

# 4SMX CRYSTALS

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## Holder Style

- Hermetically sealed ceramic package with resin sealed ceramic lid

## General Specifications

- Load Capacitance (CL): 10pF to 75pF or Series
- Drive Level: 0.1mW max
- Ageing:  $\pm 5$ ppm max per year at 25°C
- Shunt Capacitance (C0): 7pF max

## Packaging

- Loose in bulk pack or tape and reel

## Standard Frequency Tolerance and Stabilities

- $\pm 50$ ppm and  $\pm 100$ ppm

## Operating Temperature Range

- 10 to 60°C

## Storage Temperature Range

- 40 to 85°C

## Environmental

- Shock: MIL-STD-202F, Method 213B (1000G, 0.5ms)
- Vibration: MIL-STD-202F, Method 204D, Test Condition D 20G (10-2000Hz), 4 hrs in X, Y & Z axes (total 12 hrs)

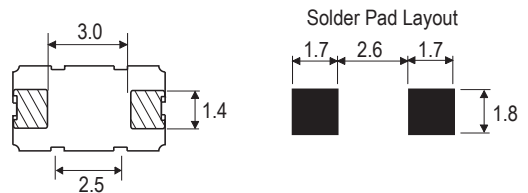
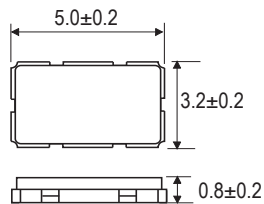
## Marking includes

- Frequency

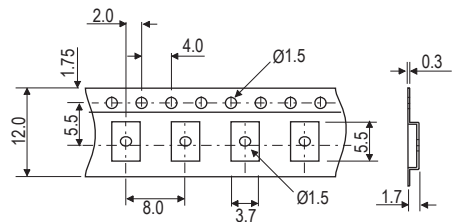
## Minimum Order Information Required

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

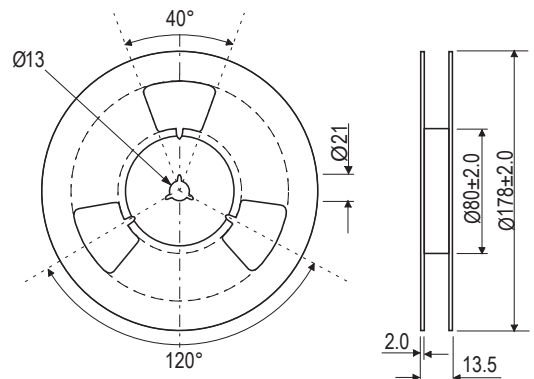
## Outline (mm)



## Tape (mm)



## Reel (mm)



**Electrical Specifications – maximum limiting values**

Frequency Range	Frequency Tolerance @25°C ±2°C	Operating Temperature Range	Frequency Stability Available Over Operating Temperature Range	ESR Max	Vibration Mode
10.0 to <12.0MHz	±50ppm	-10 to 60°C	50ppm	80Ω	Fundamental AT cut
12.0 to <16.0MHz				60Ω	
16.0 to 50.0MHz				40Ω	
>40.0 to 67.0MHz	Inclusive	±100ppm			

Note: For other frequency/specification combinations, please contact our sales office