



CXOMKHT

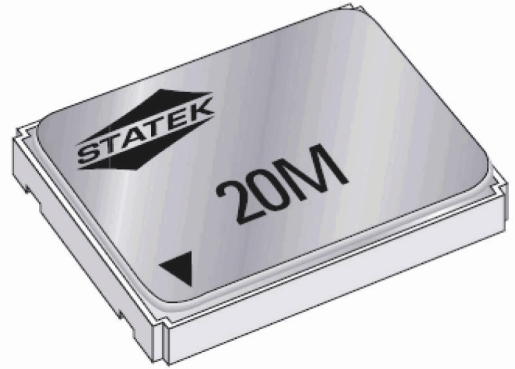
An increasing number of applications require the use of high temperature oscillators. For these applications, IQD offers Statek's CXOMKHT oscillator. This oscillator is designed to operate at temperatures up to 200°C with high shock survivability.

Model Name	Description
CXOMKHT 1.8V	A 1.8V Version
CXOMKHT 3.3V	A 3.3V Version
CXOMKHT 5.0V	A 5.0V Version

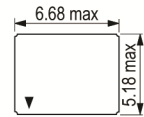
ISSUE 1; October 2018

Description

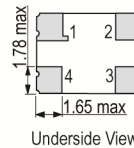
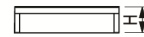
- An increasing number of applications require the use of high temperature oscillators. For these applications, IQD offers Statek's CXOMKHT oscillator. This oscillator is designed to operate at temperatures up to 200°C with high shock survivability.
- -HG-SM1 High Shock SM1 (Gold plated, RoHS compliant)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



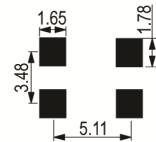
Outline (mm) -SM5 = SM5 (Solder dipped, RoHS compliant)



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 _s	



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: 1.8V ±10%
- Current Draw (typ):
 - 24MHz - 3mA
 - 32MHz - 5mA
 - 65MHz - 8mA
- 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

ISSUE 1; October 2018

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 1.8V SM1
CMOS ±50ppm ±175ppm 25 to 200C 1.8V TS

Compliance

- RoHS Status (2011/65/EU) Optional
- REACH Status Compliant
- MSL Rating (JDEC-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



ISSUE 1; October 2018

Electrical Specification - maximum limiting values 1.8V \pm 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	\pm 100.0	-	10	40/60%
		25 to 175	\pm 150.0	-	10	40/60%
		25 to 200	\pm 175.0	-	10	40/60%

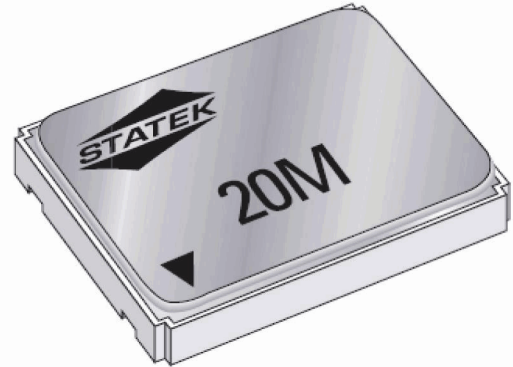
This document was correct at the time of printing; please contact your local sales office for the latest version.

[Click to view latest version on our website.](#)

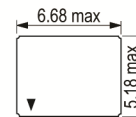
ISSUE 1; October 2018

Description

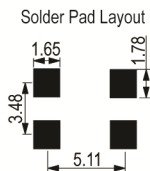
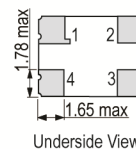
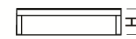
- An increasing number of applications require the use of high temperature oscillators. For these applications, IQD offers Statek's CXOMKHT oscillator. This oscillator is designed to operate at temperatures up to 200°C with high shock survivability.
- -HG-SM1 High Shock SM1 (Gold plated, RoHS compliant)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



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: 3.3V ±10%
- Supply Current (typ):
 - 24MHz - 3mA
 - 32MHz - 5mA
 - 65MHz - 8mA
- 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

ISSUE 1; October 2018

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 3.3V SM1
CMOS ±50ppm ±175ppm 25 to 200C 3.3V TS

Compliance

- RoHS Status (2011/65/EU) Optional
- REACH Status Compliant
- MSL Rating (JDEC-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



ISSUE 1; October 2018

Electrical Specification - maximum limiting values 3.3V \pm 10%

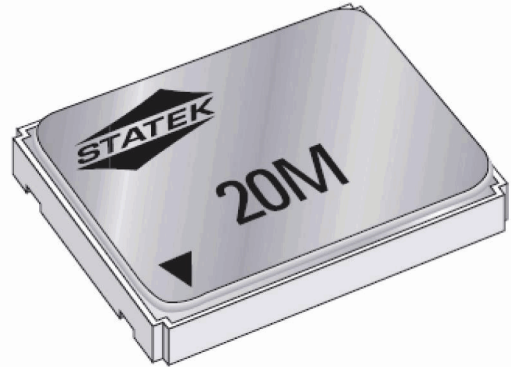
Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
200.0kHz	70.0MHz	25 to 150	\pm 100.0	-	10	40/60%
		25 to 175	\pm 150.0	-	10	40/60%
		25 to 200	\pm 175.0	-	10	40/60%

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.](#)

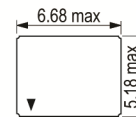
ISSUE 1; October 2018

Description

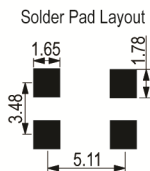
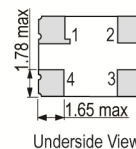
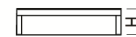
- An increasing number of applications require the use of high temperature oscillators. For these applications, IQD offers Statek's CXOMKHT oscillator. This oscillator is designed to operate at temperatures up to 200°C with high shock survivability.
- -HG-SM1 High Shock SM1 (Gold plated, RoHS compliant)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



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

ISSUE 1; October 2018

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

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

ISSUE 1; October 2018

Electrical Specification - maximum limiting values 5.0V \pm 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	\pm 100.0	-	10	40/60
		25 to 175	\pm 150.0	-	10	40/60
		25 to 200	\pm 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.](#)

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

Web: www.iqdfrequencyproducts.com