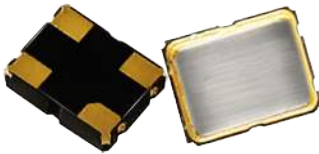


Miniature Quartz Crystal Ceramic SMD

FH



2.5 x 2.0mm Ceramic SMD

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.

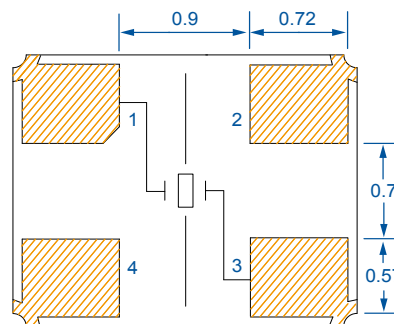
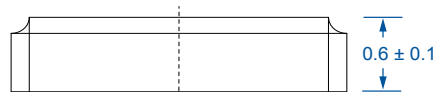
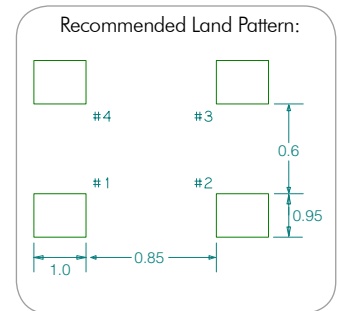
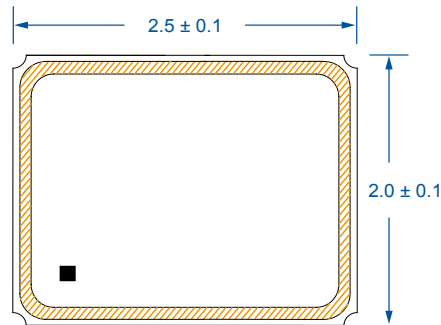
Product Features

- 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

Typical Applications

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

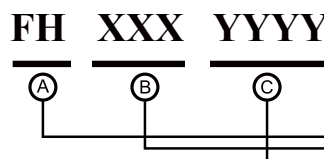
Package: (Scale: non; dimensions are in mm)



Pin Functions:

Pin	Function
1	Xtal
2	Case
3	Xtal
4	Case

Part Ordering Information:



- A: Product Family
- B: XXX = Frequency Code
- C: YYYY = Specification Code

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

Miniature Quartz Crystal Ceramic SMD FH



A product Line of
Diodes Incorporated



FH Series Quartz Crystal
Legacy NKS2 Series | 2.5 x 2.0mm

Frequency Range:

- 12 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 (12 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 or -40 to +125°C
- Storage: -55 to +125

Temperature Stability:

- ±10ppm, ±20ppm, ±30ppm, or ±50ppm (-20 to +70°C)
- ±30ppm, or ±50ppm (-40 to +85°C)
- ±50ppm, or ±70ppm (-40 to 125°C)

Aging at 25°C, First Year:

- ±3ppm Max

Reflow Temperature:

- 260°C Max, 10 seconds Max

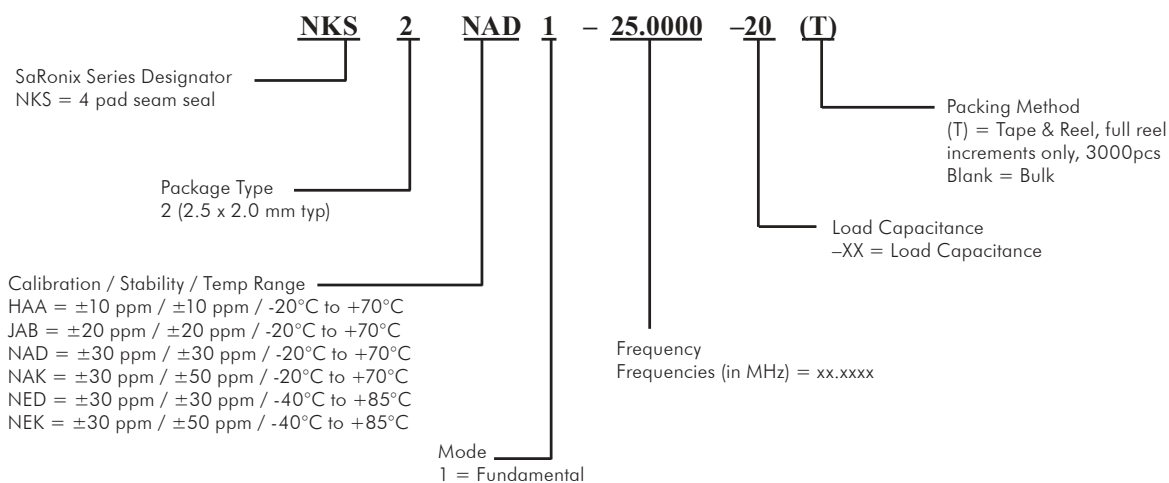
Mechanical

- 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)

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)

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