

# 3SMX Crystals

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RoHS  
2002/95/EC

## Delivery Options

- Please contact our sales office for current leadtimes

## Holder Style

- 3SMX surface mount crystals are housed in a hermetically sealed ceramic package with a ceramic lid

## General Specifications

- Load Capacitance ( $C_L$ ): 10pF to 75pF or Series
- Drive Level: 0.1mW max.
- Static Capacitance ( $C_0$ ): 7pF max.
- Ageing  $\pm 5$ ppm max / yr @25°C

## Packaging

- 3SMX surface mount crystals are available packaged individually or on tape and reel

## Standard Frequency Tolerances and Stabilities

- $\pm 30$ ppm,  $\pm 50$ ppm,  $\pm 100$ 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

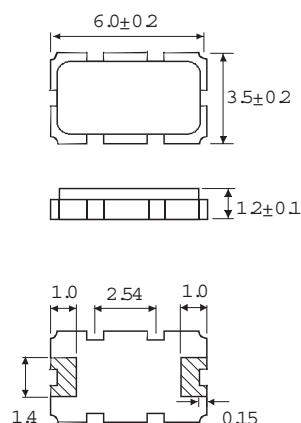
## Marking includes

- Frequency

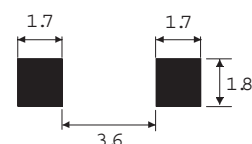
## Minimum Order Information Required

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

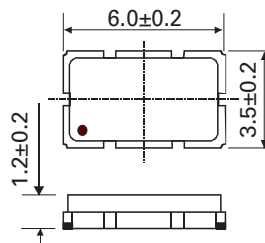
## Outline in mm - 3SMX (A)



## Solder Pad Layout



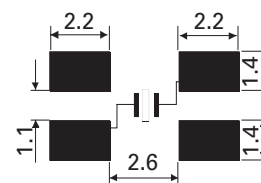
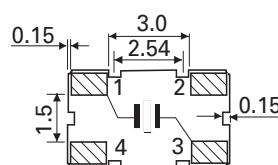
## Outline in mm - 3SMX (B)



## Pad Connections

1. Crystal
2. N/C / GND
3. Crystal
4. N/C / GND

## Solder pad layout





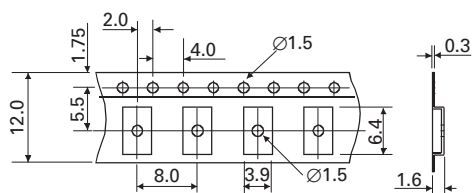
# Electrical Specification – maximum limiting values

Frequency Range	Frequency Tolerance @25°C±2°C	Operating Temperature	Frequency Stability Available Over Operating Temperature		ESR max.	Vibration Mode
			Minimum	Maximum		
10.0 to <12.0MHz	±30ppm, ±50ppm	-10 to 60°C	±50ppm	±100ppm	80Ω	Fundamental AT cut
12.0 to <16.0MHz					60Ω	
16.0 to 50.0MHz					40Ω	
>40.0 to 67.0MHz					70Ω	3rd Overtone AT cut

**Note.** For any other frequency / specification combinations, please contact our sales office.

SURFACE MOUNT  
QUARTZ CRYSTALS

Outline in mm - Tape



Outline in mm - Reel

