

ISSUE 8; August 2022

### Description

- 6 x 3.5mm SMD crystal  
Available in 2 or 4 pad design  
Ceramic package with a resin sealed ceramic lid, hermetically sealed.  
Not recommended for new designs  
For alternative see model CFPX-228
- A A 2 pad
- 2 Pad device
- B B 4 pad
- 4 Pad device

### Frequency Parameters

- Frequency 9.0MHz to 67.0MHz
- Frequency Tolerance  $\pm 30.00\text{ppm}$  to  $\pm 50.00\text{ppm}$
- Frequency Stability  $\pm 50.00\text{ppm}$  to  $\pm 100.00\text{ppm}$
- Ageing  $\pm 5\text{ppm max @ } 25^\circ\text{C}$

### Electrical Parameters

- Load Capacitance (CL) 10.0pF to 75.0pF
- Shunt Capacitance (C0) 7pF max
- Drive Level 100 $\mu\text{W}$  max

### Operating Temperature Ranges

- 10 to 60°C

### Environmental Parameters

- 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)
- Storage Temperature Range: -40 to 85°C

### Manufacturing Details

- RoHS Terminations NiAu
- RoHS Reflow 260degC 10s

### Ordering Information

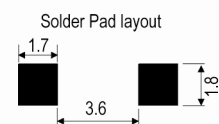
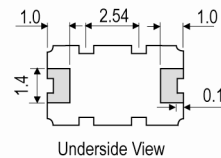
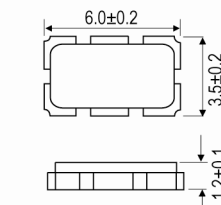
- Frequency\*
- Model\*
- Variant\*
- Frequency Tolerance (@25°C)\*
- Frequency Stability (over operating temperature range)\*
- Operating Temperature Range\*
- Load Capacitance\*
- Overtone\*
- Example  
20.0MHz 3SMX-A  
50/50/-10 to 60C/10 FUND

### Compliance

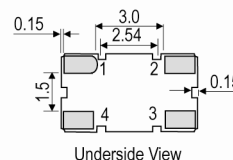
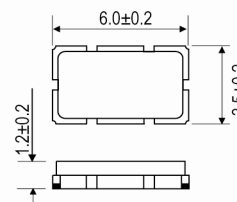
- RoHS Status (2015/863/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): 2



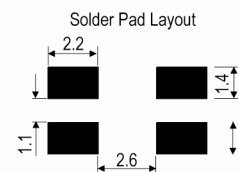
Outline (mm) -A = A 2 pad



Outline (mm) -B = B 4 pad



- Pad Connections
1. Crystal
  2. N/C / GND
  3. Crystal
  4. N/C / GND



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#### Packaging Details

- Pack Style: Reel      Tape & reel in accordance with EIA-481-D  
Pack Size: 1,000
- Pack Style: Bulk      Loose in bulk pack  
Pack Size: 100

#### Electrical Specification - maximum limiting values

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Over Tone Order	ESR
		°C	ppm		Ω
9.0MHz	11.999999MHz	-10 to 60	±50	Fundamental	80
12.0MHz	15.999999MHz	-10 to 60	±50	Fundamental	60
16.0MHz	50.0MHz	-10 to 60	±50	Fundamental	40
40.0MHz	67.0MHz	-10 to 60	±50	3rd Overtone	70

\*Stability Maximum values ±100ppm

*This document was correct at the time of printing; please contact your local sales office for the latest version.*  
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