SaRonix-eCera™

FP Series Quartz Crystal
Legacy NKS7 Series
7.0 x 5.0mm

Quartz Crystal Ceramic SMD

FP

7.0 x 5.0mm Ceramic SMD

Product Features

- Rugged AT-cut crystal construction
- Extremely compact SMD package
- Available on tape & reel; 16mm tape, 1000 units per reel
- FP: Lead-free and RoHS / Green compliant

Product Description

The 4-pad FP Series seam seal devices incorporate a sub-miniature AT-cut strip crystal resonator housed in a 7.0 x 5.0mm ceramic package. These compact crystals are ideal for surface mounting in densely-populated PCB applications.

Applications

Ideally suited for disc drives, PCMCIA, PCs and hand-held products.

Frequency Range:

- 6.0000 MHz to 56.0000 MHz (Fundamental)
- 30.0000 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: 20 to 120Ω max depending on frequency
  - 3rd Overtone: 50 to 80Ω max depending on frequency
- Drive Level: 10μW typ. (500μW max)
- Shunt Capacitance: 7pF max

Temperature Range:

- Operating: –20 to +70°C or -40 to +85°C
- Storage: –55 to +125°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: ±5ppm max after 3 drops from 75cm onto a hard wooden board
- Solderability: JESD22-B102-D Method 2 (Preconditioning E)
- Vibration: ±5ppm max sine vibration 10~55Hz, sweep period 1-2 minutes, amplitude 1.5mm, 3 mutually perpendicular planes each 1 hour
- Solvent Resistance: MIL-STD-202, Method 215
- Resistance to Soldering Heat: J-STD-020C Table 5-2 Pb-free devices (3 cycles max)

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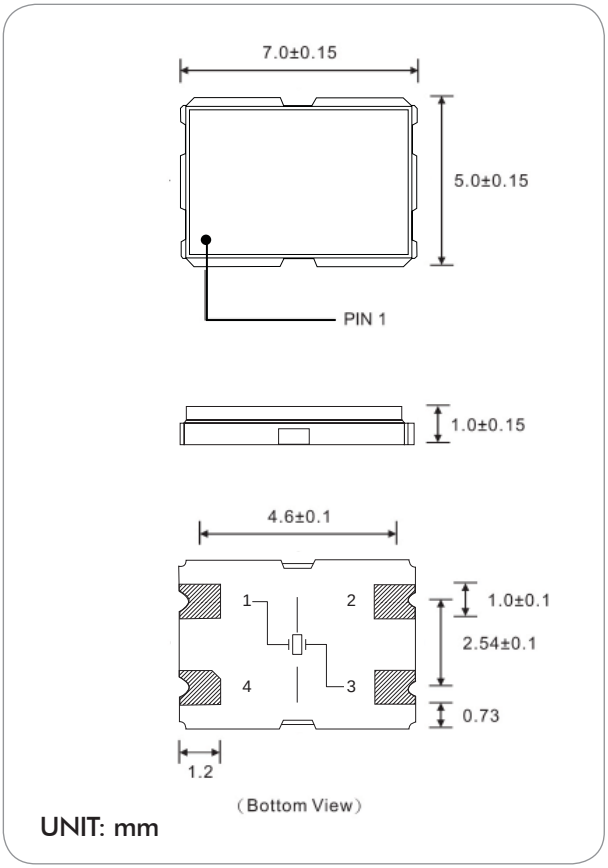
Environmental:

- Gross Test Leak: MIL-STD-883, Method 1014, Condition C
- Fine Test Leak: MIL-STD-883, Method 1014, Condition A2
- Thermal Shock: MIL-STD-883, Method 1011, Condition A
- Moisture Resistance: MIL-STD-883, Method 1004

Mechanical Drawings:



Part Ordering Information:

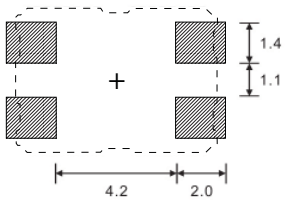
FP XXX YYYY

(A) (B) (C)

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.

Recommended Land Pattern:



UNIT: mm

Legacy Ordering Information - For Reference Only:

NKS 7 XXX 1 - 16.3840 - 10 (T)

SaRonix Series Designator
NKS7 = 4 pad seam seal

Package Type
7 (7 x 5 x 1.3 mm)

Calibration / Stability / Temp. Range
HAA = ±10 ppm / ±10 ppm / -20°C to +70°C (NKS only)
JAB = ±20 ppm / ±20 ppm / -20°C to +70°C (NKS only)
NAD = ±30 ppm / ±30 ppm / -20°C to +70°C(OBSOLETE)
NAK = ±30 ppm / ±50 ppm / -20°C to +70°C
NED = ±30 ppm / ±30 ppm / -40°C to +85°C
NEK = ±30 ppm / ±50 ppm / -40°C to +85°C

1 = Fundamental
Blank = O/T

Frequency Code
Frequencies (in MHz) = 0x.xxxx, xxx.xxxx
(a zero is used in front of frequencies under 10 MHz

Load Capacitance
(Blank = series resonant)

(T) = Tape & Reel
full reel increments only

Part Number Example:

Spec: Freq 8.1234MHz, ±30ppm calib, ±30ppm stab, -20 to +70°C, 16pF, T&R = NKS7NAD1-08.1234-16(T)

Mouser Electronics

Authorized Distributor

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

Diodes Incorporated:

FP0810005 FP2000012 FP2400003 FP2450003 FP0800013 FP1200042 FP2500043 FP2500049 FP0600038
FP0600039 FP6400002 FP0600001 FP1100002 FP1200015 FP1200040 FP2450004 FP2500024 FP1470006
FP1530002 FP2500053 FP2400019 FP0810004 FP1840008 FP2500054 FP2650002 FP0600026 FP0600027
FP0600035 FP0980008 FP1000018 FP1070001 FP2650003 FP2700006 FP2700025 FP0600002 FP0600041
FP0730001 FP0800046 FP4000004 FP1840019 FP3000010 FP3200008 FP0730016 FP2500045 FP1100003
FP1200039 FP1960002 FP2450039 FP2500058 FP2500068 FP0600044Q