

FL Series Quartz Crystal Legacy NKS3 Series 3.2 x 2.5mm

Miniature Quartz Crystal Ceramic SMD



3.2 x 2.5mm Ceramic SMD

Product Features

- Rugged AT-cut crystal construction
- Miniature 3.2 x 2.5mm ceramic package
- Available on tape & reel; 8mm tape, 3000 units per reel
- Pb-free and RoHS/Green compliant

Product Description

The 4-pad FL Series seam seal devices incorporate a sub-miniature AT-cut crystal resonator housed in a standard 3.2 x 2.5mm ceramic package. These compact crystals are ideal for surface mounting in densely populated or small form-factor PCB applications.

Typical Applications

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

Frequency Range:

• 12.0000 MHz to 66.0000 MHz (Fundamental)

Characteristics at $25^{\circ}C \pm 2^{\circ}C$:

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

80Ω max (12 to 19.9 MHz) 60Ω max (20 to 29.9 MHz) 40Ω max (30 to 66 MHz)

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

Temperature Range:

- Operating: –20 to $+70^{\circ}$ C or –40 to $+85^{\circ}$ C
- Storage: -55 to $+125^{\circ}C$

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 M Ω min (100 VDC)





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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 18.1234MHz, ±30ppm calib, ±30ppm stab, -20 to +70°C, 16pF, T&R = NKS3NAD1-18.1234-16(T)

