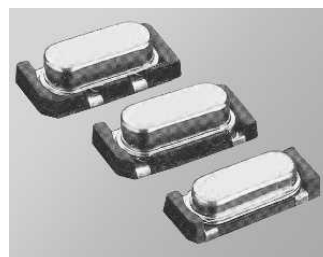


Features:

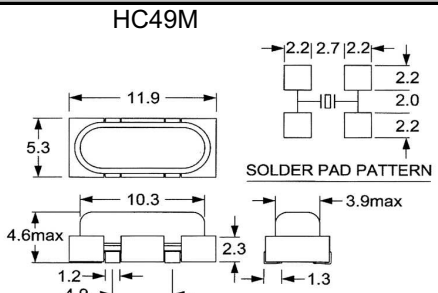
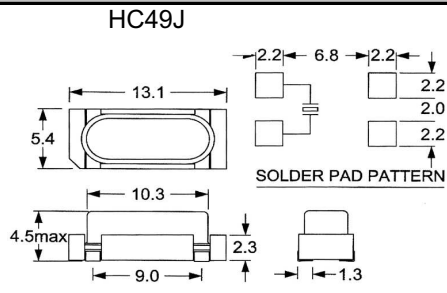
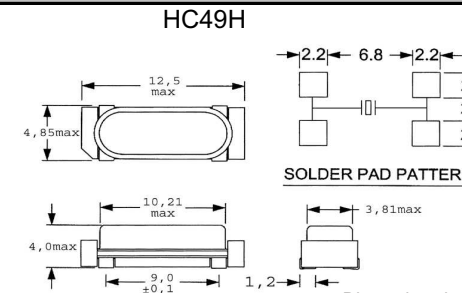
- High reliability
- Available in extended temperature range
- Excellent for automotive applications



HC49M
HC49J
HC49H

Specifications				
		Symbol	HC49M / HC49J / HC 49 H	Remarks
Frequency range		f	3.500MHz ~ 40.000MHz	Fundamental mode
			30.000MHz ~ 80.000MHz	Overtone mode
Frequency tolerance, Ta=25°C		f/f	± 10ppm ~ ± 50ppm	Please specify
Load capacitance		CL	10pF ~ 50pF	Please specify
Temperature tolerance		f/f	± 10ppm ~ ± 100ppm	Please specify
Temperature range	Storage temperature	T _{STG}	-55°C ~ +125°C	
	Operating temperature	T _{OPR}	-20°C ~ +70°C	Others are offered
Drive level	Maximum drive level	M _{DL}	1000 W	
	Recommended drive level	R _{DL}	10 W ~ 100 W	
Series resistance		R ₁	As per table	25°C
Shunt capacitance		C ₀	7pF	Max
Insulation resistance		I _R	500M Ohm	
Aging		f _A	± 5ppm/Year	Max

Resistance of series Resonance (ESR)						
Frequency (MHz)	Mode	Ohm max		Frequency (MHz)	Mode	Ohm max
3,5 ≤ f < 4,5	Fundamental	120		15 ≤ f < 18	Fundamental	30
4,5 ≤ f < 6,0	Fundamental	90		18 ≤ f < 25	Fundamental	25
6,0 ≤ f < 8,0	Fundamental	70		25 ≤ f < 33	Fundamental	25
8,0 ≤ f < 10	Fundamental	60		28 ≤ f < 35	3rdO.T	80
10 ≤ f < 12	Fundamental	50		35 ≤ f < 40	3rdO.T	70
12 ≤ f < 15	Fundamental	40		40 ≤ f < 80	3rdO.T	60

Drawing			
<p>HC49M</p>  <p>SOLDER PAD PATTERN</p>		<p>HC49J</p>  <p>SOLDER PAD PATTERN</p>	
		<p>HC49H</p>  <p>SOLDER PAD PATTERN</p> <p>Dimensions in mm</p>	

Order key								
Q	- 20.000000M	- HC49M	- F	- 30	- 50	- D	- 30	- TR
Part	Frequency	Package	Mode of oscillation	Frequency tolerance	Temperature tolerance	Temperature range	Load capacitance	Option
Q=Quartz	M=MHz	HC49M HC49J HC49H	F=fund. 3=3.OT	+/-ppm (25°C)	+/-ppm (Temp. Range)	A= 0°C ~ 70°C B=-10°C ~ 60°C C=-10°C ~ 70°C D=-20°C ~ 70°C E=-40°C ~ 85°C F=-40°C ~ 105°C G=-40°C ~ 125°C (M) H=-20°C ~ +80°C I=-10°C ~ +50°C	pF SR=series	TR=Tape and reel X=Special options

Remarks: All specifications subject to change without notice!