

## FEATURES

- ☐ Designed for surface mount applications using infrared, vapor phase, wave solder or epoxy mount techniques
- ☐ TTL and CMOS compatible
- ☐ Low power consumption
- ☐ Optional Tri-State or output Enable
- ☐ Low EMI emission
- ☐ High shock resistance
- ☐ Full military testing available
- ☐ Wire bond pads for hybrids (See top view)
- ☐ Hermetically sealed ceramic package

## APPLICATIONS

### INDUSTRIAL, COMPUTER & COMMUNICATIONS

- ☐ General purpose clock oscillator
- ☐ PCMCIA (FAX, Modem and LAN)
- ☐ Smart Card
- ☐ PDA and notebook computers

### MILITARY & AEROSPACE

- ☐ Airborne hybrid computer
- ☐ Military high speed modem
- ☐ MCM



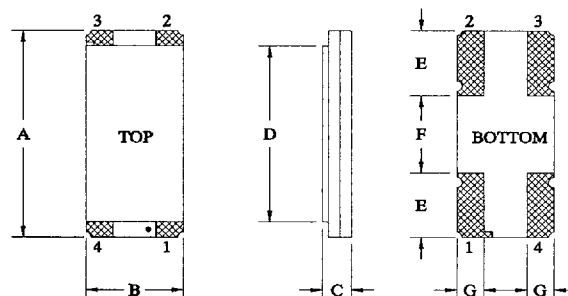
## CXO Oscillator 614 kHz to 70 MHz

### ULTRA-LOW PROFILE (1.3 mm) MINIATURE SURFACE MOUNT CRYSTAL OSCILLATOR

## DESCRIPTION

Statek's surface-mount CXO oscillator consists of a TTL and CMOS compatible hybrid circuit and a Statek miniature quartz crystal in a ceramic package. It is compatible with conventional vapor phase reflow, wave solder or infrared processing techniques, and offers small size, high shock resistance and excellent long-term stability.

## PACKAGE DIMENSIONS



DIM	TYP.		MAX.	
	INCHES	mm	INCHES	mm
A	0.400	10.16	0.405	10.29
B	0.180	4.57	0.190	4.83
C*	0.051	1.30	0.055	1.40
D	0.340	8.64		
E	0.125	3.18		
F	0.150	3.81		
G	0.050	1.27		

Termination material is Au over Ni (SM1), solder dip (SM3) also available.  
\* SM1 termination; SM3 = 0.063 in. (1.60 mm) Max.

## SPECIFICATIONS

Specifications are typical at 25°C unless otherwise noted.  
Specifications are subject to change without notice.

Supply Voltage	5V±10% (3V available)
Calibration	A: ±0.01% (100 ppm)
Tolerance*	B: ±0.1%
	C: ±1.0%
Frequency	0 to +50°C from ±5 to ±30ppm
Stability**	-10 to +70°C from ±10 to ±50ppm
	-40 to +85°C from ±20 to ±100ppm
	-55 to +125°C from ±30 to ±100ppm
Supply Current (Typical)	25 mA for 50 MHz
	20 mA for 40 MHz
	16 mA for 30 MHz
	12 mA for 24 MHz
Start-up Time	5 msec. MAX.
Rise/Fall Time	3 nsec. Typ., 6 nsec. MAX.
Duty Cycle*	40% Min., 60% MAX.
Aging, first year	10 ppm MAX.
Shock, survival***	3,000g peak .3 msec., 1/2 sine
Vibration, survival	20g rms 10-2000 Hz random
Operating Temp.	Commercial -10°C to +70°C
	Industrial -40°C to +85°C
	Military -55°C to +125°C
Storage Temp.	-55°C to +125°C

\*Tighter tolerances available

\*\*Does not include calibration tolerances

\*\*\*High shock version available

Note: All parameters are measured at ambient temperature  
with a 10MΩ and 10pF load at 5V.

## PACKAGING

CXO - 16mm Tape, 7" or 13" Reels,  
Per EIA 481A (See data sheet 10109)  
- Tray Pack

## ABSOLUTE MAXIMUM RATINGS

Supply Voltage $V_{DD}$	-0.5V to 7.0V
Storage Temperature	-55°C to +125°C
Maximum Process Temperature	260°C, 10 seconds

## TRUTH TABLE

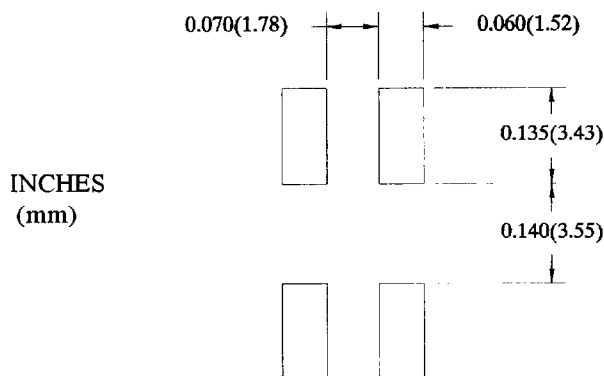
	PIN 1*	PIN 3
CXO-10E	Low (0)	High (Z)
	High (1)	Freq. Output
CXO-10T	Low (0)	High (Z)
	High (1)	Freq. Output
CXO-10N	NC	Freq. Output

\* Normally high (internal pull-up resistor)

## PIN CONNECTIONS

1. Output Enable,  $\overline{INH}$  (Tri-State) or NC
2. Ground
3. Output
4.  $V_{DD}$

## SUGGESTED LAND PATTERN



## HOW TO ORDER CXO SURFACE MOUNT CRYSTAL OSCILLATORS

CXO	S	10	T	*	32 MHz	(	25 ppm	/	25 ppm	/	50 ppm	/	I	)
"S" if special or custom design. Blank if Std.	2 = 2 LS 8 = 8 10 = 10	TTL Load	T = Tri-State N = Neither		Frequency		** Calibration Tolerance @ 25°C (A) (B) (C)		Frequency Stability over Temp. Range		Total Frequency Tolerance: Stability @ Room Temperature		Temp. Range: C = Commercial I = Industrial M = Military S = Special/Specify	
*SM1 standard/SM3 available **Other calibration fill in ppm														

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