



**HC-49/S HC-49/SS
HC-49/S3 Series Resonator**

FEATURE

- 1 Wide Frequency Range
- 2 Low Cost to Performance
- 3 Excellent for Clock Frequency generation
- 4 Very Low Profile to Only 2.3mm Available
- 5 RoHS Compliant Standard

High Frequency Resonator
In Thru-hole Enclosures

GENERIC SPECIFICATION

ITEM		HC-49/S HC-49/SS HC-49/S3	REMARK
Nominal Frequency Range		3.5MHz to 40.0MHz	Fund. Mode / AT
		20.0MHz to 48.0MHz	Fund. Mode / BT
		24.0MHz to 100.0MHz	Overtone mode
Frequency tolerance @ 25°C		±10, ±20, ±30, ±50, ±100 ppm	Others are offered
Load Capacitance		6 pF to ∞pF for Fund. Mode	Please specify
		5 pF to ∞pF for Overtone Mode	
Frequency temperature characteristics		±5, ±10, ±15, ±20, ±30, ±50 ppm	Others are offered
Temperature Range	Storage Temp.	-55°C to +125°C	
	Operating Temp.	-10°C to +60°C	Others are offered
Drive Level		10uW to 100mW (Typical: 10uW)	Please specify
Equivalent Series Resistance		As Per Table	
Shunt Capacitance		7.0pF Max.	
Insulation Resistance		More than 500MΩ @ DC 100V	
Aging		Fist year ±5ppm	

* If you have special requirement or the requirement of appearance, please provide detail data to us
i.e. Spurious, DLD, Pulling Range, C1, Q value

EQUIVALENT SERIES RESISTANCE (ESR)

TYPE FREQUENCY	MODE	ESR (Ω)	TYPE FREQUENCY	MODE	ESR (Ω)
3.5MHz≤Freq.<4.0MHz	Fund. / AT	120	20.0MHz≤Freq.≤40.0MHz	Fund. / BT	25
4.0MHz≤Freq.<5.0MHz	Fund. / AT	100	20.0MHz≤Freq.<30.0MHz	Fund. / BT	40
5.0MHz≤Freq.<6.0MHz	Fund. / AT	80	30.0MHz≤Freq.≤48.0MHz	Fund. / BT	30
6.0MHz≤Freq.<10.0MHz	Fund. / AT	60	24.0MHz≤Freq.<36.0MHz	3 rd , Overtone	100
10.0MHz≤Freq.<12.0MHz	Fund. / AT	40	36.0MHz≤Freq.<48.0MHz	3 rd , Overtone	80
12.0MHz≤Freq.<40.0MHz	Fund. / AT	30	48.0MHz≤Freq.≤100.0MHz	3 rd , Overtone	40

FREQ. TOLERANCE vs. LOAD CAPACITANCE

CL\ppm	±5	±7	±10	±15	±20
6pF	×	×	×	△	○
8pF	×	×	×	△	○
10pF	×	×	△	○	○
12pF	×	×	○	○	○
≥12pF	△	△	○	○	○

FREQ. STABILITY vs. TEMP. RANGE

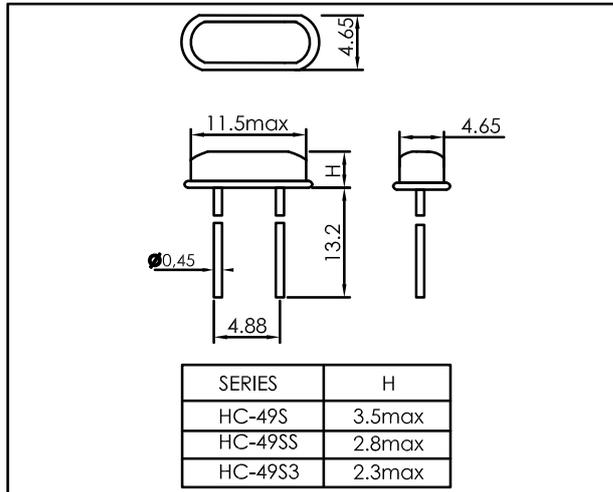
Temp.\ppm	±2.5	±5	±7	±10	±15	±20
0°C to +50°C	△	△	○	○	○	○
-10°C to +60°C	×	△	△	○	○	○
-20°C to +70°C	×	×	△	△	○	○
-40°C to +85°C	×	×	×	△	△	○

× Not Available △ Available (Case by case) ○ Standard



MECHANICAL DIMENSIONS (mm)

- HC-49S HC-49SS HC-49S3



- Recommended reflow soldering standard conditions

