Technical Data

NSF Series

ACTUAL SIZE

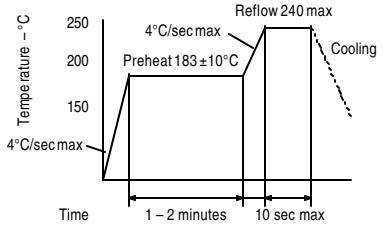
Description

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

Solder Reflow Guide



Frequency Range:	32.768 kHz
Frequency Calibration Tolerance @ 25°C:	±30ppm, others are available, contact SaRonix
Load Capacitance:	10 pF, 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 (C_1):	1.8 to 2.8fF
Shunt Capacitance (C_0):	0.7 to 1.5pF
Effective Series Resistance:	50kΩ typ, 100kΩmax
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

NSF 1 V T K - 32 - 10 - 30

Type
SaRonix, Metal SMD Tuning Fork

Package Size
1= 2 x 2 x 6 mm
2= 1.5 x 1.5 x 5mm

Oscillator Type
V = Pierce Oscillators

Package Finish
T = High Temp SMD
Lead Plating: PbSn + Ag + Au

Lead Configurations
K = Formed Leads, Pitch 2.54 mm
S = Formed Leads, Pitch 1.27 mm

Freq. Designator
32.768 kHz

Load: 10pF

Freq. Tolerance: 30ppm

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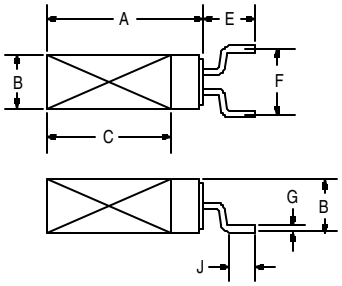
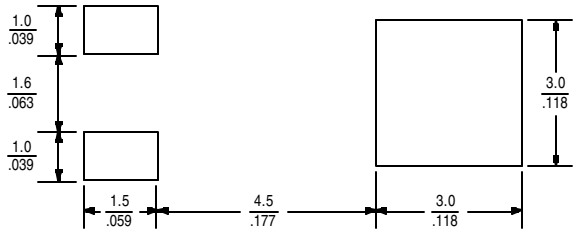
Package Details



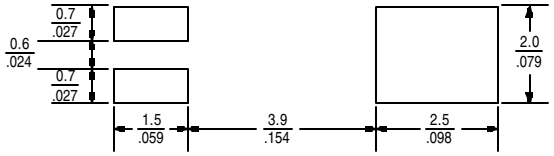
REF	NSF1	NSF2
A	6.1 / 0.24	5.0 / 0.20
B	2.0 / 0.08	1.5 / 0.06
C	4.9 / 0.19	4.2 / 0.16
E	2.0 / 0.08	1.9 / 0.07
F	2.54 / 0.10	1.27 / 0.05
G	0.2 / 0.01	0.2 / 0.01
J	1.0 / 0.04	1.0 / 0.04

Scale: None (Dimensions in mm / inches)

Recommended Land Pattern



NSF1



NSF2

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