60%     |
|               |               | -55 to 125        | ±40.0           | -            | 6                  | 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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