



CX18SM CRYSTAL

30 MHz to 50 MHz

Ultra-Miniature
Surface Mount Quartz Crystal

DESCRIPTION

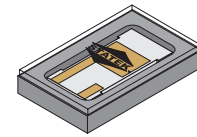
When miniaturization is paramount, Statek's ultra-miniature CX18SM quartz crystal is the most ideal choice. This crystal is available in frequencies from 30 MHz to 50 MHz, and has typical overall dimensions of 1.55 mm x 0.95 mm x 0.35 mm. This surface mount crystal is hermetically sealed within an ultra-miniature package to ensure high stability and low aging. The extremely small size of this crystal makes the CX18SM ideally suited for many high frequency applications.

FEATURES

- Extremely small footprint (1.55 mm x 0.95 mm)
- Ultra-low profile (0.35 mm)
- Ultra-low weight (1.8 mg)
- Hermetically sealed package
- Tight calibration tolerance
- Excellent aging characteristics
- Designed and manufactured in the USA

APPLICATIONS

- Cardiac Rhythm Management Telemetry (CRMT)
 - Implantable pacemakers (CRT's)
 - Implantable defibrillators (ICD's)
- Hearing assistance and cochlear implants
- Infusion pumps
- Wildlife tracking



glass lid

Actual Size

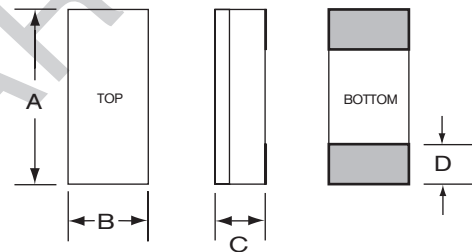


Top View



Side View

PACKAGE DIMENSIONS



TYPICAL

DIM	inches	mm
A	0.061	1.55
B	0.037	0.95
C	see below	
D	0.020	0.51

THICKNESS (DIM C)

Lid	Termination	Typical	
		inches	mm
Glass	SM1	0.0138	0.35
	SM2/SM4	0.0146	0.37
	SM3/SM5	0.0165	0.42

SPECIFICATIONS

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

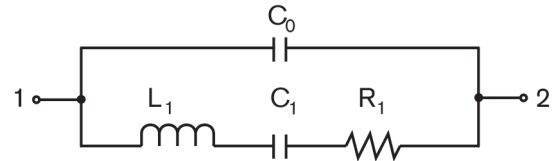
Fundamental Frequency	<u>50 MHz</u>
Motional Resistance R_1 (Ω)	60
Motional Capacitance C_1 (fF)	1.2
Quality Factor Q (k)	44
Shunt Capacitance C_0 (pF)	0.6
Calibration Tolerance ¹	± 100 ppm, or tighter as required
Load Capacitance	10 pF (unless specified otherwise)
Drive Level	200 μ W MAX
Frequency-Temperature Stability ^{1,2}	± 50 ppm to ± 10 ppm (Commercial) ± 100 ppm to ± 20 ppm (Industrial) ± 100 ppm to ± 30 ppm (Military)
Aging, first year	5 ppm MAX (better than 1 ppm available)
Shock, survival	5,000 g, 0.3 ms, 1/2 sine
Vibration, survival ³	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.

- 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.
- Per MIL-STD-202G, Method 204D, Condition D. Random vibration testing also available.

TERMINATIONS

Designation	Termination
SM1	Gold Plated (Lead Free)
SM2	Solder Plated
SM3	Solder Dipped
SM4	Solder Plated (Lead Free)
SM5	Solder Dipped (Lead Free)

EQUIVALENT CIRCUIT

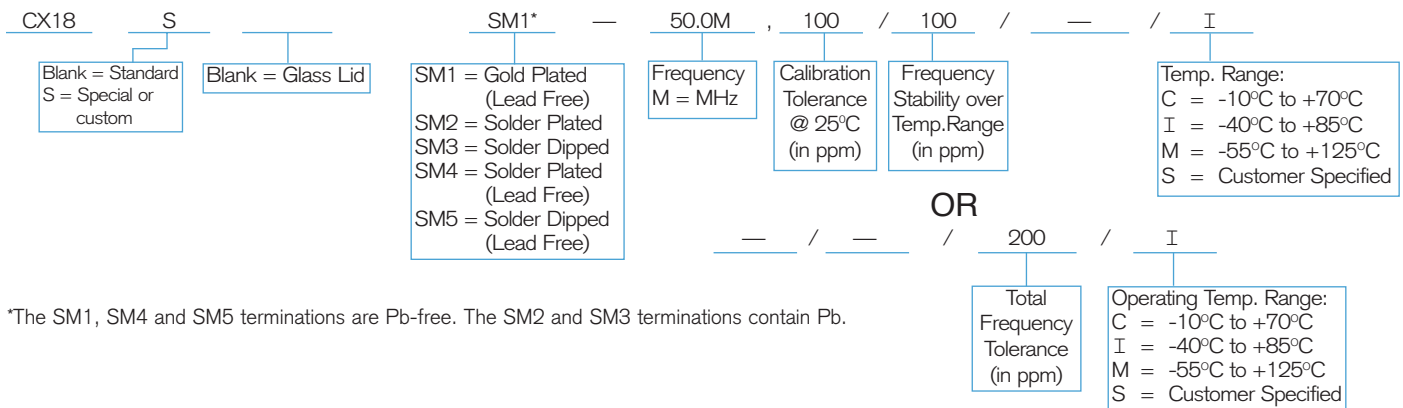


R_1 Motional Resistance L_1 Motional Inductance
 C_1 Motional Capacitance C_0 Shunt Capacitance

PACKAGING OPTIONS

- Tray Pack

HOW TO ORDER CX18SM AT CRYSTALS



*The SM1, SM4 and SM5 terminations are Pb-free. The SM2 and SM3 terminations contain Pb.