

Quartz Crystal Ceramic SMD





5.0 x 3.2mm Ceramic SMD

Product Features

- Rugged AT-cut crystal construction
- Miniature 5.0 x 3.2mm ceramic package
- Available on tape & reel; 12mm tape, 1000 units per reel
- FY: Pb-free and RoHS/Green compliant
- F9: RoHS compliant* (* per #5, Annex of Directive 2002/05/EC)

Product Description

The 2-pad F9 Series glass seal and the 4-pad FY Series seam seal devices incorporate a sub-miniature AT-cut crystal resonator housed in a standard 5.0 x 3.2mm ceramic package. These compact crystals are ideal for surface mounting in densely populated PCB applications.

Applications

- PCMCIA Cards
- Portable / hand-held PCs
- Notebook PC
- Wireless LAN
- Portable Multimedia Devices
- GPS
- HDD
- Bluetooth
- USB Dongle

Frequency Range:

- 8.0000 MHz to 50.0000 MHz (Fundamental)
- 40.000 MHz to 125.0000 MHz (3rd Overtone)

Characteristics at 25°C ±2°C:

- Frequency Calibration Tolerance: ±10ppm, ±20ppm, or ±30ppm
- Load Capacitance: 8 to 32pF or Series Resonance
- Effective Series Resistance (ESR):

Fundamental: 40 to 100Ω max depending on frequency Overtone: 60 to 80Ω max depending on frequency

- Drive Level: $10\mu W$ typ. $(100\mu W \text{ max})$
- Shunt Capacitance: 5pF Max

Temperature Range:

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

Temperature Stability:

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

Aging at 25°C, First Year:

• ±3ppm Max

Reflow Temperature:

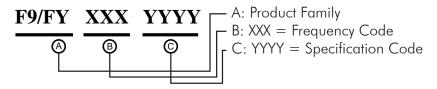
• 260°C Max, 10 seconds Max

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Quartz Crystal Ceramic SMD F9

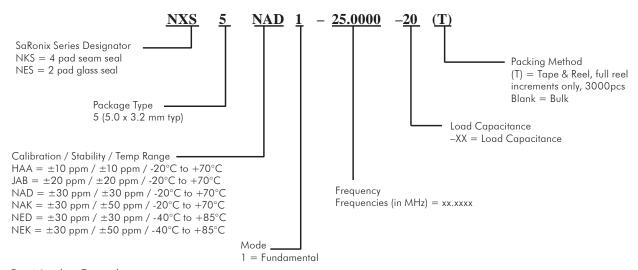
F9/FY Series Quartz Crystal Legacy NES5/NKS5 Series | 5.0 x 3.2mm

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 18.1234MHz, \pm 30ppm calib, \pm 30ppm stab, -20 to +70°C, 16pF, T&R = NKS5NAD1-18.1234-16(T)

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: $500 M\Omega \min (100 VDC)$

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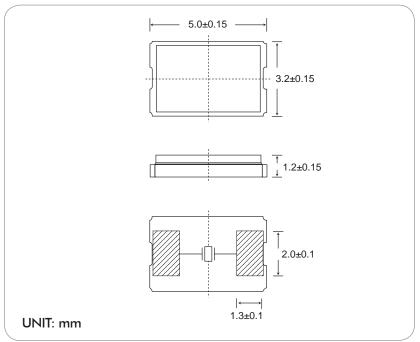
Quartz Crystal Ceramic SMD F9

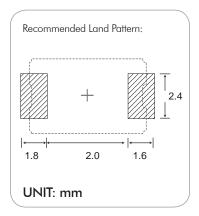




F9/FY Series Quartz Crystal Legacy NES5/NKS5 Series | 5.0 x 3.2mm

Mechanical Drawings: F9 Series





Mechanical Drawings: FY Series

