

# Through Hole standard Crystal Units HC-49U



FEATURES
1.84 to 120 MHz Case Name: HC49
APPLICATION
Industrial Consumer

## Electrical specifications :

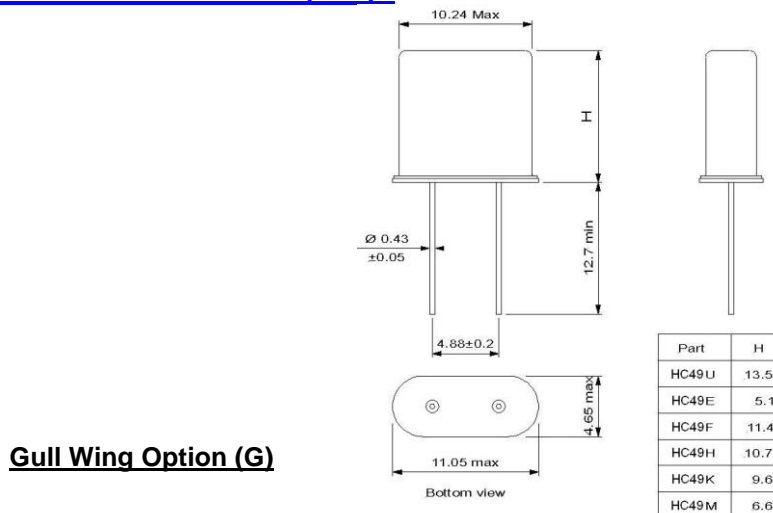
Parameters	Conditions	Min	Typ	Max	Units
Frequency Range		1.84		120	MHz
Frequency Tolerance	At 25°C	± 10		± 50	ppm
Temperature Stability	Ref to 25°C	± 10		± 50	ppm
Operating Temperature Range		- 20*		+ 70*	°C
Storage Temperature Range		- 40		+ 85	°C
Shunt Capacitance				7	pF
Load Capacitance	Customer specified	8		Series	pF
Insulator Resistance	100 Vdc	500			M Ω
Drive Level			100	500	μW
Ageing	At 25°C per year	-3		+3	ppm

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

Frequency Range (MHz)	Max (ESR) Ω	Mode	Frequency Range (MHz)	Max (ESR) Ω	Mode
1.84 to 1.99	500	Fundamental	7.00 to 7.99	40	Fundamental
2.00 to 2.99	400	Fundamental	8.00 to 14.99	30	Fundamental
3.00 to 3.49	150	Fundamental	15.00 to 40.00	25	Fundamental
3.50 to 3.99	120	Fundamental	27.00 to 29.99	50	3rd Overtone
4.00 to 4.49	100	Fundamental	30.00 to 44.99	40	3rd Overtone
4.50 to 4.99	80	Fundamental	45.00 to 100.0	35	3rd Overtone
5.00 to 5.99	70	Fundamental	80.00 to 120.0	80	5rd Overtone
6.00 to 6.99	60	Fundamental			

\*Operating temperature: -40° to +85°C option

## Mechanical Dimensions (mm) :



**Gull Wing Option (G)**

Crystal Units  
Through Hole

TYPE	HC-49U	REVISION	02	CHECKED	PB	DATE	22/04/2016
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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-49U HC-49SA HC-49SB HC-49SMA HC-49SMB MF-04 MF-05 MF-24 MF-25 MF-UM1 MF-UM5	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 G=Gull Wing

TYPE	CODIFICATION	REVISION	04	CHECKED	PB	DATE	22/04/2016
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All specifications are subject to change without notice