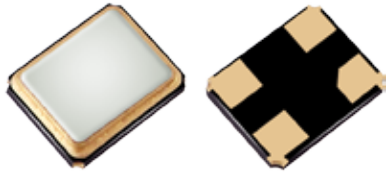


FL Series Quartz Crystal Legacy NKS3 Series 3.2 x 2.5mm

Miniature Quartz Crystal Ceramic SMD

FL


3.2 x 2.5mm Ceramic SMD

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.

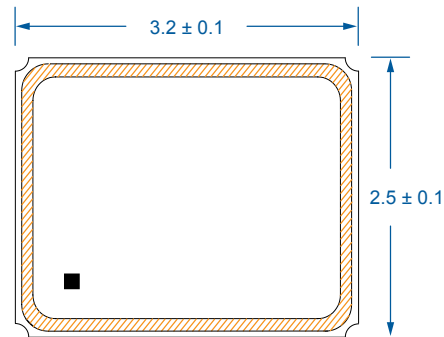
Product Features

- 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

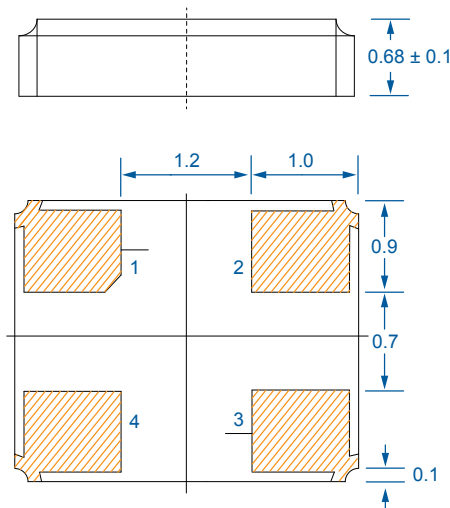
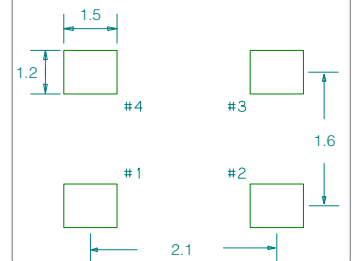
Typical Applications

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

Package: (Scale: none; dimensions are in mm)



Recommended Land Pattern:

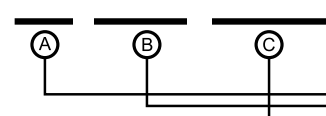


Pin Functions:

Pin	Function
1	Xtal
2	Case
3	Xtal
4	Case

Part Ordering Information:

FL XXX YYYY



- 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.

Frequency Range:

- 8 MHz to 66.0000 MHz (Fundamental)

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):
 - 500Ω max (8 to 11.9 MHz)
 - 80Ω max (12 to 19.9 MHz)
 - 60Ω max (20 to 29.9 MHz)
 - 40Ω 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°C

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

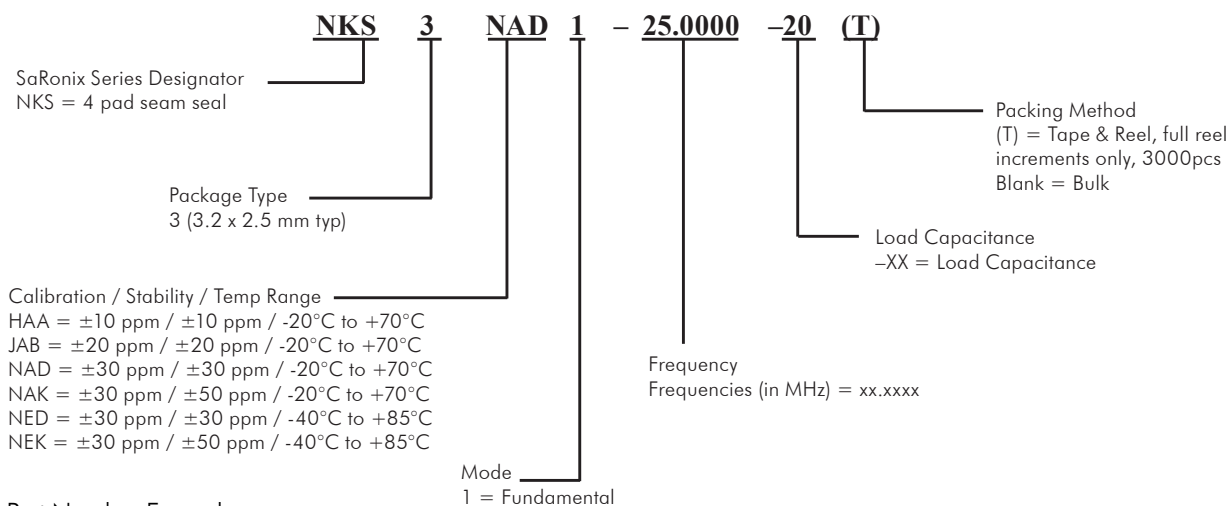
Mechanical

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

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Diodes Incorporated:

FL2400096	FL2500094	FL5400015	FL2500390	FL1200171	FL2500306	FL2700144	FL1220019	FL3640002
FL2600021	FL2500292	FL2500042	FL0800021	FL2500445	FL2000171	FL2000182	FL2500495	FL4000296
FL1200231	FL1200232	FL2450059	FL2500437	FL1000008	FL4800108	FL4800112	FL5000024	FL5000111
FL5200006	FL5400056	FL3900006	FL4000217	FL4000300	FL3840027	FL4000297	FL4000303	FL4910005
FL1200217	FL1470030	FL3740007	FL3840030Z	FL4800115	FL2500284	FL2500509	FL2600224	FL0800024
FL1430041	FL1470006	FL0800033	FL2400199	FL3800007	FL3800008	FL3840035	FL3840036	FL3840037
FL1300034	FL2400240	FL2450063	FL2600121	FL3300015	FL3740017	FL1200055	FL1470023	FL1600057
FL1600175	FL1600159	FL1200048	FL1200084	FL1200091	FL1220021	FL1600011	FL1600055	FL1600074
FL1600083	FL1600086	FL1600092	FL2000044	FL2000065	FL2000095	FL2000099	FL2000105	FL2050002
FL2400063	FL2400066	FL2400074	FL2400075	FL2400118	FL2500026	FL2500038	FL2500054	FL2500059
FL2500065	FL2500076	FL2500078	FL2500093	FL2500097	FL2500131	FL2500132	FL2500139	FL2500152
FL2500167								