



CX18 AT CRYSTAL

30 MHz to 50 MHz
Ultra-miniature, Ultra-Low Profile & Ultra-Light Weight
Surface Mount Quartz Crystal

DESCRIPTION

When miniaturization is paramount, Statek's **CX18** quartz crystal is the most ideal choice. This crystal is available in frequencies from 30 MHz to 50 MHz, and has typical overall dimensions of 1.60 mm x 1.00 mm x 0.38 mm.

FEATURES

- Ultra-Miniature Package
- Ultra-Low profile
- Ultra-light weight (1.8 mg)
- Hermetically sealed package
- Excellent aging characteristics
- Full military testing available
- Designed and manufactured in the USA

APPLICATIONS

Medical

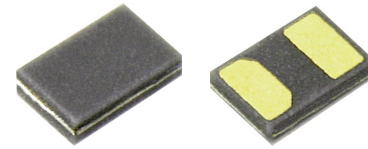
- Medical Telemetry
- Cardiac rhythm management
- Pacemakers
- Defibrillators
- Neurostimulators

Military & Aerospace

- Missile Telemetry
- Ruggedized Communications
- Aircraft Electronics
- Smart Munitions

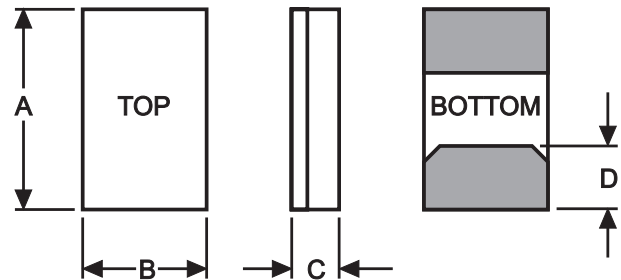
Industrial & Communications

- Bio-Tracking
- Process Control
- Portable Instrumentation



ceramic lid

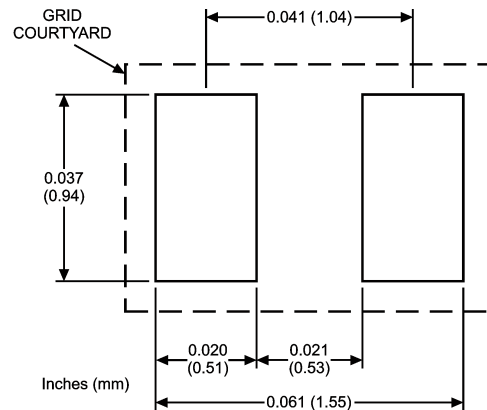
PACKAGE DIMENSIONS



TYPICAL

DIM	inches	mm
A	0.063	1.60
B	0.039	1.00
C	0.015	0.38
D	0.020	0.51

SUGGESTED LAND PATTERN



SPECIFICATIONS

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

Fundamental Frequency	<u>32.0 MHz</u>	<u>49.0 MHz</u>
Motional Resistance R_1 (Ω)	150	50
Motional Capacitance C_1 (fF)	0.9	1.1
Quality Factor Q (k)	60	54
Shunt Capacitance C_0 (pF)	0.6	0.5
Calibration Tolerance ¹	±50 to ±30 ppm, or tighter as required	
Load Capacitance	9 pF (unless specified otherwise)	
Drive Level	100 μ W MAX	
Frequency-Temperature Stability ^{1,2}	±50 ppm to ±10 ppm (Commercial) ±50 ppm to ±20 ppm (Industrial) ±100 ppm to ±30 ppm (Military)	
Aging, first year	3 ppm MAX	
Shock, survival ³	5,000 g, 0.3 ms, 1/2 sine	
Vibration, survival ⁴	20 g, 10-2,000 Hz swept sine	
Operating Temp. Range	-10°C to +70°C (Commercial) -40°C to +85°C (Industrial) -55°C to +125°C (Military)	
Storage Temp. Range	-55°C to +125°C	
Max Process Temperature	260°C for 20 sec.	

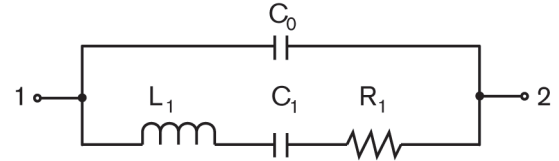
Moisture Sensitivity Level (MSL) - This product is hermetically sealed and not moisture sensitive.

1. Other tolerances available. Contact factory.
2. Does not include calibration tolerance. The characteristics of the frequency stability over temperature follow that of the AT thickness-shear mode.
3. High-Shock version available, contact factory.
4. Per MIL-STD-202G, Method 204D, Condition D. Random vibration testing also available.

TERMINATIONS

Designation	Termination
SM1	Gold Plated (Lead Free, ENEPIG)

EQUIVALENT CIRCUIT



R_1 Motional Resistance L_1 Motional Inductance
 C_1 Motional Capacitance C_0 Shunt Capacitance

PACKAGING OPTIONS

- Tray Pack
- 12 mm tape, 7" or 13" reels (Per EIA 481)

HOW TO ORDER CX18 AT CRYSTALS

