



## CX-1-03 Crystals 10.0kHz to 2.10MHz

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### Delivery Options

- Please contact our sales office for current leadtimes

### Description

- Statek's CX-1, -1V, -1H crystals are high quality chemically etched resonators manufactured with a photo lithographic process
- The CX-1H version is a tuning fork resonator intended for use in simple series oscillators over the frequency range 10.0 to 600.0kHz
- The CX-1V versions are intended for use in simple Pierce oscillators. They are tuning fork resonators over the frequency range 10.0 to 600.0kHz
- The CX-1 are length extensional resonators covering the frequency range 530.0kHz to 2.10MHz

### 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 ( $C_L$ ) CX-1V type:
  - 11pF (10.0 to < 16.0kHz)
  - 10pF (16.0 to < 25.0kHz)
  - 9pF (25.0 to < 55.0kHz)
  - 8pF (55.0 to < 100.0kHz)
  - 5pF (100.0 to < 180.0kHz)
  - 4pF (180.0 to < 600.0kHz)
- Load Capacitance ( $C_L$ ) CX-1 type:
  - 7pF (530.0kHz to 2.10MHz)
- Other values available upon request
- CX-1H type is calibrated at Series Resonance
- Static Capacitance ( $C_0$ ): 1.0pF to 2.0pF
- Drive Level CX-1V type:
  - 0.5 $\mu$ W max. (10.0 to < 25.0kHz)
  - 1.0 $\mu$ W max. (25.0 to 600.0kHz)
- Drive Level CX-1 type:
  - 3.0 $\mu$ W max. (530.0kHz to 2.10MHz)
- Drive Level CX-1H type:
  - 1.5 $\mu$ W max. (10.0 to < 25.0kHz)
  - 3.0 $\mu$ W max. (25.0 to 600.0kHz)
- Ageing:  $\pm 5$ ppm maximum first year

### 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

- Shock: 1000g, 1.0ms  $1/2$  sine (CX-1V/H type)
- Vibration: 20g, 10 to 2000Hz (CX-1V/H type)
- Shock: 750g, 0.3ms  $1/2$  sine (CX-1 type)
- Vibration: 10g, 20 to 1000Hz (CX-1 type)

### Marking

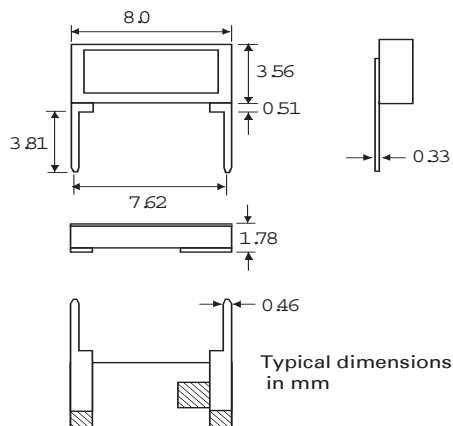
- Includes Frequency

### Minimum Order Information Required

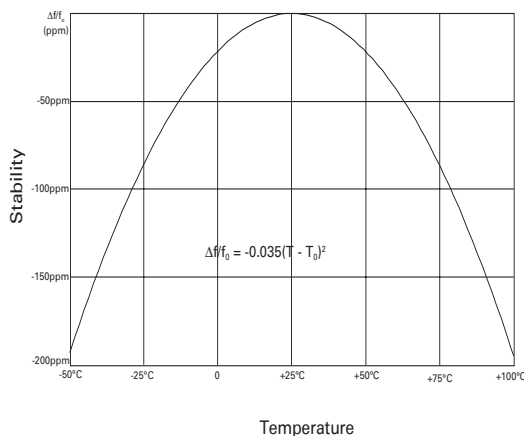
- Frequency + Model + Terminations + Frequency Tolerance @ 25°C + Operating Temperature Range + Circuit Condition

### Packaging

- Style '03' is Tray Pack



### Typical Frequency Temperature Curve (32.768kHz)



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**Electrical Specification – maximum limiting values**

Frequency Range	*Frequency Tolerance @ 25°C ±2°C	Operating Tempertaure Ranges	**ESR max.	Vibration Mode
10.0 to <25.0kHz	A = ±30ppm B = ±100ppm C = ±1000ppm	-10 to 70°C -40 to 85°C -55 to 125°C	2.1MΩ	Tuning Fork
25.0 to <50.0kHz			360kΩ	
50.0 to <75.0kHz			160kΩ	
75.0 to <170.0kHz	A = ±50ppm B = ±100ppm C = ±1000ppm		100kΩ	
170.0 to <250.0kHz	A = ±100ppm B = ±200ppm C = ±2000ppm		50kΩ	
250.0 to 600.0kHz	A = ±200ppm B = ±500ppm C = ±5000ppm			
530.0 to 2.1MHz ***	A = ±500ppm B = ±1000ppm C = ±10000ppm		3kΩ	Extensional

LEADED QUARTZ CRYSTALS

**Ordering Example** 50.0kHz CX-1V 03 C C 9pF

Frequency \_\_\_\_\_

Model No \_\_\_\_\_

Termination \_\_\_\_\_

Frequency Tolerance @ 25°C \_\_\_\_\_

Operating Temperature Range: C = -10 to 70°C; I = -40 to 85°C; M = -55 to 125°C \_\_\_\_\_

Load Capacitance(Circuit Condition) - if non standard \_\_\_\_\_

\* Please note: other frequency tolerance are available on request.  
 \*\* Above ESR values are for CX-1H only, CX-1V divide above values by 3.  
 \*\*\* Only CX-1 available