

Technical Data

49S Series



Description

The 49S Series is a miniature, AT or BT cut strip resonator crystal, housed in low profile 3.5mm high packaging. The Series meets the standard 0.200" board spacing.

Applications & Features

- Fibre Channel
- Ethernet
- 56K and Cable Modems
- ADSL
- ISDN
- Microcontrollers
- Remote Control Devices
- Network Processors
- Audio/Video
- Low profile 3.5mm high
- AT or BT cut performance
- Resistance weld seal

Frequency Range: 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 (standard - see part number builder for other options)
Storage: -55 to +125°C

Freq. Stability Tolerance: ±50ppm (0 to -100ppm for BT) -20 to +70°C, (standard - see part number builder for other options)

Characteristics at 25°C ±2°C:

Freq. Calibration Tolerance: ±50 ppm (standard - see part number builder for other options)
Load Capacitance: 12pF to 32pF or series resonance
Effective Series Resistance: 30 to 200Ω (frequency dependent)
Drive Level: 100μW correlation, 500μW max
Shunt Capacitance: 7pF max

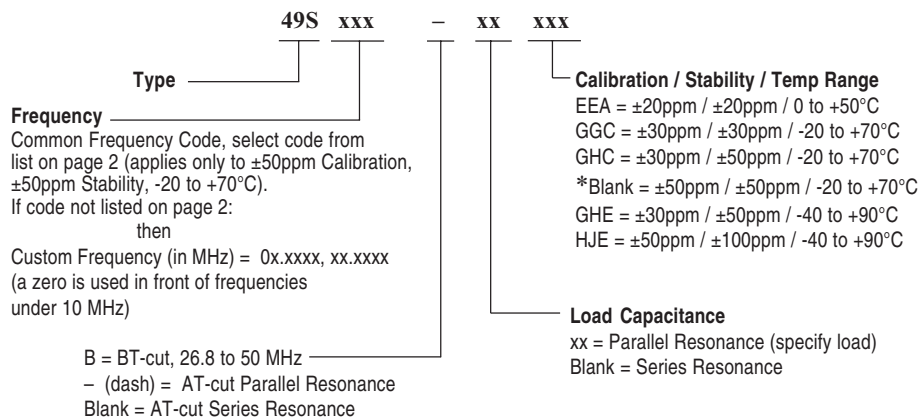
Mechanical:

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 B

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:



*no code used, as these specs designate standard configuration for this series

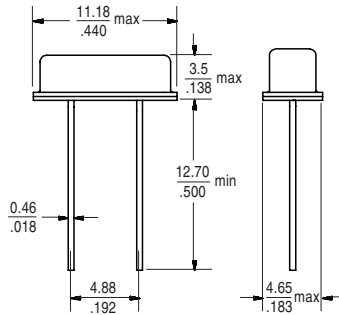
Part Number Examples:

Spec: Common Freq 20MHz, ±50ppm calib, ±50ppm stab, -20 to +70°C, 12pF = 49S200-12
Spec: Common Freq 20MHz, ±50ppm calib, ±50ppm stab, -20 to +70°C, Series = 49S200
Spec: Custom Freq 5.1234MHz, ±30ppm calib, ±30ppm stab, -20 to +70°C, 16pF = 49S05.1234-16GGC

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Package Details



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

Marking Format (exact location of items may vary)

If custom frequency, calibration, stability, temp use:

Line 1: S = SaRonix Designator

- (dash) = separator

xxx = Calib/Stability/Temp Code

YYWW = Date Code

Line 2: Frequency (up to 7 digits including decimal point)

BT-cut = B or

AT-cut Parallel = - (dash) or

AT-cut Series = leave Blank

xx = Load Capacitance (leave blank if Series)

S-xxxYYWW
24.5760-xx

If common frequency and standard specifications:

Line 1: S = SaRonix Designator

YYWW = Date Code

Line 2: Frequency (up to 7 digits including decimal point)

BT-cut = B or

AT-cut Parallel = - (dash) or

AT-cut Series = leave Blank

xx = Load Capacitance (leave blank if Series)

SYWW
24.5760-xx

Common Frequencies:

Common frequency codes:

to be used only with ± 50 ppm calibration, ± 50 ppm stability over -20 to $+70^{\circ}\text{C}$

Frequency MHz	Frequency Code	Max ESR (Fundamental)	Max ESR (3rd OT)
3.579545	035	200	
3.686400	037	160	
4.000000	040	150	
4.915200	049	150	
5.068800	051	120	
6.000000	060	100	
7.372800	073	80	
8.000000	080	80	
10.000000	100	60	
11.059200	111	60	
12.000000	120	60	
12.288000	122	60	
14.318180	143	30	
15.000000	150	30	
16.000000	160	30	
18.000000	180	30	
18.432000	184	30	
19.660800	196	30	
20.000000	200	30	
24.000000	240	30	
24.576000	245	30	
25.000000	250	30	
26.800000	268	30	
28.000000	280	30	
29.491200	294	30	
30.000000	300	30	80
32.000000	320	30	80
32.256000	322	30	80
33.000000	330	30	
33.333000	333	30	
33.868000	338	30	
35.251200	352	30	80
36.000000	360	30	80
40.000000	400	30	80
40.320000	403	30	80
40.960000	409		80
42.000000	420	30	80
42.500000	425		80
45.000000	450	30	80
46.000000	460	30	80
48.000000	480		80
50.000000	500	30	80
52.416000	524		80
56.448000	564		80
60.000000	600		80
66.666667	666		80

All specifications are subject to change without notice.

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