



SELECTION GUIDE

The widest choice of quartz crystals, oscillators and sensors

Visit our website www.statek.com

THE COMPANY

In 1970, Statek Corporation was the first to use semiconductor technology such as photolithography, chemical etching and micromachining to manufacture quartz resonators in wafer form. Today, Statek remains at the forefront of innovation in the design, development and manufacturing of highly reliable, ultra-miniature quartz-based frequency control products.

Innovative in-house design, production and testing capabilities make possible not only rapid new product development and validation, but also continuous improvement of key product features such as low acceleration sensitivity, high shock, tight calibration tolerance, low aging, radiation resistance, and highly stable frequencies at increasingly higher operating temperatures.

KEY ATTRIBUTES

- Ultra miniature products
- Highest shock survivability in the industry
- High stability and precision
- Proven reliability
- Excellent long-term aging
- Full military testing
- Widest selection of packaging options
- Prompt specialized technical support
- Full lot traceability
- Designed and manufactured in the USA



EXAMPLES OF APPLICATIONS

Medical

- Cardiac rhythm management
- Neurostimulators
- RF telemetry
- Infusion pumps
- Cochlear implants
- Orthopedic implants
- Retinal implants
- Glaucoma implants
- Patient monitoring equipment

Defense and Aerospace

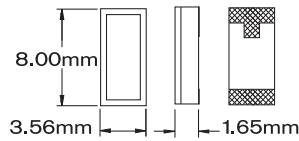
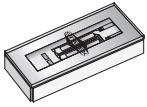
- Smart munitions
- High shock embedded electronics
- Guidance and navigation
- Communications
- Sensors (IMU)
- Avionics
- Military medical devices
- Space / Satellites
- Unmanned Aerial Vehicles (UAV)

Industrial

- Oil and gas exploration
- Directional drilling
- Ruggedized wireless communications
- Force, temperature, pressure sensors
- Inventory control
- Transport safety
- Public transport electronics
- In-flight entertainment systems
- Aircraft engines

SURFACE MOUNT CRYSTALS – 10 kHz to 250 MHz

CX1



HG = HIGH SHOCK, HT = HIGH TEMPERATURE, SW = SWEEPED QUARTZ

Frequency Range

Reference Data Sheets

10 kHz to 600 kHz
(Tuning Fork)

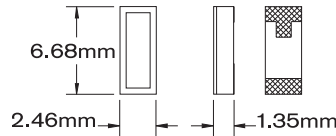
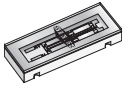
10121 CX1VSM TF
10122 CX1HSM TF
10183 CX1VHT
10129 CX1SM EXT
10185 CX1HT EXT

530 kHz to 2.1 MHz
(Extensional)

6 MHz to 250 MHz
(AT Fundamental)

10107 CX1SM AT
10108 CX1HGSM AT
10184 CX1HT AT
10199 SWCX1SM AT

CX3



HG = HIGH SHOCK

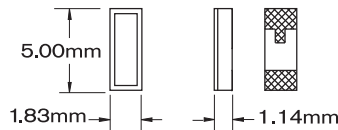
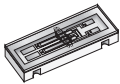
18 kHz to 600 kHz
(Tuning Fork)
800 kHz to 1.35 MHz
(Extensional)

10104 CX3VSM TF
10146 CX3HSM TF
10123 CX3SM EXT

9.6 MHz to 250 MHz
(AT Fundamental)

10120 CX3SM AT
10182 CX3HGSM AT

CX4



HG = HIGH SHOCK, HT = HIGH TEMPERATURE
HIGHEST SHOCK SURVIVABILITY

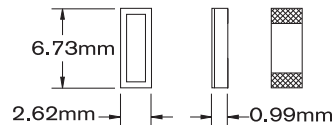
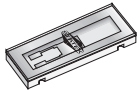
30 kHz to 250 kHz
(Tuning Fork)
600 kHz to 2.5 MHz
(Extensional)

10103 CX4VSM TF
10183 CX4VHT TF
10161 CX4 EXT
10185 CX4HT EXT

14 MHz to 250 MHz
(AT Fundamental)
14 MHz to 50 MHz
(High Shock)

10150 CX4SM AT
10184 CX4HT AT
10165 CX4HGSM AT

CX6



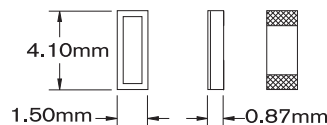
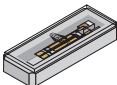
18 kHz to 600 kHz
(Tuning Fork)
800 kHz to 1.35 MHz
(Extensional)

10132 CX6VSM TF
10133 CX6SM EXT

9.6 MHz to 250 MHz
(AT Fundamental)

10117 CX6SM AT

CX9



HT = HIGH TEMPERATURE

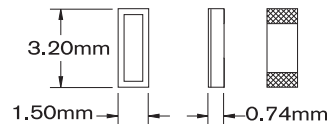
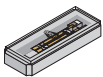
32 kHz to 250 kHz
(Tuning Fork)
32 kHz to 160 kHz
(Tuning Fork / High Temp)

10157 CX9VSM TF
10183 CX9VHT TF

13.5 MHz to 250 MHz
(AT Fundamental)

10158 CX9SM AT
10187 CX9 Telemetry

CX11/CX11L/CX11LHG



L = Low-Profile Package Version, 0.51mm typical height
HG = HIGH SHOCK

32 kHz to 180 kHz
(Tuning Fork)

10174 CX11SM TF

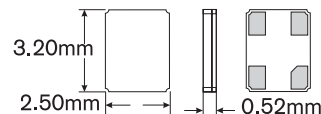
16 MHz to 250 MHz
(AT Fundamental)

10179 CX11SM AT
10188 CX11L Telemetry

16 MHz to 50 MHz
(AT Fundamental /
High Shock)

10193 CX11LHG


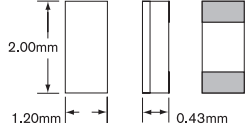
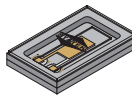
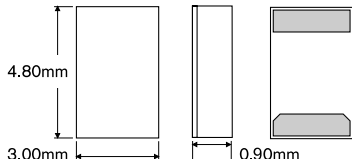

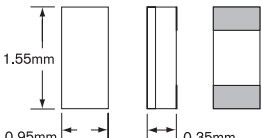
CX14



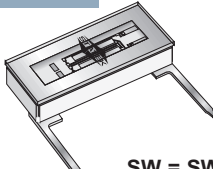
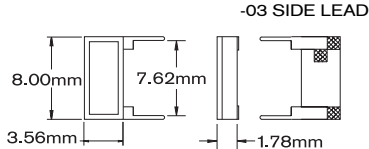
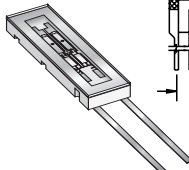
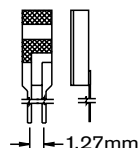
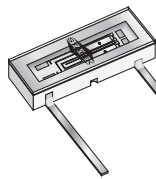
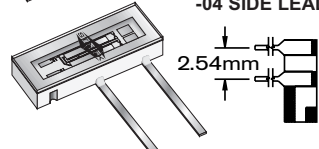

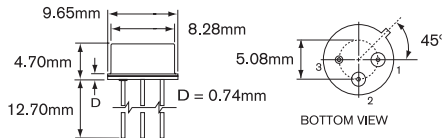
12 MHz to 50 MHz
(AT Fundamental)

10173 CX14SM AT

SURFACE MOUNT CRYSTALS – 10 kHz to 250 MHz (continued)

CX16  2.0 x 1.2 mm 	Frequency Range 24 MHz to 50 MHz (AT Fundamental)	Reference Data Sheets 10200 CX16SM AT
CX17  High Pullability for VCTCXO Applications 	Frequency Range 12 MHz to 200 MHz (AT Fundamental)	Reference Data Sheets 10206 CX17SM AT
CX18  1.55 x 0.95 mm Actual Size ■ 	Frequency Range 30 MHz to 50 MHz (AT Fundamental)	Reference Data Sheets 10207 CX18SM AT

THRU-HOLE CRYSTALS – 10 kHz to 250 MHz

CX1  SW = SWEPT QUARTZ 	Frequency Range 10 kHz to 600 kHz (Tuning Fork) 530 kHz to 2.1 MHz (Extensional) 6 MHz to 250 MHz (AT Fundamental)	Reference Data Sheets 10101 CX1V TF 10102 CX1H TF 10130 CX1 EXT 10127 CX1 AT 10202 CX1HT-06 10199 SWCX1 AT
CX2  -02 END LEAD  -03 SIDE LEAD  -04 SIDE LEAD  HT = HIGH TEMPERATURE	Frequency Range 16 kHz to 600 kHz (Tuning Fork) 760 kHz to 1.35 MHz (Extensional) 9.6 MHz to 250 MHz (AT Fundamental)	Reference Data Sheets 10138 CX2V TF 10139 CX2 EXT 10140 CX2 AT 10202 CX2HT-06 10202 CX2HT-07
SX1   HT = HIGH TEMPERATURE (up to +260°C)	Frequency Range 30 kHz to 250 MHz	Reference Data Sheets 10194 SX1HT

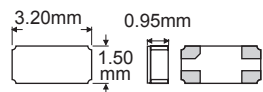
ORDERING OPTIONS FOR STATEK QUARTZ CRYSTALS

e.g. CX11 Model	S S=Special or custom design. Blank if std.	C C=Ceramic Lid Blank=Glass Lid	SM1 - 32.0M, Frequency K=kHz M=MHz	50 Calibration Tolerance @ 25°C (in ppm)	50 Frequency Stability Over Temp. Range (in ppm)	- Total Frequency Stability over Temp. Range (in ppm)	I Temp. Range: C = -10°C to +70°C I = -40°C to +85°C M = -55°C to +125°C S = Specify
Designate "H" for Series, "V" for Pierce: 10 kHz to 600 kHz Tuning Fork design only. Leave blank for standard AT cut designs. NOTE: For specific ordering requirements, call us at 714-639-7810. Please refer to the model data sheet for detail of all available parameters / options.		Terminations SM1 = Gold Plated (Pb Free) SM2 = Solder Plated SM3 = Solder Dipped SM4 = Solder Plated (Pb Free) SM5 = Solder Dipped (Pb Free)		Or - / - / 100 / I		Total Frequency Stability over Temp. Range (in ppm)	

10100 - Rev L

SURFACE MOUNT OSCILLATORS **30 kHz to 300 MHz**

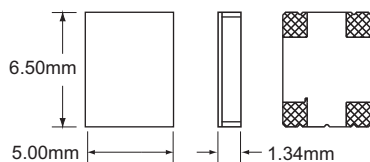
CXOL



Model	Package Configuration	Features	Frequency Range	Reference Data Sheets
CXOL	4-pad Ceramic SMD	1.2V to 5.0V operation CMOS/TTL compatible Enable/Tri-state output	32 kHz to 100 kHz	10205
Fast Start-up			32.768 kHz	10217

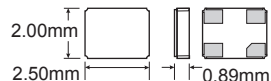
ULTRA-LOW CURRENT

CXOMK



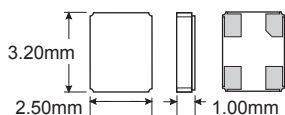
CXOMK CXOMKHG High Shock	4-pad Ceramic SMD	0.9V to 5V operation CMOS/TTL compatible Enable/Tri-state output	200 kHz to 200 MHz	10210
CXOMKHT High Temp	4-pad Ceramic SMD	3.3V or 5V operation CMOS/TTL compatible Enable/Tri-state output	200 kHz to 50 MHz	10180
CXOMKHT High Temp Fast Start-up	4-pad Ceramic SMD	3.3V operation CMOS/TTL compatible Enable/Tri-state output	32.768 kHz	10201

CXOQ



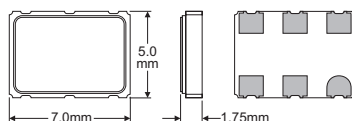
CXOQ/ CXOQHG High Shock	4-pad Ceramic SMD	1.8V to 3.3V operation CMOS/TTL compatible Enable/Tri-state output	400 kHz to 100 MHz	10190
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CXOX



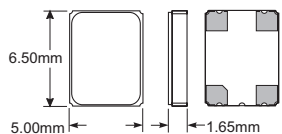
CXOX/ CXOXHG High Shock	4-pad Ceramic SMD	1.8V to 5V operation CMOS/TTL compatible Enable/Tri-state output	1 MHz to 160 MHz	10168
CXOXHT High Temp	4-pad Ceramic SMD	3.3V or 5V operation CMOS/TTL compatible Enable output	1 MHz to 50 MHz	10180
Fast Start Up			32.768 kHz	10201
CXOXULP		Ultra-Low Power		10216

DFXO



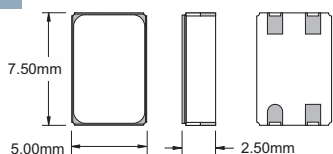
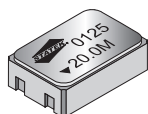
DFXO Differential Output Low Jitter	6-pad Ceramic SMD	2.5V to 3.3V operation LVPECL, LVDS, CMOS outputs available Low phase noise Low phase jitter High frequency	20 MHz to 300 MHz	10196
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HFXO



HFXO High Precision High Shock	4-pad Ceramic SMD	0.9V to 5V operation CMOS/TTL compatible hybrid circuit Shock survivability of 75,000 g Tight frequency tolerance	220 kHz to 100 MHz	10189
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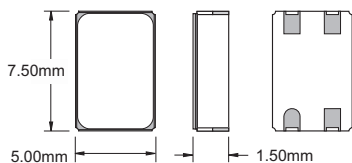
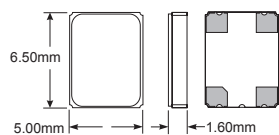
HGXO



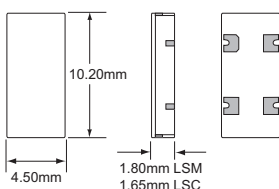
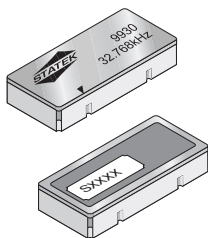
HGXO High Shock	4-pad Ceramic SMD	1.8V to 5V operation CMOS/TTL compatible Extreme high shock survivability up to 100,000 g. Highest accuracy and stability	460 kHz to 50 MHz	10156
HGXOHT High Temp				10208 (3.3V and 5.0V)
Fast Start Up and High Temp			32.768 kHz	10209

HIGHEST SHOCK SURVIVABILITY

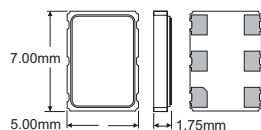
HTXO

LFXO

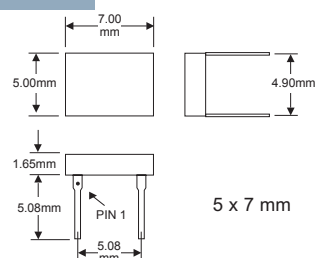
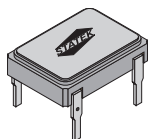
LSM/LSC



VCXO



LHGAT/LHTAT



ORDERING OPTIONS FOR STATEK QUARTZ CRYSTAL OSCILLATORS

NOTE:

For specific ordering requirements, call us at 714-639-7810. Please refer to the model data sheet for detail of all available parameters and options.

10100 - Rev L

TEMPERATURE SENSORS - 160 kHz to 350 kHz

	Frequency Range	Reference Data Sheets
TS1 See CX1 surface mount and leaded package configurations for typical dimensions.	160 kHz to 350 kHz (Tuning Fork)	10162
TS2 See CX2 surface mount and leaded package configurations for typical dimensions.	160 kHz to 350 kHz (Tuning Fork)	10162

LEGACY OSCILLATORS

Statek provides full support for its legacy oscillators. Please contact us.



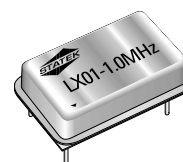
3 Pin / 6 Pin
TO-39 / TO-5



24 Pad LCC
Leadless Chip Carrier



4 Pin
Half DIP



4 Pin
Full DIP

TCXO/OCXO

PLEASE CONTACT OUR SISTER COMPANY: GREENRAY INDUSTRIES, TEL: 717-766-0223
FAX: 717-790-9509 / WEBSITE: WWW.GREENRAYINDUSTRIES.COM



Statek Corporation
Orange, California



Greenray Industries
Mechanicsburg, Pennsylvania

Statek Corporation maintains synergetic relationships with sister companies Greenray Industries (www.greenrayindustries.com) and Advanced Technical Ceramics Company (www.adtechceramics.com), both leaders in their respective industries. Our alliance helps us to best serve our customers with leading-edge innovation and world-class manufacturing, all from a single source.



Advanced Technical Ceramics Company
Chattanooga, Tennessee