

Actual Size ■

Product Description

The 4-pad NKS3 Series devices incorporate a sub-miniature AT-cut crystal resonator housed in a standard 3.2x2.5mm 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 3.2x2.5mm ceramic package
- Available on tape & reel; 16mm tape, 3000/reel
- Pb-free and ROHS/Green compliant

Typical Applications

- HDD
- PCMCIA Cards
- Portable / hand-held PCs
- Notebook PC
- GPS
- Bluetooth
- Wireless LAN
- GSM

Common Frequencies (MHz):

13.5600	26.0000
14.3181	27.0000
14.7456	28.6363
15.3600	31.2500
16.0000	32.0000
16.3840	32.7680
19.2000	33.0000
20.0000	37.5000
20.4800	39.0625
22.1184	40.0000
24.0000	48.0000
24.5760	53.1250
25.0000	54.0000

Frequency Range:

- 14.3181 MHz to 54.0000 MHz (Fundamental)

Characteristics at 25°C ±2°C:

- Frequency Calibration Tolerance: ±10ppm, ±20ppm, ±30ppm
- Load Capacitance: 14 to 20pF
- Effective Series Resistance:
 - 80Ω max (14 to 19.9 MHz)
 - 60Ω max (20 to 29.9 MHz)
 - 40Ω max (30 to 54 MHz)
- Drive Level: 10μW typ. (100μW max)
- Shunt Capacitance: 5pF Max.

Temperature Range:

- Operating: -20 to +70°C or -40 to +85°C (as specified)
- Storage: -40 to +85°C

Temperature Stability (as specified):

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

Aging at 25°C, First Year:

- ±3ppm Typ., ±5ppm Max.

Mechanical:

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

Environmental:

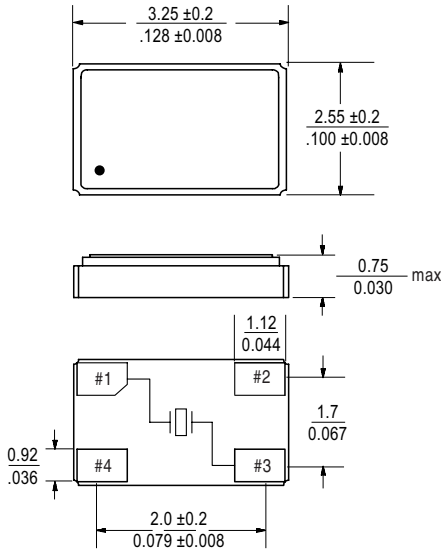
- Gross Test Leak: JESD22-A109 (Condition C)
- Fine Test Leak: JESD22-A109 (Condition A1)
- Moisture Resistance: JESD22-A113

Reflow Temperature:

- 260°C Max

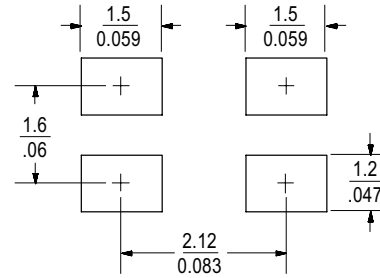
Mechanical Drawings: 2.5 x 3.2 Ceramic

Package Details



Bottom View

Recommended Land Pattern

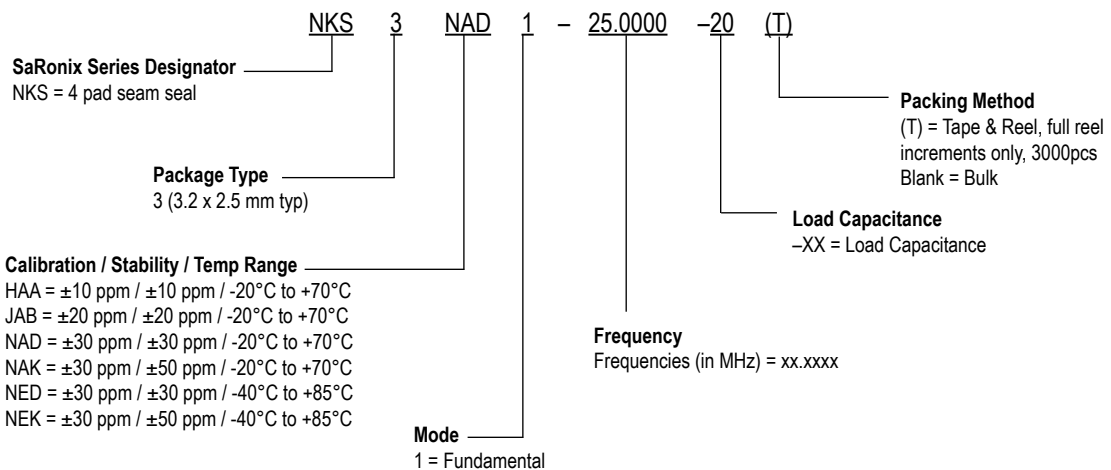


Scale: None (Dimensions $\frac{\text{mm}}{\text{inches}}$)

Package Top Marking

Marking Line 1: xx.xxxx (frequency up to 6 digits including decimal point)
 Marking Line 2: •S YWWX (pin 1, SaRonix, date code, origin)

Ordering Information



Part Number Example:

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