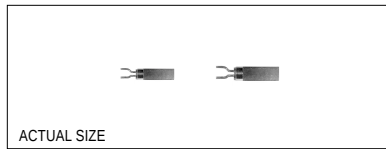


Technical Data

NSF Series



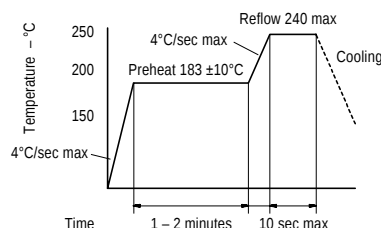
Description

The miniature NSF Series crystals are tuning forks resonating in the fundamental mode. Low power consumption and aging as well as high stability and reliability make these crystals ideal for any consumer and industrial application. They are manufactured using a photolithographic process and are housed in either 1.5 x 1.5 x 5 or 2 x 2 x 6 mm square tubular SMD packages. The unique square package design makes these crystals ideal for pick-and-place environments.

Applications & Features

- Ideal for portable applications, time of day clocks, communication equipment, pagers, cellular telephones, camcorders, micro computers or any consumer or industrial application
- pick-and-place environment friendly
Available on tape & reel; 16mm tape, 5000pcs per reel (NSF1) and 6000pcs per reel (NSF2)

Solder Reflow Guide



Frequency Range:	32.768 kHz
Frequency Calibration Tolerance @ 25°C:	±30ppm, others are available, contact SaRonix
Load Capacitance:	12.5pF, others are available, contact SaRonix
Operating Temperature:	-40 to +85°C (industrial), -55 to +85°C (military)
Storage Temperature:	+85°C
Drive Level:	1μW max
Motional Capacitance (C1):	1.8 to 2.8fF
Shunt Capacitance (C0):	0.7 to 1.5pF
Effective Series Resistance:	NSF1: 60kΩ typ, 80kΩ max NSF2: 70kΩ typ, 90kΩ max
Aging:	±3ppm max first year

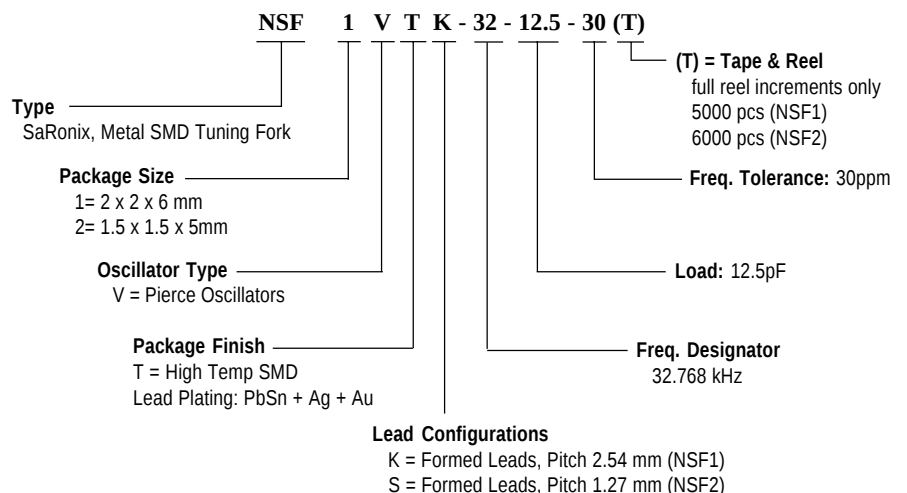
Mechanical:

Shock:	MIL-STD-883, Method 2002, Condition B
Solderability:	MIL-STD-883, Method 2003
Terminal Strength:	MIL-STD-202, Method 211, Conditions A & C
Vibration:	MIL-STD-883, Method 2007, Condition A
Solvent Resistance:	MIL-STD-202, Method 215
Resistance to Soldering Heat:	MIL-STD-202, Method 210, Condition I or J

Environmental:

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

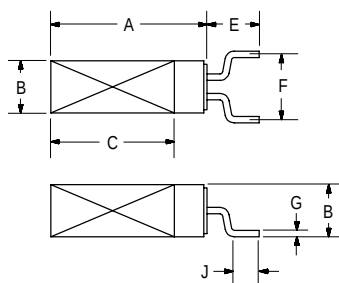
Part Numbering Guide



Technical Data

NSF Series

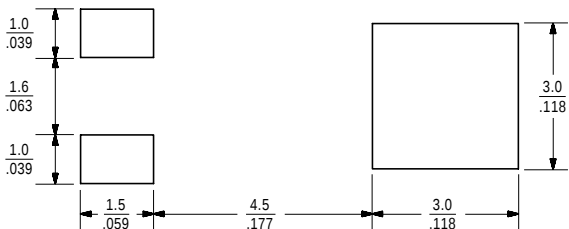
Package Details



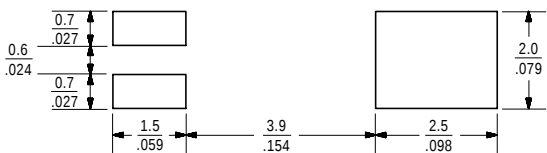
REF	NSF1	NSF2
A	$\frac{6.1}{0.24}$	$\frac{5.0}{0.20}$
B	$\frac{2.0}{0.08}$	$\frac{1.5}{0.06}$
C	$\frac{4.9}{0.19}$	$\frac{4.2}{0.16}$
E	$\frac{2.0}{0.08}$	$\frac{1.9}{0.07}$
F	$\frac{2.54}{0.10}$	$\frac{1.27}{0.05}$
G	$\frac{0.2}{0.01}$	$\frac{0.2}{0.01}$
J	$\frac{1.0}{0.04}$	$\frac{1.0}{0.04}$

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

Recommended Land Pattern



NSF1



NSF2

All specifications are subject to change without notice.