



Features:

- 3.500 – 70.0 MHz Frequency Range
- Low Cost, Low Profile CPU Crystal
- Thru-Hole Package
- AT – Cut Crystal
- Extended Temperature Range Available

RoHS Compliance



- [Click Here for RoHS C of C](#)
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ELECTRICAL SPECIFICATIONS

Mode of Operation	Fundamental / 3 rd OT
Nominal Frequency Range	3.500 to 70.0 Mhz
Frequency Tolerance @ 25°C	± 50ppm (Standard), ± 30ppm, ± 20ppm, ± 15ppm, ± 10ppm
Temperature Stability	± 100ppm, ± 50ppm, ± 30ppm
Operating Temperature Range	0-70°C, -10+60°C, -20+70°C, -40+85°C
Load Capacitance (CL)	10pF to 32pF or Series
Equivalent Series Resistance	See Maximum Equivalent Series Resistance Table
Drive Level	0.01 – 1mW
Shunt Capacitance	< 7.0pF
Insulation Resistance	500 Ohm min @ 100V DC ±15V
Aging	± 5ppm Maximum
Crystal Cut	AT Strip (BT Available)

Part Numbering System

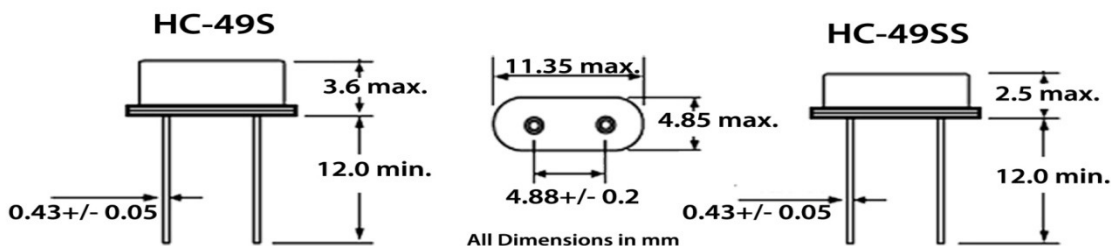
Model	Frequency	Load (Cl)	Package	Option	Stability @ 25°C	Stability / Temp	Operate Temp.
BFC	143 = 14.31818	S = Series	4=HC49S	SL = Sleeved	5 = ± 50ppm	0 = 100ppm	A = 0-70°C
	Click Here for Standard Crystal Frequencies Abbreviations	10pF-32pF	4S=HC49SS	G = Gull Wing	3 = ± 30ppm	5 = 50ppm	B = -10+60°C
				L = 3 rd Lead	2 = ± 20ppm	3 = 30ppm	C = -20+70°C
					1 = ± 10ppm	2 = 20ppm	D = -40+85°C
					6 = ± 15ppm	1 = 10ppm	

Frequency Stability vs. Temperature

Temp. Range	Temperature Stability (ppm)				
	± 10	± 15	± 20	± 30	± 50
0-70°C	Available	Available	Available	Available	Available
-10+60°C	Available	Available	Available	Available	Available
-20+70°C	Not Available	Available	Available	Available	Available
-40+85°C	Not Available	Not Available	Not Available	Available	Available

Maximum Equivalent Series Resistance

Frequency Range	ESR (Ohms)	Mode	Frequency Range	ESR (Ohms)	Mode
3.5 to 3.999 MHz	200	Fundamental	9.0 to 12.999 MHz	60	Fundamental
4.0 to 4.999 MHz	150	Fundamental	13.0 to 15.999 MHz	50	Fundamental
5.0 to 5.999 MHz	120	Fundamental	16.0 to 19.999 MHz	40	Fundamental
6.0 to 6.999 MHz	100	Fundamental	27.0 to 32.0 MHz	30	Fundamental
			27.0 to 70.0 MHz	100	3 rd OT





Frequency Stability vs. Temperature					
Temp. Range	Temperature Stability (ppm)				
	± 10	± 15	± 20	± 30	± 50
0-70°C	Available	Available	Available	Available	Available
-10+60°C	Available	Available	Available	Available	Available
-20+70°C	Not Available	Available	Available	Available	Available
-40+85°C	Not Available	Not Available	Not Available	Available	Available
Maximum Equivalent Series Resistance					
Frequency Range	ESR (Ohms)	Mode	Frequency Range	ESR (Ohms)	Mode
3.5 to 3.999 MHz	200	Fundamental	9.0 to 12.999 MHz	60	Fundamental
4.0 to 4.999 MHz	150	Fundamental	13.0 to 15.999 MHz	50	Fundamental
5.0 to 5.999 MHz	120	Fundamental	16.0 to 19.999 MHz	40	Fundamental
6.0 to 6.999 MHz	100	Fundamental	27.0 to 32.0 MHz	30	Fundamental
			27.0 to 70.0 MHz	100	3 rd OT

Notes: