



CXOMK

CXOMK

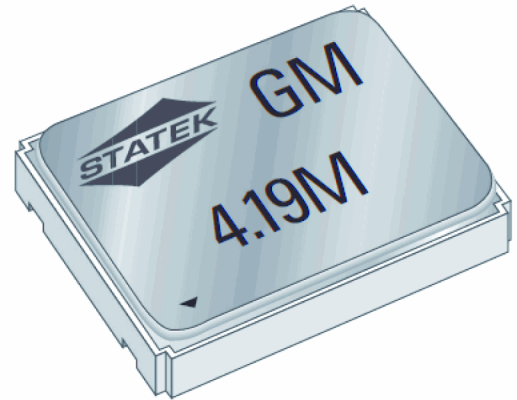
Statek's surface-mount CXOMK oscillators consist of a Statek miniature quartz crystal and a CMOS/TTL compatible hybrid circuit in a ceramic package. Utilising the latest advancements in production technology, the CXOMK oscillator is capable of achieving tight frequency calibration tolerance and high stability over wide

Model Name	Description
CXOMK 1.8V	A 1.8V Version
CXOMK 2.5V	A 2.5V Version
CXOMK 3.0V	A 3.0V Version
CXOMK 3.3V	A 3.3V Version
CXOMK 5.0V	A 5.0V Version

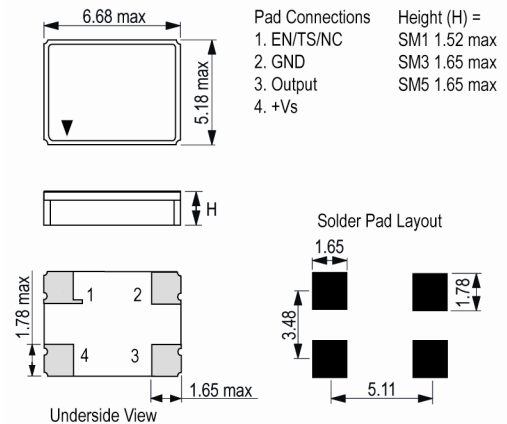
ISSUE 1; June 2019

Description

- This product is designed and manufactured by Statek Corporation in California, USA and distributed by IQD. Statek's surface-mount CXOMK oscillators consist of a Statek miniature quartz crystal and a CMOS/TTL compatible hybrid circuit in a ceramic package. Utilising the latest advancements in production technology, the CXOMK oscillator is capable of achieving tight frequency calibration tolerance and high stability over wide temperature ranges.
- 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
 - Low EMI emission
 - High shock resistance
 - Hermetically sealed ceramic package
- APPLICATIONS
 - Aerospace
 - Cockpit Systems
 - Navigation
 - Industrial, Computer & Communications
 - Industrial Controls
 - Instrumentation
 - Microprocessor Clocks
 - Medical
- 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 ± 30.00 ppm
- Tolerance Condition @ 25°C
- Frequency Stability ± 15.00 ppm to ± 100.00 ppm
- Ageing ± 10 ppm max in 1st year @ 25°C

Electrical Parameters

- Supply Voltage 1.8V $\pm 10\%$
- Supply Voltage (absolute max rating): -0.5V to 4.0V
- Current consumption (typ @ 166MHz):
 - 15mA @ 2.7V
 - 18mA @ 3.0V
 - 20mA @ 3.3V
- Start-up Time: 5ms max

Operating Temperature Ranges

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

Output Details

- Output Compatibility CMOS
- Drive Capability 15pF

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Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- Shock:
 - Std: 5000G, 0.3ms, 1/2 sine
 - HG: 10000G, 0.3ms, 1/2 sine
- Vibration: MIL-STD-202G, Method 204D, Condition D: 20G, 10-2000Hz, swept sine
 - Note: Random vibration testing also available, please contact our sales offices

Manufacturing Details

- Maximum process temperature: 260°C for 20 seconds

Ordering Information

- Frequency*
- Model*
- Termination Variant*
- Output Compatibility*
- Frequency Tolerance (@ 25°C)*
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Supply Voltage
- Pad 1 Function*
- (*minimum required)
- Example
40.0MHz CXOMK SM1
CMOS ±30ppm ±50ppm -10 to 70C 1.8V TS

Compliance

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

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 1.8V ±10%

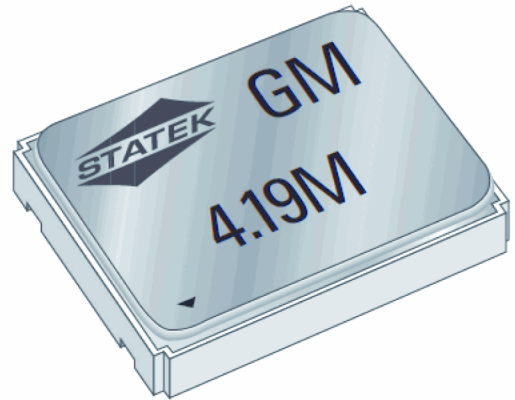
Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
200.0kHz	220.0MHz	-10 to 70	±15.0	-	6	40/60%
		-40 to 85	±30.0	-	6	40/60%
		-55 to 125	±40.0	-	6	40/60%

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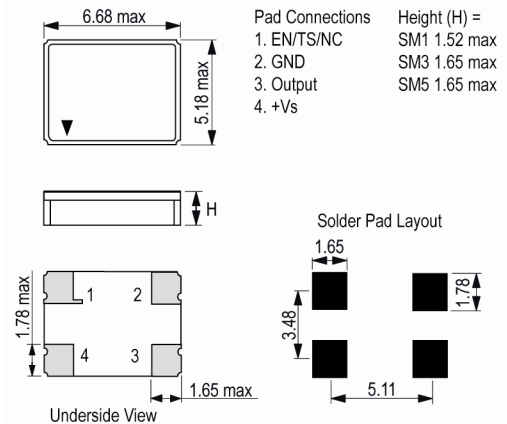
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Description

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- 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
 - Low EMI emission
 - High shock resistance
 - Hermetically sealed ceramic package
- APPLICATIONS
 - Aerospace
 - Cockpit Systems
 - Navigation
 - Industrial, Computer & Communications
 - Industrial Controls
 - Instrumentation
 - Microprocessor Clocks
- 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 $\pm 30.00\text{ppm}$
- Tolerance Condition @ 25°C
- Frequency Stability $\pm 15.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Ageing $\pm 10\text{ppm}$ max in 1st year @ 25°C

Electrical Parameters

- Supply Voltage 2.5V $\pm 10\%$
- Supply Voltage (absolute max rating): -0.5V to 4.0V
- Current consumption (typ @ 166MHz):
 - 15mA @ 2.7V
 - 18mA @ 3.0V
 - 20mA @ 3.3V
- Start-up Time: 5ms max

Operating Temperature Ranges

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

Output Details

- Output Compatibility CMOS
- Drive Capability 15pF

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Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- Shock:
 - Std: 5000G, 0.3ms, 1/2 sine
 - HG: 10000G, 0.3ms, 1/2 sine
- Vibration: MIL-STD-202G, Method 204D, Condition D: 20G, 10-2000Hz, swept sine
 - Note: Random vibration testing also available, please contact our sales offices

Manufacturing Details

- Maximum process temperature: 260°C for 20 seconds

Ordering Information

- Frequency*
 - Model*
 - Termination Variant*
 - Output Compatibility*
 - Frequency Tolerance (@ 25°C)*
 - Frequency Stability (over operating temperature range)*
 - Operating Temperature Range*
 - Supply Voltage
 - Pad 1 Function*
 - (*minimum required)
- Example
 - 40.0MHz CXOMK SM1
 - CMOS ±30ppm ±50ppm -10 to 70C 2.5V TS

Compliance

- RoHS Status (2015/863/EU) Compliant
- 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

Electrical Specification - maximum limiting values 2.5V ±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%

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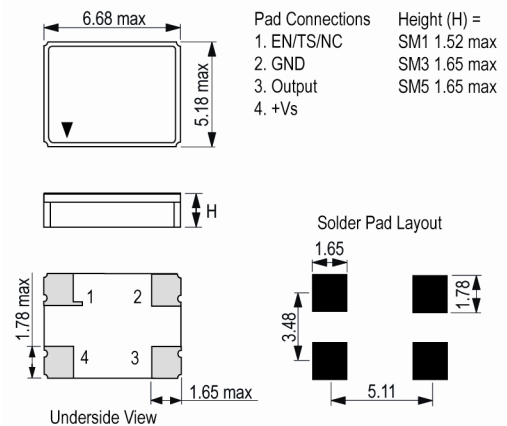
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Description

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- 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
 - Low EMI emission
 - High shock resistance
 - Hermetically sealed ceramic package
- APPLICATIONS
 - Aerospace
 - 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 ±30.00ppm
- Tolerance Condition @ 25°C
- Frequency Stability ±15.00ppm to ±100.00ppm
- Ageing ±10ppm max in 1st year @ 25°C

Electrical Parameters

- Supply Voltage 3.0V ±10%
- Supply Voltage (absolute max rating): -0.5V to 7.0V
- Current consumption (typ @ 166MHz):
 - 15mA @ 2.7V
 - 18mA @ 3.0V
 - 20mA @ 3.3V
- Start-up Time: 5ms max

Operating Temperature Ranges

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

Output Details

- Output Compatibility CMOS
- Drive Capability 15pF

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Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- Shock:
 - Std: 5000G, 0.3ms, 1/2 sine
 - HG: 10000G, 0.3ms, 1/2 sine
- Vibration: MIL-STD-202G, Method 204D, Condition D: 20G, 10-2000Hz, swept sine
 - Note: Random vibration testing also available, please contact our sales offices

Manufacturing Details

- Maximum process temperature: 260°C for 20 seconds

Ordering Information

- Frequency*
- Model*
- Termination Variant*
- Output Compatibility*
- Frequency Tolerance (@ 25°C)*
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Supply Voltage
- Pad 1 Function*
- (*minimum required)
- Example
40.0MHz CXOMK SM1
CMOS ±30ppm ±50ppm -10 to 70C 3.0V TS

Compliance

- RoHS Status (2015/863/EU) Compliant
- 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

Electrical Specification - maximum limiting values 3.0V ±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%

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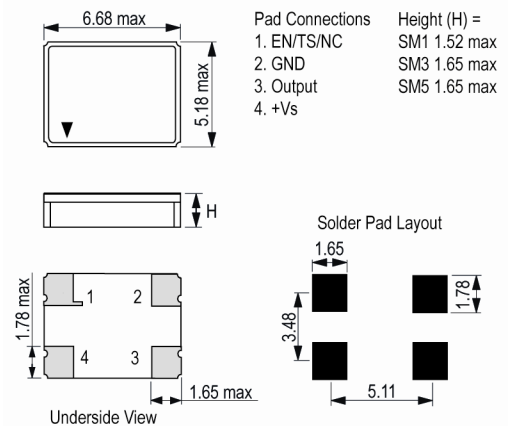
Description



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- 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
 - Low EMI emission
 - High shock resistance
 - Hermetically sealed ceramic package
- APPLICATIONS
 - Aerospace
 - Cockpit Systems
 - Navigation
 - Industrial, Computer & Communications
 - Industrial Controls
 - Instrumentation
 - Microprocessor Clocks
- 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: ±30.00ppm
- Tolerance Condition: @ 25°C
- Frequency Stability: ±15.00ppm to ±100.00ppm
- Ageing: ±10ppm max in 1st year @ 25°C

Electrical Parameters

- Supply Voltage: 3.3V ±10%
- Supply Voltage (absolute max rating): -0.5V to 7.0V
- Supply Current (typical)
 - 2mA @ 10 MHz
 - 4mA @ 24 MHz
 - 6mA @ 30 MHz
 - 8mA @ 40 MHz
 - 10mA @ 50MHz
- Start-up Time: 5ms max

Operating Temperature Ranges

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

Output Details

- Output Compatibility: CMOS
- Drive Capability: 15pF

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Environmental Parameters

- Storage Temperature Range: -55 to 125°C
- Shock:
 - Std: 5000G, 0.3ms, 1/2 sine
 - HG: 10000G, 0.3ms, 1/2 sine
- Vibration: MIL-STD-202G, Method 204D, Condition D: 20G, 10-2000Hz, swept sine
 - Note: Random vibration testing also available, please contact our sales offices

Manufacturing Details

- Maximum process temperature: 260°C for 20 seconds

Ordering Information

- Frequency*
- Model*
- Termination Variant*
- Output Compatibility*
- Frequency Tolerance (@ 25°C)*
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Supply Voltage
- Pad 1 Function*
- (*minimum required)
- Example
40.0MHz CXOMK SM1
CMOS ±30ppm ±50ppm -10 to 70C 3.3V TS

Compliance

- RoHS Status (2015/863/EU) Compliant
- 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

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	%
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%

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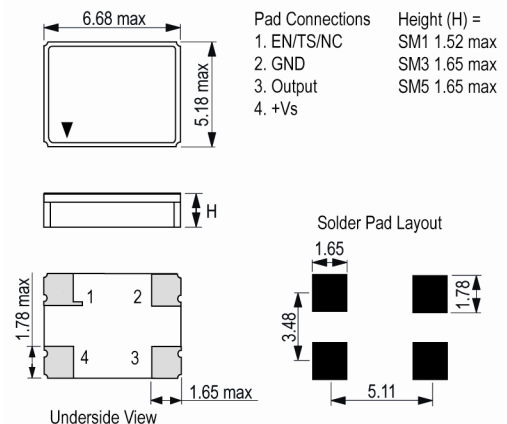
ISSUE 1; July 2021

Description

- This product is designed and manufactured by Statek Corporation in California, USA and distributed by IQD. 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
- APPLICATIONS
 - Aerospace -
 - Cockpit Systems
 - Navigation
 - Industrial, Computer & Communications -
 - Industrial Controls
 - Instrumentation
 - Microprocessor Clocks
- 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 ± 30.00 ppm
- Tolerance Condition @ 25°C
- Frequency Stability ± 15.00 ppm to ± 100.00 ppm
- (note: Frequency Stability does not include Frequency Tolerance)
- Ageing: ± 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

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

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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 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)

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

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

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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	220.0MHz	-10 to 70	\pm 15.0	-	6	40/60%
		-40 to 85	\pm 30.0	-	6	40/60%
		-55 to 125	\pm 40.0	-	6	40/60%

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