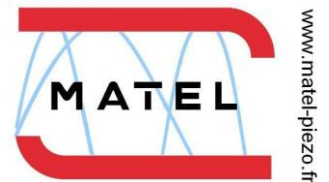


Through Hole Low Profile Crystal Units HC-49SA & HC-49SB



FEATURES
HC-49SA: 3.200 to 66.000 MHz HC-49SB: 8.000 to 66.000 MHz Case Name: HC49S
APPLICATION
Low cost Industry standard

Electrical specifications :

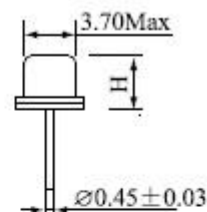
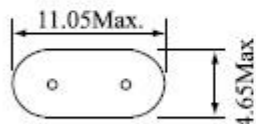
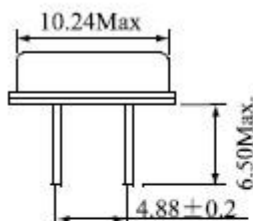
Parameters	Conditions	Min	Typ	Max	Units
Frequency Range	49SA	3.200		66.000	MHz
	49SB	8.000		66.000	MHz
Frequency Tolerance	At 25°C	± 10		± 50	ppm
Temperature Stability	Ref to 25°C	± 10		± 50	ppm
Operating Temperature Range		- 20*		+ 70*	°C
Storage Temperature Range		- 55		+ 125	°C
Shunt Capacitance				7	pF
Load Capacitance	Customer specified	10		Series	pF
Insulator Resistance	100 Vdc	500			M Ω
Drive Level			100		μW
Ageing	At 25°C per year	-5		+5	ppm

* Operating temperature range: -30°C to +85°C option.

Equivalent Series Resistance (ESR) and Mode of Vibration (Mode) :

Frequency Range (MHz)	Max (ESR) Ω	Mode	Frequency Range (MHz)	Max (ESR) Ω	Mode
3.200 to 4.499	150	Fundamental/AT	9.000 to 9.999	60	Fundamental/AT
4.500 to 5.999	120	Fundamental/AT	10.000 to 12.999	50	Fundamental/AT
6.000 to 6.999	100	Fundamental/AT	13.000 to 40.000	40	Fundamental/AT
7.000 to 7.999	90	Fundamental/AT	40.000 to 66.000	80	3rd Overtone
8.000 to 8.999	80	Fundamental/AT			

Mechanical Dimensions (mm) :



Part	"H"
HC-49SA	3.5 Max
HC-49SB	2.5 Max

Crystal Units
Through Hole

TYPE	HC-49SA & HC-49SB	REVISION	03	CHECKED	PB	DATE	06/10/2015
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Crystal Units Codification Part Numbering System



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HCX-TAB 12MHz F 20 A 3 3 S

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Package	Nominal Frequency (MHz)	Vibration Mode	Load Capacitance	Operating Temperature Range	Frequency Tolerance	Frequency Stability	Option
HCX-TAB HCX-1AB HCX-2SB HCX-3SB HCX-5SB HCX-5SA HCX-6SB HCX-6SA HCX-7SB HC-49SMA HC-49SMB HC-49SA HC-49SB MF-UM1 MF-UM5 HC-49U	Please enter the nominal frequency	F = AT-fund T = AT-3rd V = AT-5th B = BT-fund	00 = series 10 = 10pF 32 = 32pF Other load capacitance on request	A= 0°C to +50°C B= 0°C to +70°C C= -10°C to +60°C D= -10°C to +70°C E= -20°C to +70°C G= -30°C to +85°C M= -40° to +85°C R= -55° to +125°C	1=±10ppm 2=±20ppm 3=±30ppm 5=±50ppm 0=±100ppm X=±5ppm Y=±15ppm Z=±25ppm	1=±10ppm 2=±20ppm 3=±30ppm 5=±50ppm 0=±100ppm X=±5ppm Y=±15ppm Z=±25ppm	S = Insulator tab

TYPE	CODIFICATION	REVISION	02	CHECKED	PB	DATE	28/03/2012
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All specifications are subject to change without notice