

3SMX CRYSTALS

ISSUE 7; 1 NOVEMBER 2010 – RoHS 2002/95/EC

Not recommended for new designs

For alternative see model CFPX-228

Description

- 6 x 3.5mm SMD crystal
- Available in 2 or 4 pad design
- Ceramic package with a resin sealed ceramic lid, hermetically sealed

General Specifications

- Load Capacitance (C_L): 10pF to 75pF or Series
- Drive Level: 100 μ W max
- Ageing: ± 5 ppm max per year at 25°C
- Shunt Capacitance (C_0): 7pF max

Standard Frequency Tolerances and Stabilities

- ± 30 ppm, ± 50 ppm, ± 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 (10Hz-2000Hz), 4hrs in 3 mutually perpendicular planes (total 12hrs)

Packaging

- Loose in bulk pack, 100pcs per bag
- Tape and reel in accordance with EIA-481-D, 1kpcs per reel (please see pages 372 & 373)

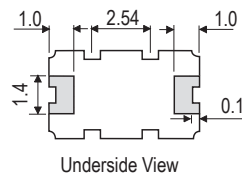
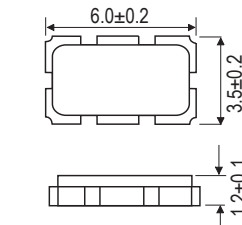
Ordering Information (*minimum required)

- Frequency*
- Model*
- Variant*
- Frequency Tolerance (@25°C)*
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Load Capacitance*
- Overtone*

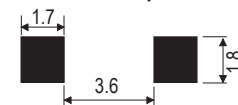
Example

- 20.0MHz 3SMX-A
50/50/-10 to 60C/10 FUND

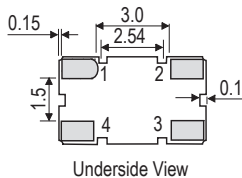
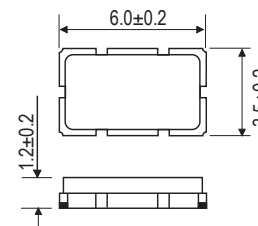
Outline (mm) – 3SMX-A



Solder Pad layout



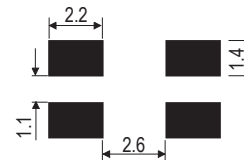
Outline (mm) – 3SMX-B



Pad Connections

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

Solder Pad Layout





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
			Minimum	Maximum		
9.0 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 offices

