

# CX-1-03 CRYSTALS 8.0 to 160.0MHz

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## Delivery Options

- Please contact our sales office for current leadtimes

## Description

- Statek's CX-1-03 crystals are high quality chemically etched resonators manufactured with a photolithographic process.

## Holder Style

- CX-1-03 crystals are housed in a ceramic package, hermetically sealed, with a soft soldered glass lid & leads.

## General Specifications

- Load Capacitance ( $C_L$ ): 20pF  
Other values available upon request
- Static Capacitance ( $C_0$ ): 2.0 to 3.5pF
- Drive Level: 500 $\mu$ W max
- Ageing:  $\pm 5$ ppm max first year

## Standard Frequency Tolerances\*

- $\pm 100$ ppm,  $\pm 1000$ ppm,  $\pm 10000$ ppm  
\* Tighter tolerances available

## Operating Temperature Ranges

- -10 to 70°C = C
- -40 to 85°C = I
- -55 to 125°C = M

## Storage Temperature Range

- -55 to 125°C

## Environmental Specification

(higher specification available on request)

- Shock: 3000g, 0.3ms  $\frac{1}{2}$  sine
- Vibration: 20g rms, 10 to 2000Hz random

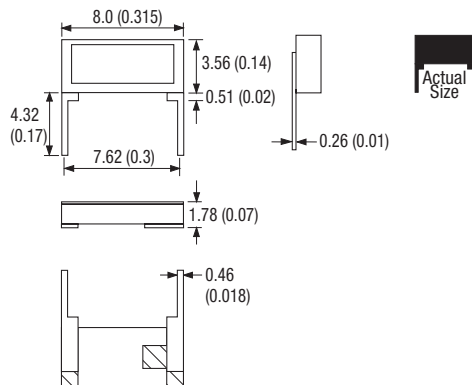
## Marking

- Includes Frequency

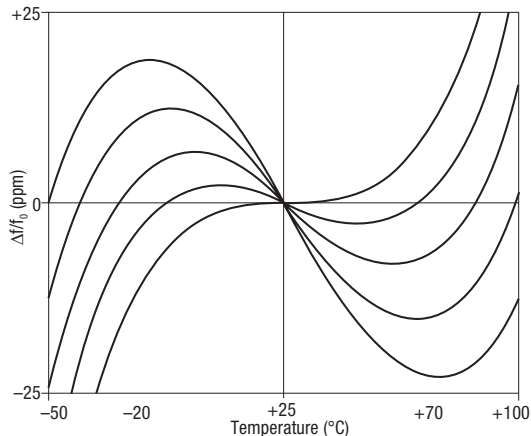
## Minimum Order Information Required

- Frequency + Model + Terminations + Frequency Tolerance @ 25°C + Frequency Stability + Operating Temperature Range + Circuit Condition

## Outline in mm (inches) - (scale 2:1)



## Typical Frequency vs Temperature Curves for various angles of AT-cut crystals



# Electrical Specification – maximum limiting values

Frequency Range	*Frequency Tolerance @ 25°C ±2°C	Operating Temperature Range	Frequency Stability Available Over Operating Temperature		ESR Max	Vibration Mode
			Minimum	Maximum		
8.0 to < 9.0MHz	A = ±100ppm B = ±1000ppm C = ±10000ppm	-10 to 70°C	±10ppm	±100ppm	300Ω	Fundamental AT cut
		-40 to 85°C	±20ppm	±100ppm		
		-55 to 125°C	±30ppm	±300ppm		
9.0 to < 11.0MHz	A = ±100ppm B = ±1000ppm C = ±10000ppm	-10 to 70°C	±10ppm	±100ppm	200Ω	Fundamental AT cut
		-40 to 85°C	±20ppm	±100ppm		
		-55 to 125°C	±30ppm	±300ppm		
11.0 to < 14.0MHz	A = ±100ppm B = ±1000ppm C = ±10000ppm	-10 to 70°C	±10ppm	±100ppm	100Ω	Fundamental AT cut
		-40 to 85°C	±20ppm	±100ppm		
		-55 to 125°C	±30ppm	±300ppm		
14.0 to < 20.0MHz	A = ±100ppm B = ±1000ppm C = ±10000ppm	-10 to 70°C	±10ppm	±100ppm	70Ω	Fundamental AT cut
		-40 to 85°C	±20ppm	±100ppm		
		-55 to 125°C	±30ppm	±300ppm		
20.0 to 70.0MHz	A = ±100ppm B = ±1000ppm C = ±10000ppm	-10 to 70°C	±10ppm	±100ppm	50Ω	Fundamental AT cut
		-40 to 85°C	±20ppm	±100ppm		
		-55 to 125°C	±30ppm	±300ppm		
48.0 to 160.0MHz	A = ±100ppm B = ±1000ppm C = ±10000ppm	-10 to 70°C	±10ppm	±100ppm	80Ω	3rd Overtone
		-40 to 85°C	±20ppm	±100ppm		
		-55 to 125°C	±30ppm	±300ppm		
<b>Ordering Example</b> <div>10.0MHz CX-1 03 A 100ppm C 18pF</div> <div>Frequency_____</div> <div>Model No_____</div> <div>Terminations_____</div> <div>Frequency Tolerance @ 25°C_____</div> <div>Frequency Stability_____</div> <div>Operating Temperature Range: C = -10 to 70°C; I = -40 to 85°C; M = -55 to 125°C_____</div> <div>Load Capacitance (Circuit Condition) -if non-standard_____</div>						
*Please note: other frequency tolerances are available on request.						