

Features:



- Low profile available
- Wide frequency range
- Tight tolerance and stability over temperature
- Tape & reel packaging
- 3 pin-version available



HC49USSMD

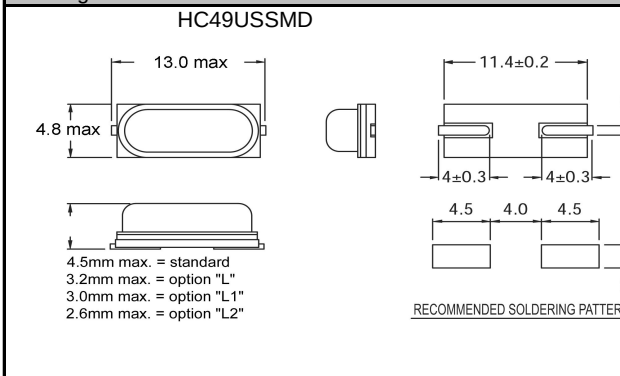
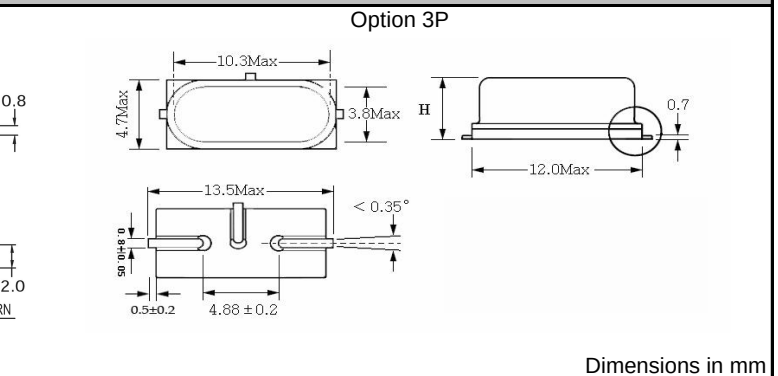
Option: 3 Pin

Specifications			
	Symbol	HC49USSMD	Remarks
Frequency range	f	3.500MHz ~ 40.000MHz	Fund. mode
		30.000MHz ~ 90.000MHz	Overtone mode
Frequency tolerance, Ta=25°C	$\Delta f/f$	$\pm 3\text{ppm} \sim \pm 50\text{ppm}$	Please specify
Load capacitance	C_L	5pF ~ 50pF	Please specify
Temperature tolerance	$\Delta f/f$	$\pm 3\text{ppm} \sim \pm 50\text{ppm}$	Please specify
Temperature range	Storage temperature	T _{STG}	-40°C ~ +105°C
	Operating temperature	T _{OPR}	0°C ~ +70°C / -40°C ~ +105°C
Drive level	Maximum drive level	M _{DL}	1000μW
	Recommended drive level	R _{DL}	10μW ~ 100μW
Series resistance	R ₁	As per table	25°C $\pm 3^\circ\text{C}$
Shunt capacitance	C ₀	7pF	Max
Insulation resistance	I _R	500M Ohm	Min
Aging	Δf_A	$\pm 5\text{ppm/Year}$	Please specify

Resistance of series resonance (ESR)

Frequency (MHz)	Mode	Ohm max	Frequency (MHz)	Mode	Ohm max
3.5 ≤ f < 4.5	Fundamental	130	12.0 ≤ f < 15.0	Fundamental	40
4.5 ≤ f < 6.0	Fundamental	90	15.0 ≤ f < 18.0	Fundamental	30
6.0 ≤ f < 8.0	Fundamental	70	18.0 ≤ f < 33.0	Fundamental	25
8.0 ≤ f < 10.0	Fundamental	60	30.0 ≤ f < 40.0	3rd OT	80
10.0 ≤ f < 12.0	Fundamental	50	40.0 ≤ f < 90.0	3rd OT	60

Drawing

HC49USSMD	Option 3P
 <p>4.5mm max. = standard 3.2mm max. = option "L" 3.0mm max. = option "L1" 2.6mm max. = option "L2"</p> <p>RECOMMENDED SOLDERING PATTERN</p>	
Dimensions in mm	

Order key

Q	- 20.000000M	- HC49USSMD	- 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	HC49USSMD	F=fund. 3=3.OT	$\pm\text{ppm}$ (25°C)	$\pm\text{ppm}$ (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 H= -20°C ~ +80°C I= -10°C ~ +50°C	pF SR=series	3P=3 Pin version L=3.2mm height L1=3.0mm height L2=2.6mm height TR=Tape and reel X=Special options