

Ultra-Miniature SMD Crystal

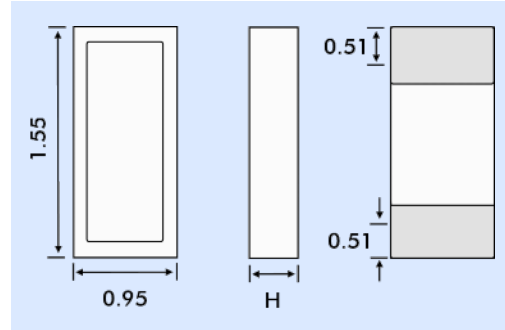
30MHz to 50MHz

FEATURES

- Ultra-miniature SMD package 1.55 x 0.95 x 0.35mm
- Frequency Range 30MHz ~ 50MHz
- High shock and vibration resistance
- Hermetically sealed
- Available with glass or ceramic lid
- Tight calibration tolerance
- Custom designs available



OUTLINE & DIMENSIONS



Dim. H	Glass Lid
SM1	0.35
SM2	0.37
SM3	0.42
SM4	0.37
SM5	0.42

DESCRIPTION

CX18SM crystals are designed for applications where miniaturization is paramount. The rugged crystal is ideally suited for a wide variety of high frequency applications including medical electronics, cardiac rhythm management, pacemakers for example. Also suitable for cochlear implants, infusion pumps and wildlife tracking. Designed and manufactured by Statek Inc.

SPECIFICATION

Specifications stated are typical at 25°C unless otherwise indicated. Specifications may change without notice.

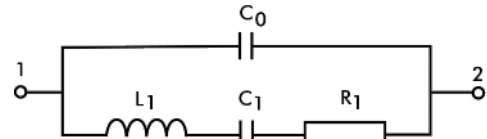
Fundamental Frequency:	50.0MHz
Motional Resistance R (Ω):	60
Motional Capacitance C1 (ff):	1.2
Quality Factor Q (k):	44
Shunt Capacitance C0 (pF):	0.6
Standard Calibration Tolerance ¹ :	±100ppm or tighter as required.
Load Capacitance:	10pF (or as specified)
Drive Level:	200µW maximum
Frequency Stability ^{1,2}	
-10° to +70°C:	±50ppm to ±10ppm
-40° to +85°C:	±100ppm to ±20ppm
-55° to +125°C:	±100ppm to ±30ppm
Ageing, First Year:	±5ppm maximum (Better than ±1ppm available)
Shock, Survival:	5000g, 0.3ms, ½ sine
Vibration, Survival ³ :	20g rms, 10~2000Hz swept sine
Operating Temperature Range:	-10°C to +70°C (Commercial) -40°C to +85°C (Industrial) -55°C to +125°C (Military)
Storage Temperature Range:	-55° to +125°C
Maximum Process Temperature:	+260°C for 20 seconds

1. Other tolerances available, contact Euroquartz sales
2. Does not include calibration tolerance. (Frequency stability characteristics follow that of the AT-Cut thickness-shear mode.)
3. Per MIL-STD-202G, Method 204D, Condition D. Random vibration testing also available.

TERMINATIONS - PLATING

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

CRYSTAL EQUIVALENT CIRCUIT



R1 Motional Resistance L1 Motional Inductance
C1 Motional Capacitance C0 Shunt Capacitance

PACKAGING OPTIONS

CX18SM AT crystals are available either tray packed (<250pcs) or tape and reel (>250 pieces).
12mm tape, 178mm or 330mm reels (EIA 418).

HOW TO ORDER CX18SM AT CRYSTALS

CX18 - S - - SM1 - 50.0M, 100 / 100 / - / I

'S' if special, custom design. Otherwise leave blank	Blank = glass lid	Terminations SM1 = Gold plated * SM2 = Solder plated SM3 = Solder dipped SM4 = Solder plated * SM5 = Solder dipped * * = Lead free	Frequency M = MHz	Calibration Tolerance @25°C (in ppm)*	Frequency Stability over Temp. Range (in ppm)*	Temp. Range C = -10° ~ +70°C I = -40° ~ +85°C M = -55° ~ +125°C S = Customer specified
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*Alternative 'total' tolerance (in ppm)