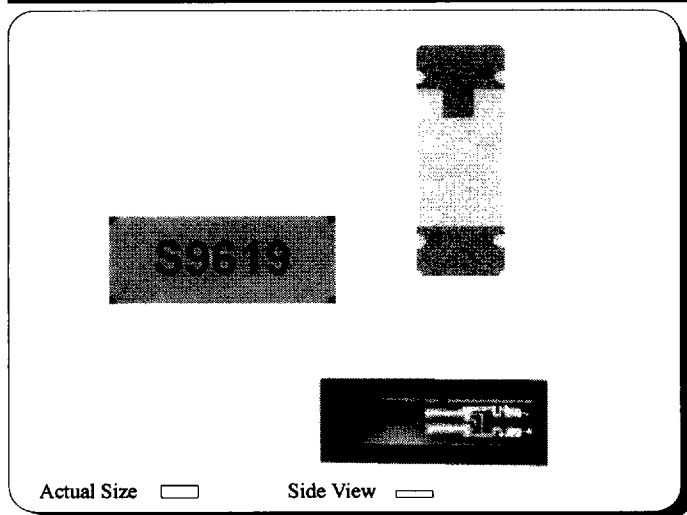




CX-4V-SM CRYSTAL

30 kHz - 200 kHz

ULTRA-MINIATURE SURFACE MOUNT QUARTZ CRYSTAL



DESCRIPTION

Statek's ultra-miniature CX-4V quartz crystals are hermetically sealed in the smallest surface mount ceramic package in the world! This high quality tuning fork resonator is intended for use in Pierce (single inverter) oscillators. Maximum process temperature should not exceed 260°C.

FEATURES

- ☐ Ultra-miniature design:

	Length	Width	Thickness
INCHES	0.197	0.072	0.043
[mm]	5.0	1.8	1.1
- ☐ Hermetically sealed ceramic package
- ☐ Quartz crystal tuning fork design
- ☐ High shock resistance
- ☐ Excellent aging characteristics
- ☐ Designed for low power applications
- ☐ Full military testing available
- ☐ Designed for surface mount using infrared, vapor phase, wave solder or epoxy techniques.

APPLICATIONS

MEDICAL

- ☐ Pacemaker, defibrillator and hearing aid

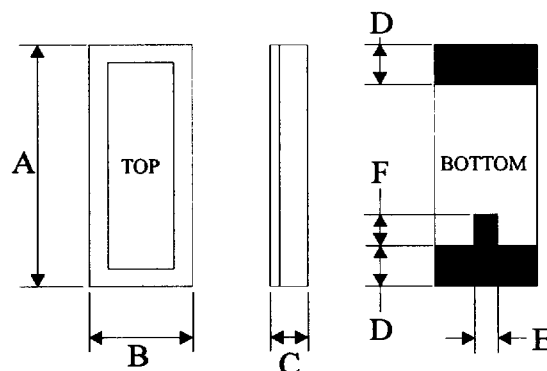
INDUSTRIAL, COMPUTER & COMMUNICATIONS

- ☐ PCMCIA (FAX, Modem and LAN)
- ☐ Smart Card

MILITARY & AEROSPACE

- ☐ Airborne hybrid computer
- ☐ Real time clock
- ☐ MCM

PACKAGE DIMENSIONS



DIM	TYP.		MAX.	
	INCHES	mm	INCHES	mm
A	.197	5.00	.210	5.33
B	.072	1.83	.085	2.16
C	---	---	*	*
D	.038	0.97		
E	.020	0.51		
F	.025	0.64		

*DIM "C"	GLASS LID		CERAMIC LID	
	INCHES	mm	INCHES	mm
SM1	.045	1.14	.050	1.27
SM2	.046	1.17	.051	1.30
SM3	.048	1.22	.053	1.35

STATEK CORPORATION

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8891940 0000426 479

10103-06/96

SPECIFICATIONS

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

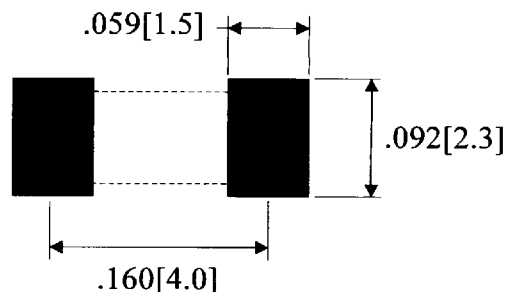
	32.768 kHz	100kHz	200kHz
Motional Resistance R_1 (k Ω)	50	18	2.7
Motional Capacitance C_1 (fF)	2.3	1.07	2.1
Quality Factor Q (k)	40	85	140
Shunt Capacitance C_o (pF)	1.1	0.7	1.1
Load Capacitance (pF)*	9	8	5
Turning Point (°C)**	25	10	29
Calibration Tolerance***	GLASS LID	CERAMIC LID	
	A $\pm 0.003\%$ (± 30 ppm)	$\pm 0.01\%$ (± 100 ppm)	
	B $\pm 0.01\%$	$\pm 0.1\%$	
	C $\pm 0.1\%$	$\pm 1.0\%$	
Drive Level	0.5 μ W MAX.		
Temperature Coefficient	-0.035 ppm/°C ²		
Aging, first year	5ppm MAX.		
Shock, survival	5,000g peak 0.3msec., ½ sine		
Vibration, survival	20g rms 10-2,000 Hz random		
Operating Temperature Range	-10°C to +70°C Commercial -40°C to +85°C Industrial -55°C to +125°C Military		
Storage Temperature	-55°C to +125°C		
Maximum Process Temperature	260°C for 20 sec.		

*Other load capacitance value available

**Other temperature available

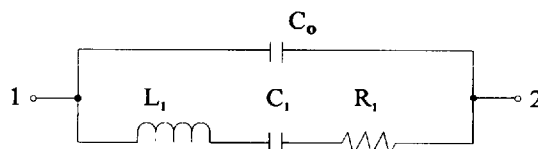
***Tighter tolerances available

SUGGESTED LAND PATTERN



INCHES[mm]

EQUIVALENT CIRCUIT



R_1 Motional Resistance L_1 Motional Inductance
 C_1 Motional Capacitance C_o Shunt Capacitance

TERMINATIONS

Designation	Termination
SM1	Gold Plated
SM2	Nickel, Solder Plated
SM3	Nickel, Solder Plated and Solder Dipped

PACKAGING

CX-4V -16mm Tape, 7" or 13" Reels,
 Per EIA 481A (See data sheet 10109)
 -Tray Pack
 -Bulk Pack

HOW TO ORDER CX-4V-SM SURFACE MOUNT CRYSTALS

CX-4V _____ SM1 32.768 kHz (25ppm / I)

"S" if special or
 custom design.
 Blank if Std.

C=Ceramic Lid
 Blank=Glass Lid

SM1
 SM2
 SM3

Frequency

*Calibration
 Tolerance
 @25°C
 (A)
 (B)
 (C)

Temp. Range:
 C = Commercial
 I = Industrial
 M = Military

*Other calibration fill in ppm

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