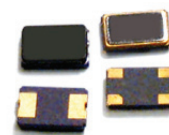


Miniature Quartz Crystal Ceramic SMD

F6 FX


Actual Size



Product Description

The F6 2-pad and FX 4-pad Series incorporate a sub-miniature AT-cut strip crystal resonator housed in a 3.5x6 mm ceramic package. These compact crystals are ideal for surface mounting in densely-populated PCB applications.

Product Features

- Tight tolerance & stability
- Rugged construction and excellent mechanical shock resistance
- Extremely compact SMD package
- Available on tape & reel; 12mm tape, 1000pcs per reel
- FX: Pb-free and RoHS/Green compliant
- F6: ROHS compliant

Typical Applications

- Ideally suited for disc drives, PCMCIA, PCs and hand-held electronic products

Common Frequencies

Contact SaRonix for additional frequencies

38.8000 MHz,	62.5000 MHz
66.0000 MHz	66.6667 MHz
75.0000 MHz	77.7600 MHz
100.0000 MHz	106.2500 MHz
125.0000 MHz	133.0000 MHz
150.0000 MHz	155.5200 MHz
156.2500 MHz	160.0000 MHz

Frequency Range:

- 6.0000 MHz to 56.0000 MHz (Fundamental)
- 30.0000+ MHz to 56.0000 MHz (3rd Overtone)

Temperature Range:

- Operating: -20 to +70°C, -40 to +85°C
- Storage: -40 to +85°C

Temperature Tolerance:

- ± 10 , ± 20 , ± 30 , ± 50 ppm, -20 to +70°C
- ± 30 , ± 50 ppm, -40 to +85°C

Characteristics at 25°C $\pm 3^\circ\text{C}$:

- Frequency Calibration: ± 10 , ± 20 , ± 30
- Load Capacitance: 10 to 32pF or Series Resonance
- Effective Series Resistance:
- Fundamental: 20 Ω to 80 Ω depending on frequency
- 3rd Overtone: 60 Ω to 80 Ω depending on frequency
- Standard Drive Level: 10 μW
- Shunt Capacitance: 5pF max

Aging at 25°C, First Year:

- ± 3 ppm Max.

Mechanical:

- ± 5 ppm max after 3 drops from 75cm onto a hard wooden board
- Solderability: JESD22-B102-D Method 2 (Preconditioning E)
- Vibration: ± 5 ppm max sine vibration 10~55Hz, sweep period 1-2 minutes, amp. 1.5mm, 3 mutually perpendicular planes each 1 hour
- Solvent Resistance: MIL-STD-202, Method 215
- Resistance to Soldering Heat: J-STD-020C Table 5-2 Pb-free devices (3 cycles max)

Environmental:

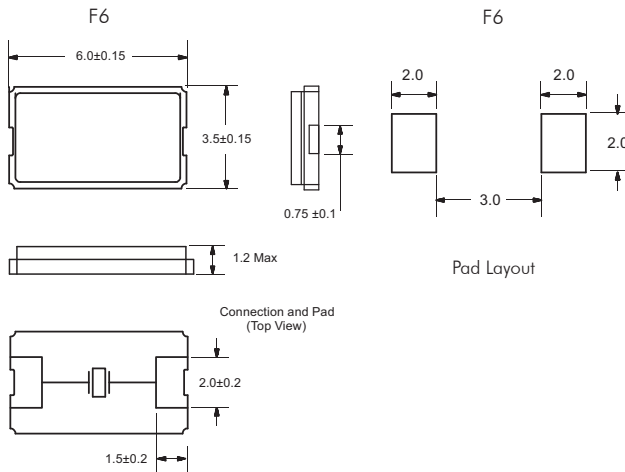
- Gross Test Leak: MIL-STD-883, Method 1014, Condition C
- Fine Test Leak: MIL-STD-883, Method 1014, Condition A2
- Thermal Shock: MIL-STD-883, Method 1011, Condition A
- Moisture Resistance: MIL-STD-883, Method 1004

Reflow Temperature:

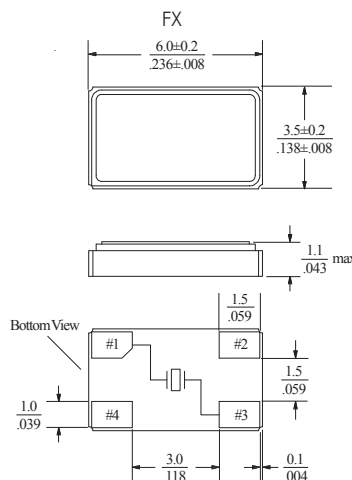
- 260°C Max, 10 sec max

Mechanical Drawings: 6 x 3.5 Ceramic SMD

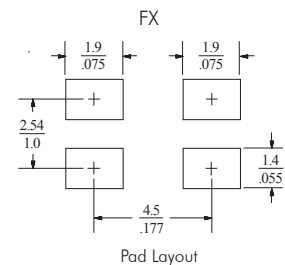
Package Details



Pad Layout



Pads #2 and #4 are connected to metal lid for shielding to minimize EMI



Scale: None (Dimensions in $\frac{mm}{inches}$)

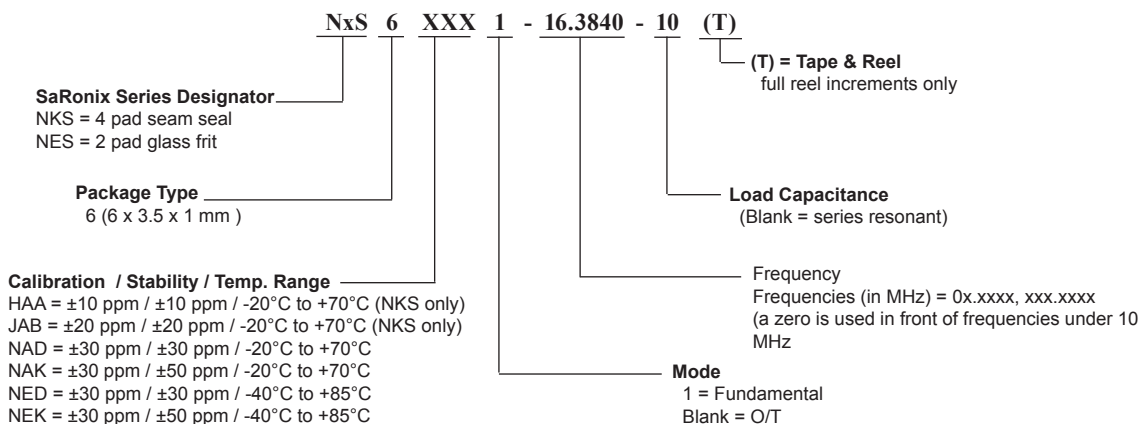
New Part Number Example

F6 **163** **0001**
A **B** **C**
A = Product Family
B = Frequency Code
C = Specification Code

FX **163** **0001**
A **B** **C**
A = Product Family
B = Frequency Code
C = Specification Code

Note: After July 1, 2007, a Saronix - eCera part number following the above format will be assigned upon confirmation of exact customer requirements.

Legacy Ordering Information



Part Number Example:

Spec: Freq 8.1234MHz, ±30ppm calib, ±30ppm stab, -20 to +70°C, 16pF, T&R = NKS6NAD1-08.1234-16(T)