

Technical Data

49SMLB / SAB / SUB / SNC



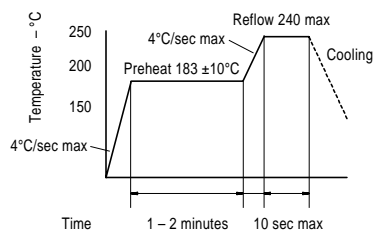
Description

The crystals are miniature AT or BT cut strip resonators housed in low profile packages for surface mounting. The parts present a proven metal package technology with a precision molded base and universal contact configuration.

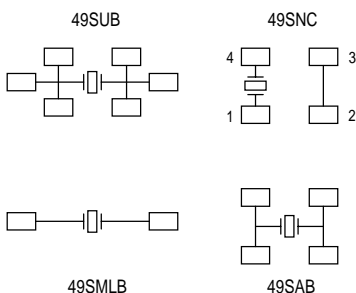
Applications & Features

- Low profile SMD
- AT or BT cut performance
- Resistance weld seal
- 49SNC is interchangeable with popular molded crystal configurations
- Available on tape & reel; 24mm tape, 1000pcs per reel

Solder Reflow Guide



Lead Configurations



Frequency Range:

3.2 MHz to 80 MHz
 3.2 to 29.999 MHz, AT Fundamental
 26.8 to 50.000 MHz, BT Fundamental
 30.0 to 80.000 MHz, AT 3rd OT

Temperature Range:

Operating: -20 to +70°C (-40 to +85°C available)
 Storage: -55 to +125°C

Frequency

Stability Tolerance: ±50 ppm -20 to +70°C (0 to -100 ppm for BT)

Characteristics at 25°C ±2°C:

Frequency Calibration Tolerance: ±50 ppm (tighter available)
 Load Capacitance: 16 pF to 32 pF or series resonance
 Effective Series Resistance: 30 to 200Ω (frequency dependent)
 Drive Level: 25μW correlation, 500μW max
 Shunt Capacitance: 7 pF max

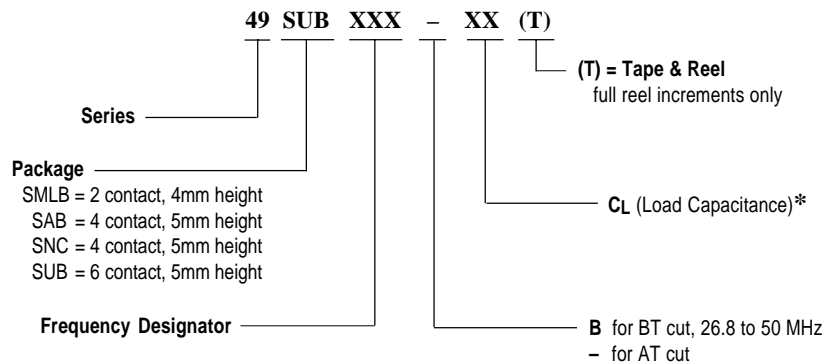
Mechanical:

Shock: MIL-STD-883, Method 2002, Condition B
 Solderability: MIL-STD-883, Method 2003
 Terminal Strength: MIL-STD-202, Method 211, Conditions A and 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 A
 Thermal Shock: MIL-STD-883, Method 1011, Condition A
 Moisture Resistance: MIL-STD-883, Method 1004

Part Numbering Guide:



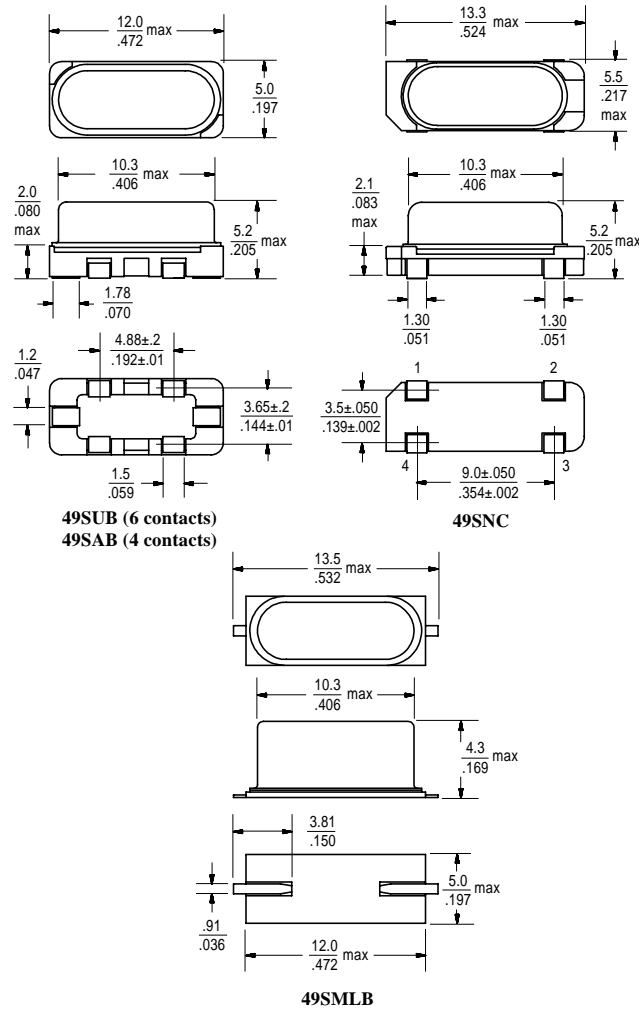
*If no CL value is specified, crystal is calibrated for series resonance.
 Example: 49SAB120 (Part marked: S120)

If CL value is specified, crystal is calibrated for parallel resonance.
 Example: 49SUB073-20 (Part marked: S073-20)

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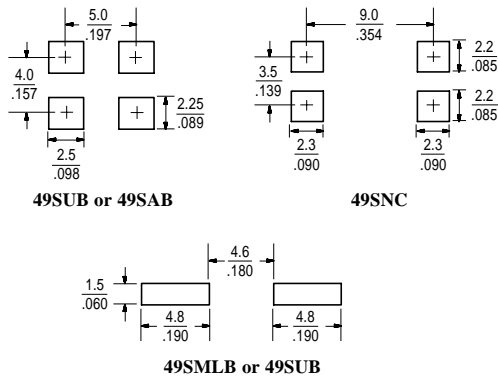
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Package Details



Scale: None (Dimensions in mm / inches)

Recommended Land Patterns



Common Frequencies:

The following selection chart lists series of crystals considered standard. Special frequencies and load calibrations are available upon request.

| Frequency MHz | Saronix Part Number | Max ESR (Fund) | Saronix Part Number | Max ESR (3rd OT) |
|---------------|---------------------|----------------|---------------------|------------------|
| 3.579545 | 49xxx035-18 | 200 | | |
| 3.686400 | 49xxx037 | 160 | | |
| 3.686400 | 49xxx037-20 | 160 | | |
| 4.000000 | 49xxx040 | 150 | | |
| 4.915200 | 49xxx049 | 150 | | |
| 5.068800 | 49xxx051 | 120 | | |
| 6.000000 | 49xxx060 | 100 | | |
| 7.372800 | 49xxx073-20 | 80 | | |
| 8.000000 | 49xxx080 | 80 | | |
| 10.000000 | 49xxx100 | 60 | | |
| 11.059200 | 49xxx111-20 | 60 | | |
| 12.000000 | 49xxx120 | 60 | | |
| 12.288000 | 49xxx122-20 | 60 | | |
| 14.318180 | 49xxx143-32 | 30 | | |
| 15.000000 | 49xxx150 | 30 | | |
| 16.000000 | 49xxx160 | 30 | | |
| 16.000000 | 49xxx160-20 | 30 | | |
| 18.000000 | 49xxx180-20 | 30 | | |
| 18.432000 | 49xxx184 | 30 | | |
| 19.660800 | 49xxx196-20 | 30 | | |
| 20.000000 | 49xxx200-20 | 30 | | |
| 20.000000 | 49xxx200-50 | 30 | | |
| 24.000000 | 49xxx240 | 30 | | |
| 24.000000 | 49xxx240-16 | 30 | | |
| 24.000000 | 49xxx240-20 | 30 | | |
| 24.576000 | 49xxx245 | 30 | | |
| 24.576000 | 49xxx245-16 | 30 | | |
| 25.000000 | 49xxx250 | 30 | | |
| 25.000000 | 49xxx250-16 | 30 | | |
| 26.800000 | 49xxx268B | 30 | | |
| 26.800000 | 49xxx268B16 | 30 | | |
| 28.000000 | 49xxx280B | 30 | | |
| 28.000000 | 49xxx280B16 | 30 | | |
| 29.491200 | 49xxx294B | 30 | | |
| 29.491200 | 49xxx294B16 | 30 | | |
| 30.000000 | 49xxx300B | 30 | 49xxx300 | 80 |
| 30.000000 | 49xxx300B16 | 30 | 49xxx300-16 | 80 |
| 32.000000 | 49xxx320B | 30 | 49xxx320 | 80 |
| 32.000000 | 49xxx320B16 | 30 | 49xxx320-16 | 80 |
| 32.256000 | 49xxx322B | 30 | 49xxx322 | 80 |
| 32.256000 | 49xxx322B22 | 30 | 49xxx322-22 | 80 |
| 33.000000 | 49xxx330B | 30 | | |
| 33.333000 | 49xxx333B | 30 | | |
| 33.868000 | 49xxx338B | 30 | | |
| 35.251200 | 49xxx352B | 30 | 49xxx352 | 80 |
| 35.251200 | 49xxx352B18 | 30 | 49xxx352-18 | 80 |
| 36.000000 | 49xxx360B | 30 | 49xxx360 | 80 |
| 36.000000 | 49xxx360B22 | 30 | 49xxx360-22 | 80 |
| 40.000000 | 49xxx400B | 30 | 49xxx400 | 80 |
| 40.000000 | 49xxx400B16 | 30 | 49xxx400-16 | 80 |
| 40.320000 | 49xxx403B | 30 | 49xxx403 | 80 |
| 40.960000 | | | 49xxx409 | 80 |
| 42.000000 | 49xxx420B | 30 | 49xxx420 | 80 |
| 42.000000 | 49xxx420B16 | 30 | 49xxx420-16 | 80 |
| 42.500000 | | | 49xxx425 | 80 |
| 45.000000 | 49xxx450B | 30 | 49xxx450 | 80 |
| 45.000000 | 49xxx450B16 | 30 | 49xxx450-16 | 80 |
| 46.000000 | 49xxx460B | 30 | 49xxx460 | 80 |
| 46.000000 | 49xxx460B16 | 30 | 49xxx460-16 | 80 |
| 48.000000 | | | 49xxx480 | 80 |
| 48.000000 | | | 49xxx480-16 | 80 |
| 50.000000 | 49xxx500B | 30 | 49xxx500 | 80 |
| 50.000000 | 49xxx500B16 | 30 | 49xxx500-16 | 80 |
| 52.416000 | | | 49xxx524 | 80 |
| 56.448000 | | | 49xxx564 | 80 |
| 60.000000 | | | 49xxx600 | 80 |
| 60.000000 | | | 49xxx600-16 | 80 |
| 66.666667 | | | 49xxx666 | 80 |
| 66.666667 | | | 49xxx666-16 | 80 |

All specifications are subject to change without notice.

DS-153 REV E