



CX18 AT CRYSTAL

30 MHz to 50 MHz

Ultra-miniature, Ultra-Low Profile 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

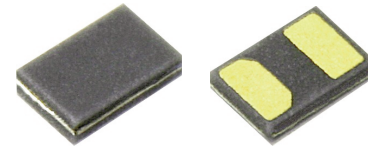
- Medical Telemetry
- Cardiac Rythm Management
- Pacemakers
- Defibrillators
- Neurostimulators

Military & Aerospace

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

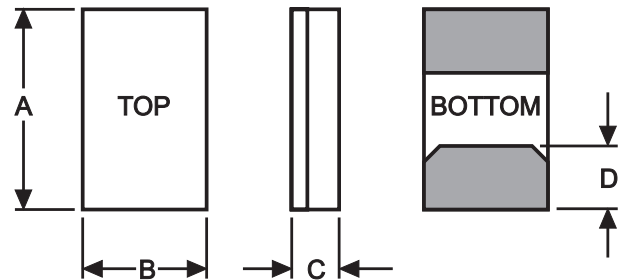
Industrial & Communications

- Bio-Tracking
- Process Control
- Portable Instrumentation



ceramic lid

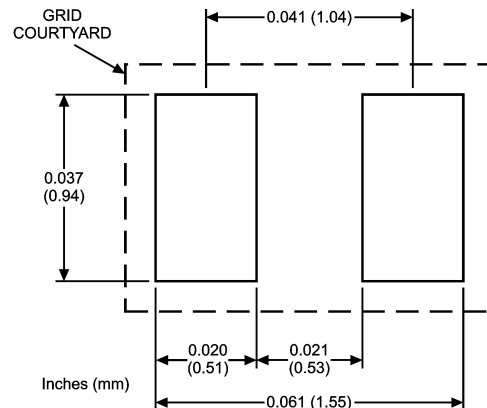
PACKAGE DIMENSIONS



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)	60	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	
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.	

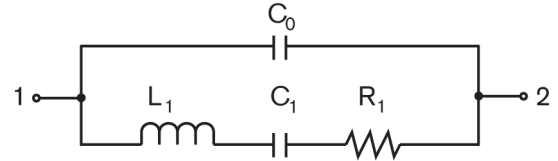
Moisture Sensitivity Level (MSL) - This product is hermetically sealed and not moisture sensitive.

- Other tolerances available. Contact factory.
- Does not include calibration tolerance. The characteristics of the frequency stability over temperature follow that of the AT thickness-shear mode.
- High-Shock version available, contact factory.
- 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

