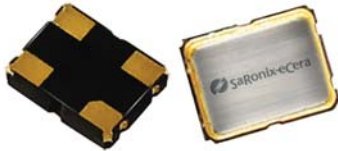


Miniature Quartz Crystal Ceramic SMD

FH



2.5 x 2.0mm Ceramic SMD

Product Features

- Rugged AT-cut crystal construction
- Miniature 2.5 x 2.0mm ceramic package
- Available on tape & reel; 8mm tape, 3000 units per reel
- Pb-free and RoHS/Green compliant

Product Description

The 4-pad FH Series seam seal devices incorporate a sub-miniature AT-cut crystal resonator housed in a standard 2.5 x 2.0mm ceramic package. These compact crystals are ideal for surface mounting in densely populated or small form-factor PCB applications.

Typical Applications

- Portable / Hand-held PCs
- PCMCIA Cards
- Notebook PC
- Bluetooth
- Wireless LAN
- UWB
- ZigBee
- USB
- GPS
- HDD
- GSM, CDMA, GPRS

Frequency Range:

- 16 MHz to 66.0000 MHz (Fundamental)

Characteristics at 25°C ±2°C:

- Frequency Calibration Tolerance: ±10ppm, ±20ppm, or ±30ppm
- Load Capacitance: 7 to 32pF or Series Resonance
- Effective Series Resistance (ESR):
 - 150Ω max (16 to 19.9 MHz)
 - 80Ω max (20 to 29.9 MHz)
 - 60Ω max (30 to 66 MHz)
- Drive Level: 10μW typ. (100μW max)
- Shunt Capacitance: 5pF Max

Temperature Range:

- Operating: -20 to +70°C or -40 to +85°C
- Storage: -55 to +125°C

Temperature Stability:

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

Aging at 25°C, First Year:

- ±3ppm Max

Reflow Temperature:

- 260°C Max, 10 seconds Max

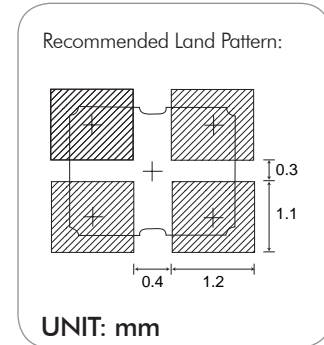
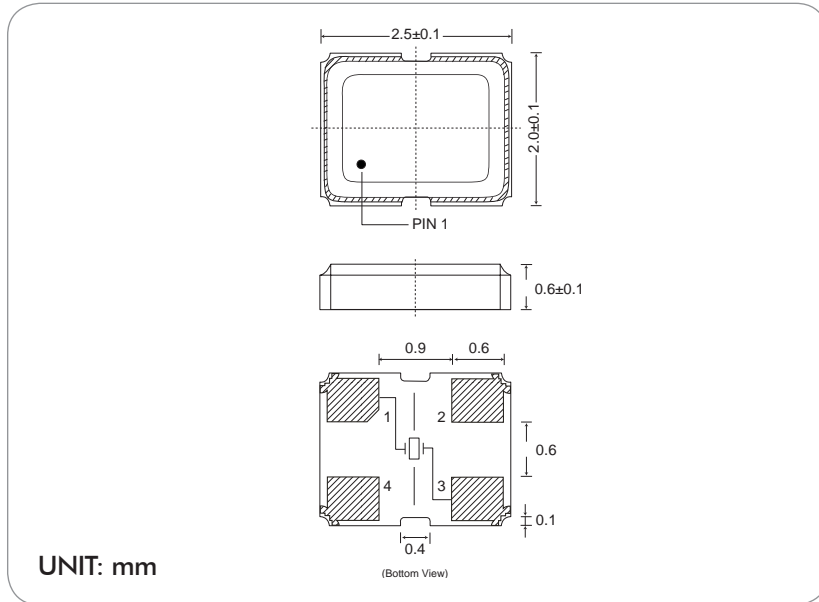
Mechanical

- Shock: JESD22-B104 Condition B
- Solderability: J-STD-002
- Terminal Strength: MIL-STD-883 Method 2004
- Vibration: JESD22-B103
- Solvent Resistance: JESD22-B107
- Resistance to Soldering Heat: J-STD-020C Table 5-2 Pb-free devices (3 cycles max)

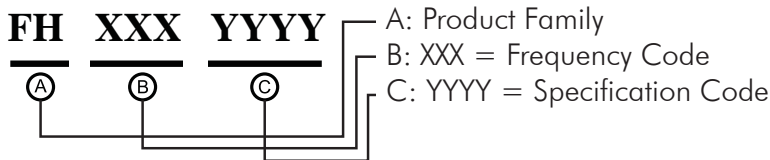
Environmental

- Gross Test Leak: JESD22-A109, Condition C
- Fine Test Leak: JESD22-A109, Condition A1
- Moisture Resistance: JESD22-A113
- Insulation Resistance: 500 MΩ min (100 VDC)

Mechanical Drawings:

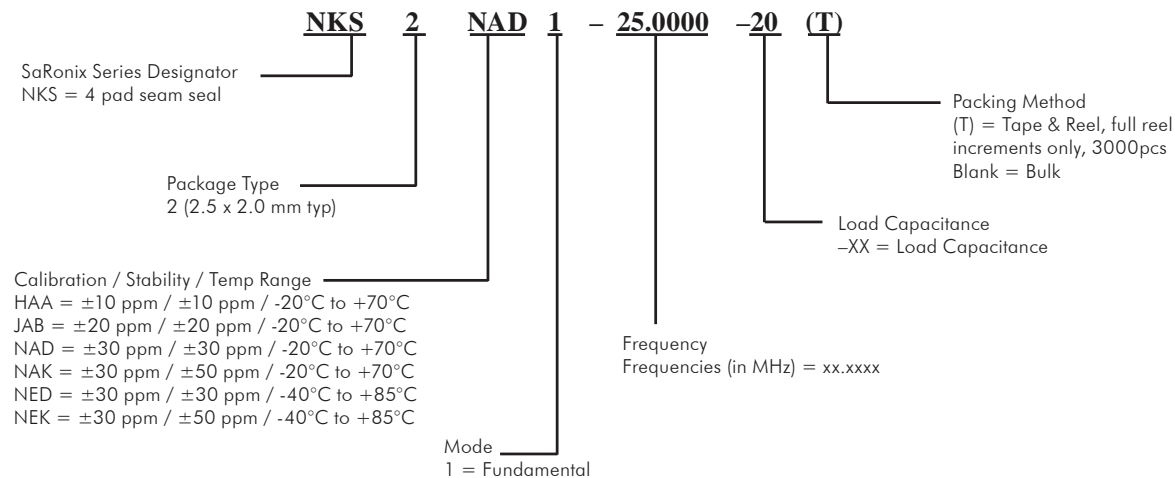


Part Ordering Information:



Following the above format, Saronix-eCera part numbers will be assigned upon confirmation of exact customer requirements.

Legacy Ordering Information - For Reference Only:



Part Number Example:

Spec: Freq 20MHz, ±30ppm calib, ±30ppm stab, -20 to +70°C, 16pF, T&R = NKS2NAD1-20.0000-16(T)

Mouser Electronics

Authorized Distributor

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Diodes Incorporated:

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[FH4000079](#) [FH4000040](#) [FH4000041](#) [FH4000076](#) [FH2000046](#) [FH2500016](#) [FH4000023](#) [FH4000032A](#) [FH3200012](#)
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[FH1600031](#) [FH2000041](#) [FH2500011](#) [FH2400047](#) [FH1600017](#) [FH1600054](#) [FH2000025](#) [FH2000039](#) [FH2500001](#)
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[FH1200018](#) [FH2860003](#) [FH2700018](#) [FH3200007](#) [FH5000013](#) [FH2400037](#) [FH1600001](#) [FH4500001](#) [FH4000036](#)
[FH2500038](#) [FH1200013](#) [FH4000072](#) [FH2500035](#) [FH2500037](#) [FH3000013](#) [FH2710002](#) [FH1220004](#) [FH3740007](#)
[FH4000064](#) [FH1600021](#)