



## The Widest Selection of Quartz Crystals, Oscillators and Sensors

### THE COMPANY

For more than 35 years, Statek Corporation has been the acknowledged leader in the design, development and manufacturing of highly reliable, micro-machined, **ultra-miniature quartz products**. Our in-house technological capability enables us to reduce **"Production"** and **"New Product Development"** cycle times, and to scale up new and custom products quickly. Our R&D engineers continue to develop new products and customized solutions to meet the specialized needs of our customers, such as **low acceleration sensitivity, high-shock, tight tolerance, low aging, radiation resistance** and **extended temperatures**. We welcome new application challenges and are committed to maintaining our leadership in the quartz devices industry.



Visit our website [www.statek.com](http://www.statek.com)

### APPLICATIONS

- Cardiac Pacemakers/Defibrillators
- Computer/Computer Peripherals
- Down Hole Instrumentation
- Industrial Instrumentation
- Medical Equipment
- Military Devices
- Transponder/Animal Migration
- Wireless/Portable Telecommunications

### KEY FEATURES

- Ultra Miniature Products
- Designed and Manufactured in the USA
- Excellent Long-Term Aging
- Extreme High Shock Survivability
- Full Military Testing
- High Stability and Precision
- Low Power Consumption
- Proven Reliability

10100 - Rev G



## STATEK PRODUCTS

The products designed, developed and manufactured by Statek include a complete range of **"Surface Mount"** and **"Thru-hole"** quartz crystals, crystal oscillators and quartz sensors. These rugged, highly reliable, ultra-miniature quartz products are custom laser-tuned to frequencies ranging from **1 Hz to 250 MHz**. Statek's products are ideally suited for **Medical, Military, Industrial, Telecommunications** and **Computer** applications.



## TECHNOLOGICAL CAPABILITY

Statek developed the **micro-machining process** for ultra-miniature quartz crystals using **photolithographic chemical milling**. High-precision **laser frequency adjustment** and **hermetically sealed ceramic packaging** contribute to Statek's proven quality and reliability. Low power consumption, tight calibration and high frequency/temperature stability are some of the features that make Statek's products the preferred choice of engineers worldwide.

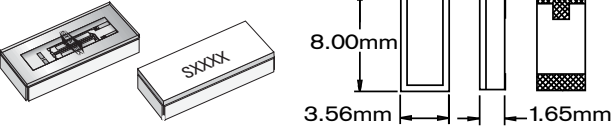
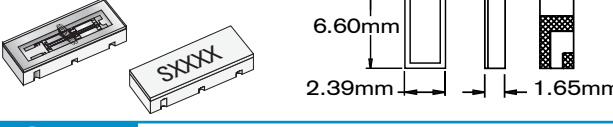
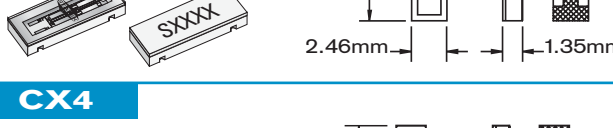

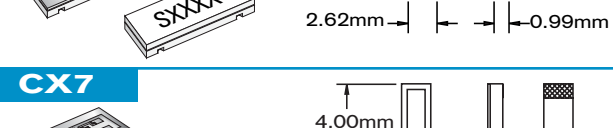
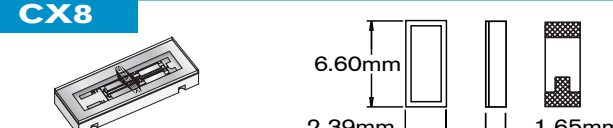
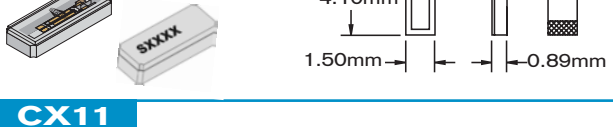

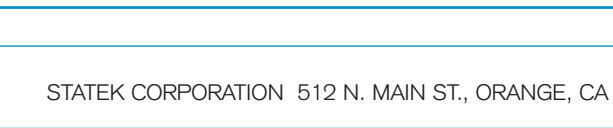

## ADVANCED TECHNOLOGY

The frequency management market constantly demands **higher fundamental frequency products**, smaller physical size and increased ruggedness. Statek's R&D constantly pioneers new products that meet these ongoing challenges.



10100 - Rev G

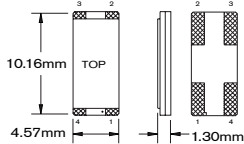
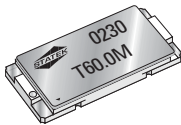
**SURFACE MOUNT CRYSTAL  
SELECTION GUIDE – 10 kHz to 250 MHz**

	Available Terminations	Frequency Range (Quartz Design)	Reference Data Sheets
<p><b>CX1</b></p>  <p>8.00mm 3.56mm 1.65mm</p> <p>NOTE: HIGH SHOCK (HG) VERSION AVAILABLE</p>	SM1 SM2 SM3 SM4 SM5	10 kHz to 600 kHz (Tuning Fork) 530 kHz to 2.1 MHz (Extensional) 8 MHz to 250 MHz (AT Fundamental*)	10121 CX1VSM TF 10122 CX1HSM TF 10129 CX1SM EXT 10107 CX1SM AT 10108 CX1HGSM AT
<p><b>CX2</b></p>  <p>6.60mm 2.39mm 1.65mm</p>	SM1 SM2 SM3 SM4 SM5	16 kHz to 600 kHz (Tuning Fork) 760 kHz to 1.35 MHz (Extensional) 9.6 MHz to 250 MHz (AT Fundamental*)	10134 CX2VSM TF 10137 CX2HSM TF 10135 CX2SM EXT 10136 CX2SM AT
<p><b>CX3</b></p>  <p>6.68mm 2.46mm 1.35mm</p>	SM1 SM2 SM3 SM4 SM5	18 kHz to 600 kHz (Tuning Fork) 800 kHz to 1.35 MHz (Extensional) 9.6 MHz to 250 MHz (AT Fundamental*)	10104 CX3VSM TF 10146 CX3HSM TF 10123 CX3SM EXT 10120 CX3SM AT
<p><b>CX4</b></p>  <p>5.00mm 1.83mm 1.14mm</p> <p>NOTE: HIGH SHOCK (HG) VERSION AVAILABLE</p>	SM1 SM2 SM3 SM4 SM5	30 kHz to 250 kHz (Tuning Fork) 600 kHz to 2.5 MHz (Extensional) 14 MHz to 250 MHz (AT Fundamental) 14 MHz to 50 MHz (High Shock)	10103 CX4VSM TF 10161 CX4 EXT 10150 CX4SM AT 10165 CX4HGSM AT
<p><b>CX6</b></p>  <p>6.73mm 2.62mm 0.99mm</p>	SM1 SM2 SM3 SM4 SM5	18 kHz to 600 kHz (Tuning Fork) 800 kHz to 1.35 MHz (Extensional) 9.6 MHz to 250 MHz (AT Fundamental*)	10132 CX6VSM TF 10133 CX6SM EXT 10117 CX6SM AT
<p><b>CX7</b></p>  <p>4.00mm 1.83mm 1.14mm</p>	SM1 SM2 SM3 SM4 SM5	80 kHz to 160 kHz (Tuning Fork) 14 MHz to 250 MHz (AT Fundamental)	10152 CX7VSM TF 10155 CX7SM AT
<p><b>CX8</b></p>  <p>6.60mm 2.39mm 1.65mm</p>	SM1 SM2 SM3 SM4 SM5	150 kHz to 205 kHz (Tuning Fork) 1 MHz to 1.35 MHz (Extensional)	Contact Factory
<p><b>CX9</b></p>  <p>4.10mm 1.50mm 0.89mm</p>	SM1 SM2 SM3 SM4 SM5	32 kHz to 160 kHz (Tuning Fork) 14 MHz to 250 MHz (AT Fundamental)	10157 CX9VSM TF 10158 CX9SM AT
<p><b>CX11</b></p>  <p>3.20mm 1.50mm 0.87mm</p>	SM1 SM2 SM3 SM4 SM5	100 kHz to 180 kHz (Tuning Fork)	Contact Factory
<p><b>CX14</b></p>  <p>3.20mm 2.50mm 0.60mm</p>	SM1 SM2 SM3 SM4 SM5	12 MHz to 50 MHz (AT Fundamental)	Contact Factory



**SURFACE MOUNT OSCILLATOR  
SELECTION GUIDE - 1 Hz to 170 MHz**

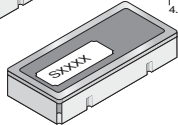
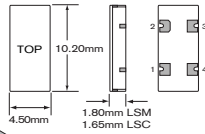
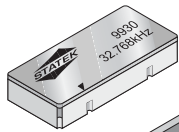
**CXO**



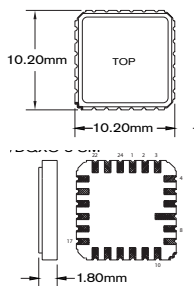
Model	Package Configuration	Features	Frequency Range	Reference Data Sheet
CXO	4-pad Ceramic SMD	3.3V or 5V operation CMOS/TTL compatible Enable/Tri-state output	300 kHz to 170 MHz	10106
CXOM CXOMHG	4-pad Ceramic SMD	5V operation CMOS/TTL compatible Enable/Tri-state output	300 kHz to 120 MHz	10116 10160
CXO3M CXO3MHG	4-pad Ceramic SMD	3.3V operation CMOS/TTL compatible Enable/Tri-state output	32.768 kHz, 300 kHz to 170 MHz	10126 10172
LSM/LSC	4-pad Ceramic SMD	3.3V or 5V operation CMOS compatible Tri-state output (optional) Lowest current Highest accuracy & stability	30 kHz to 250 kHz  700 kHz to 2.1 MHz	10151  10154
LSC	4-pad Ceramic SMD	3.3V or 5V operation CMOS compatible Tri-state output (optional) Lowest current	32.768 kHz	10153
SQXO2SM/DQXO3SM	24-pad LCC	5V operation CMOS/TTL compatible	10 kHz to 2 MHz	10143
SQXO2ATSM	24-pad LCC	3.3V or 5V operation CMOS/TTL compatible High frequency (AT)	300 kHz to 120 MHz	10158
DQXO3SM	24-pad LCC	3.3V or 5V operation CMOS/TTL compatible Low frequency	1 Hz to 10 kHz	10144
HGXO	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
CXOX	4-pad Ceramic SMD	1.8V to 5V operation CMOS/TTL compatible Enable/Tri-state output	1 MHz to 160 MHz	10168

NOTE: HIGH SHOCK (HG) VERSION AVAILABLE

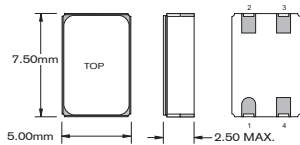
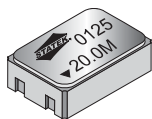
**LSM/LSC**



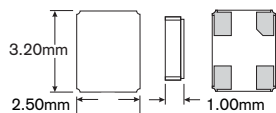
**SQXO2SM/DQXO3SM**



**HGXO**



**CXOX**



**PACKAGING OPTIONS FOR SHIPMENTS OF SURFACE MOUNT CRYSTALS, OSCILLATORS AND SENSORS**

Tray Pack  
Tape and Reel\*

\* Please contact factory for specific "Tape and Reel" packaging information

**PACKAGING OPTIONS FOR SHIPMENTS OF THRU-HOLE CRYSTALS, OSCILLATORS AND SENSORS**

**SURFACE MOUNT (SM) PACKAGE TERMINATION GUIDE**

Designation	Termination	Maximum Process Temperature
SM1	Gold Plated	260°C for 20 sec.
SM2	Solder Plated	260°C for 20 sec.
SM3	Solder Dipped	260°C for 20 sec.
SM4	Solder Plated (Lead Free)	260°C for 20 sec.
SM5	Solder Dipped (Lead Free)	260°C for 20 sec.

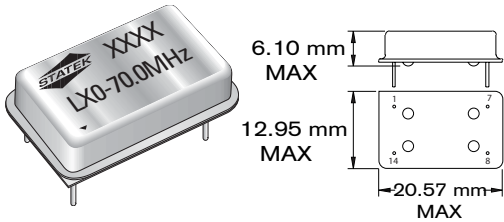
All orders = Tray Pack or Tube

10100 - Rev G



**THRU-HOLE OSCILLATOR  
SELECTION GUIDE – 1 Hz to 120 MHz**

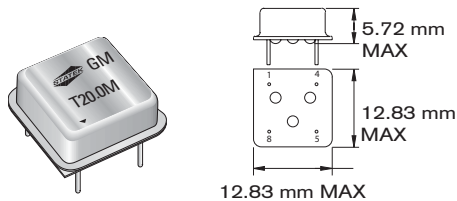
**LXO/LXO1/LXOAT**



Model	Package Configuration	Features	Frequency Range	Reference Data Sheet
LXO	4-pin DIP	2.5V to 15V operation CMOS compatible Low current Wide supply voltage range	10 kHz to 2.1 MHz	10110
LXO1	4-pin DIP	3.3V or 5V operation CMOS compatible Very low current Tri-state output (optional)	10 kHz to 2.1 MHz	10112
LXOAT	4-pin DIP	3.3V or 5V operation CMOS/TTL compatible High frequency (AT) Enable/Tri-state output (optional) High accuracy & stability	300 kHz to 120 MHz	10111

VOLTAGE OPTIONS DOWN TO 1.5V AVAILABLE

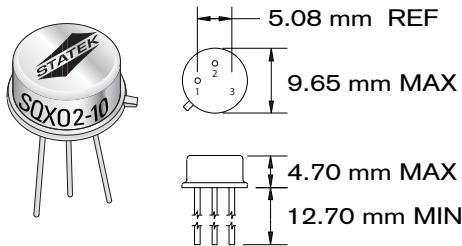
**LXOM/LXOMAT**



LXOM	1/2 size 4-pin DIP	3.3V or 5V operation CMOS compatible Low current Tri-state output (optional)	10 kHz to 2.1 MHz	10145
LXOMAT	1/2 size 4-pin DIP	3.3V or 5V operation CMOS/TTL compatible Enable/Tri-state output (optional) High frequency (AT) High accuracy & stability	300 kHz to 120 MHz	10118

VOLTAGE OPTIONS DOWN TO 1.5V AVAILABLE

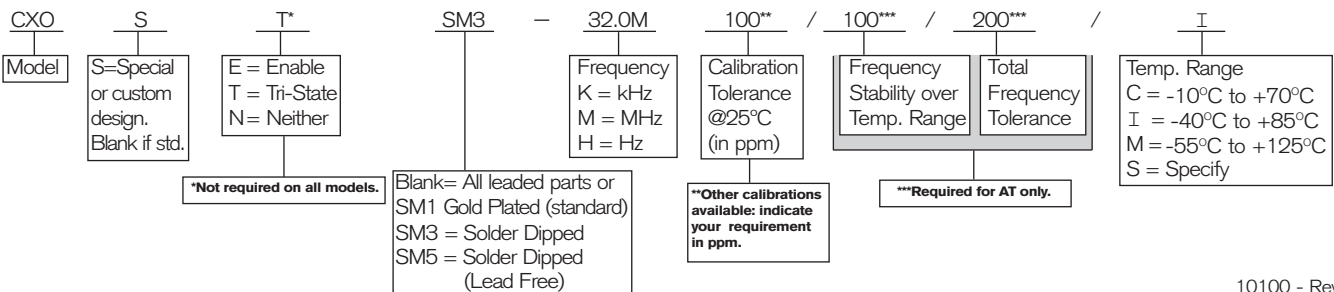
**SQXO2/LQXO4/DQXO3**



SQXO2	3-pin TO-39	3.3V or 5V operation CMOS/TTL compatible Low current High accuracy & stability	10 kHz to 2.1 MHz	10131
SQXO2AT	3-pin TO-39	3.3V or 5V operation CMOS/TTL compatible High Frequency (AT) High accuracy & stability	300 kHz to 120 MHz	10128
LQXO4	3-pin TO-39	3.3V or 5V operation CMOS compatible Very low current Fast rise & fall times Highest accuracy & stability	32 kHz to 200 kHz	10141
DQXO3	3-pin TO-39	3.3V or 5V operation CMOS compatible Multiple outputs available (6-pin) Low current/low frequency	1 Hz to 10 kHz	10142

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

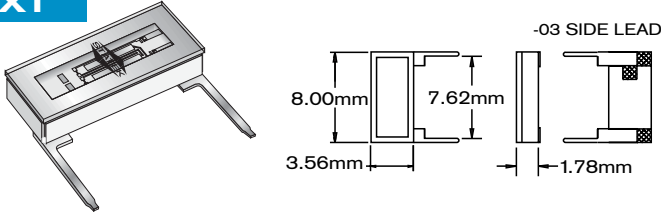
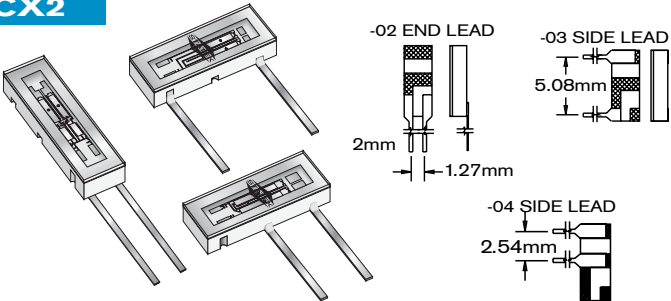
**ORDERING OPTIONS FOR STATEK QUARTZ CRYSTAL OSCILLATORS** NOTE: Example only. For specific ordering requirements, call us at 714-639-7810.



## STATEK'S COMMITMENT TO QUALITY

It is the policy of Statek Corporation to provide its customers with products and services that meet or exceed their expectations. The entire organization is committed to ensuring that customer satisfaction is achieved at all times. Striving for **"Total Continuous Improvement"**, Statek has developed the **"Road to Excellence"** quality model, which incorporates both the **"ISO 9001 Standards"** and the **"Total Quality Management"** programs.

Contact STATEK CORPORATION for custom circuit design assistance, circuit analysis, samples, pricing and delivery.

<b>THRU-HOLE CRYSTAL SELECTION GUIDE – 10 kHz to 250 MHz</b>		Available Terminations	Frequency Range (Quartz Design)	Reference Data Sheets
<b>CX1</b> 		03	10 kHz to 600 kHz (Tuning Fork) 530 KHz to 2.1 MHz (Extensional)	10101 CX1V TF 10102 CX1H TF 10130 CX1 EXT
			8 MHz to 250 MHz (AT Fundamental*)	10127 CX1 AT
<b>CX2</b> 		02	16 kHz to 600 kHz (Tuning Fork) 760 KHz to 1.35 MHz (Extensional)	10138 CX2V TF 10139 CX2 EXT
		03		
		04	9.6 MHz to 250 MHz (AT Fundamental*)	10140 CX2 AT
			*For third overtone contact factory for availability	
			*For third overtone contact factory for availability	

Statek offers a selection of temperature and custom force sensor elements to meet your specific design applications. These sensor elements have been designed for highly accurate sophisticated devices in military, space, medical, industrial and research applications. Below are two examples of our temperature sensor elements.

<b>TEMPERATURE SENSOR SELECTION GUIDE – 266.144 kHz*</b>		Available Terminations	Frequency Range (Quartz Design)	Reference Data Sheets
<b>*Other frequencies available upon request</b>				
<b>TS1</b> Reference CX1 surface mount and leaded package configurations for typical dimensions.		03 SM1 SM2 SM3 SM4 SM5	266.144 kHz* (Tuning Fork) * Other frequencies available upon request	10162
	<b>TS2</b> Reference CX2 surface mount and leaded package configurations for typical dimensions.		02 03 04 SM1 SM2 SM3 SM4 SM5	266.144 kHz* (Tuning Fork) * Other frequencies available upon request

### ORDERING OPTIONS FOR STATEK QUARTZ CRYSTALS NOTE: Example only. For specific ordering requirements, call us at 714-639-7810.

CX1	V	S	C	SM1	32.0M,	100**	/	100***	/	200***	/	I
Model		S=Special or custom design. Blank if std.	C=Ceramic Lid Blank=Glass Lid	02 03 04 SM1 SM2 SM3 SM4 SM5	Frequency K=kHz M=MHz	Calibration Tolerance @ 25°C (in ppm)		Frequency Stability Over Temp. Range		Total Frequency Tolerance		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.						**Other calibrations available: indicate your requirement in ppm.		***Required for AT only.				

10100 - Rev G