

Technical Data

NES7 / NLS7 Series



Description

The 2 pad NES7 and 4 pad NLS7 Series incorporate a sub-miniature AT-cut strip crystal resonator housed in a standard 5x7 mm ceramic package. These compact crystals are ideal for surface mounting in densely-populated PCB applications.

Applications & Features

- Rugged AT-cut crystal construction
- Miniature 5x7 ceramic package
- Networking
- Disc Drives
- PCMCIA Cards
- Portable and hand-held PCs
- Available on tape & reel; 16mm tape, 1000pcs per reel

Frequency Range:	6.0000 MHz to 30.0000 MHz (Fundamental) 30.0000+ MHz to 80.0000 MHz (3rd Overtone)
Temperature Range:	
Operating:	-20 to +70°C, -40 to +85°C
Storage:	-40 to +85°C
Temperature Stability Tolerance:	±50ppm, -20 to +70°C standard, see part number builder for options
Characteristics @ 25°C ±2°C:	
Freq. Calibration Tolerance:	±30, ±50 ppm
Load Capacitance:	12 to 32pF or Series Resonance
Effective Series Resistance:	70Ω max, 6 to 10 MHz 40Ω max, 10+ to 30 MHz 60Ω max, 30+ to 44.999 MHz 50Ω max, 45 to 80MHz
Drive Level:	10μW typ
Shunt Capacitance:	5pF max
Aging @ 25°C, First Year:	±3ppm typ, ±5ppm max
Mechanical:	
Shock:	MIL-STD-883, Method 2002
Solderability:	MIL-STD-883, Method 2003
Vibration:	MIL-STD-883, Method 2007
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
Fine Leak Test:	MIL-STD-883, Method 1014
Thermal Shock:	MIL-STD-883, Method 1011
Moisture Resistance:	MIL-STD-883, Method 1004

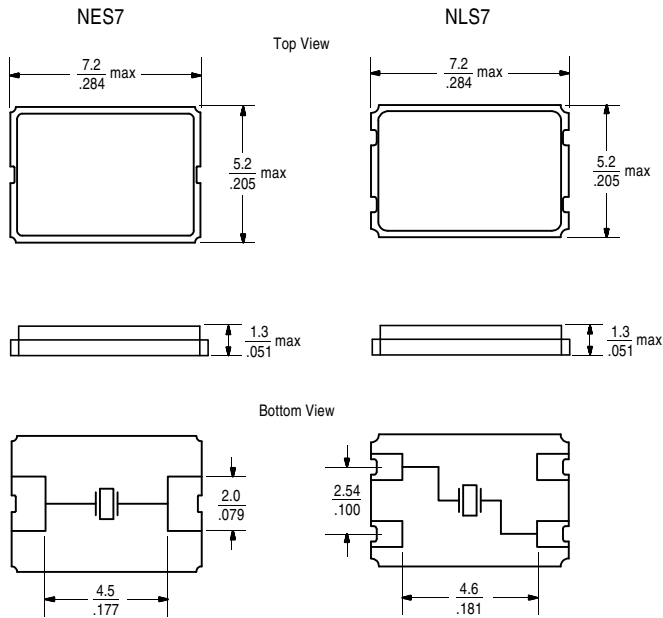
Part Numbering Guide

SaRonix Series Designator	NxS	7	xxx	x	- 08.1920	-xx	(T)	Packing Method
NES = 2 pad glass frit NLS = 4 pad glass frit								(T) = Tape & Reel, full reel increments only, 1000pcs Blank = Bulk
Package Type								Load Capacitance
7 (7 x 5 x 1.1 mm typ)								- xx = Load Capacitance Blank and no dash = Series Resonant
Calibration / Stability / Temp Range								Frequency
NAD = ±30ppm / ±30ppm / -20 to +70°C NB = ±30ppm / ±50ppm / -20 to +70°C LB = ±50ppm / ±50ppm / -20 to +70°C GHE = ±30ppm / ±50ppm / -40 to +85°C HHE = ±50ppm / ±50ppm / -40 to +85°C								Common Frequencies = 3 digit code, select code from list on page 2 or Custom Frequencies (in MHz) = 0x.xxxx, xx.xxxx, xxx.xxxx (a zero is used in front of frequencies under 10 MHz)
Mode								
1 = Fundamental 3 = 3rd Overtone								

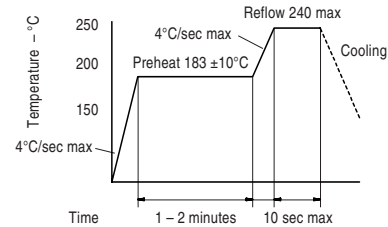
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Package Details



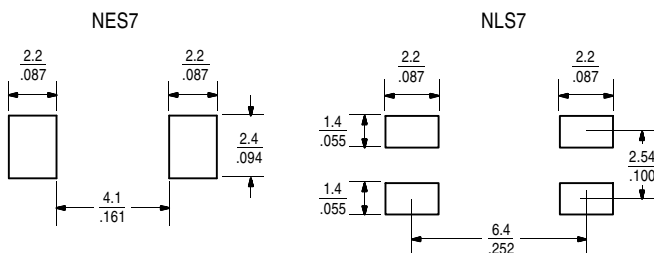
Solder Reflow Guide



Common Frequencies

Frequency	Code
Fundamental	
8.00000	080
9.83040	098
10.00000	100
12.00000	120
14.31818	143
14.74560	147
16.00000	160
20.00000	200
20.48000	204
24.57600	245
25.00000	250
27.00000	270
28.22400	282
3rd Overtone	
33.33300	333
40.00000	400

Recommended Land Patterns



Marking Format (exact location of items may vary)

Line 1:
 S = SaRonix Designator
 xxx = Calibration/Stability/Temp Code (2 or 3 letter code from part number builder)
 1 or 3: 1 = Fundamental, 3 = 3rd Overtone
 YYWW = Date Code

Line 2:
 xx.xxx = Frequency (up to 6 digits, including decimal point)
 - (dash) = separator (leave blank if Series)
 xx = 2 digit Load Capacitance (leave blank if Series)

Sxxx1YY WW
18.432-16

All specifications are subject to change without notice.

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