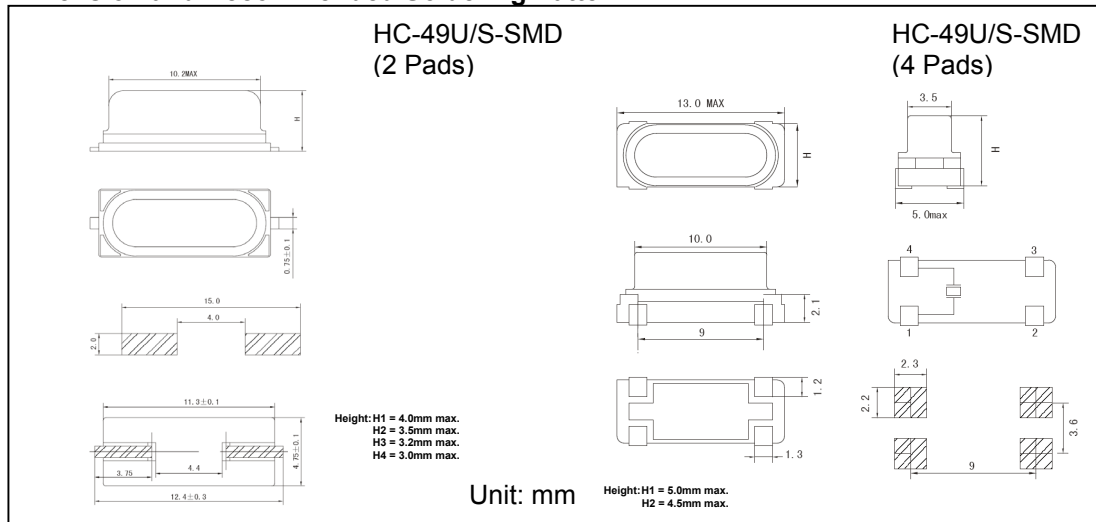




Quartz Crystal Unit (HC-49U/S-SMD)

● Dimension and Recommended Soldering Pattern



RoHS Compliant
Directive 2002/95/EC

REACH Compliant
(15 SVHCs)
Regulation (EC) No.
1907/2006

TS16949:2002
Certified

● Electrical Specifications ¹

Holder type		HC-49U/S-SMD (two pads, height: H1, H2, H3, H4) HC-49U/S-SMD (four pads, height: H1, H2)
Frequency range	F ₀	3.200 to 100.000MHz ²
Frequency tolerance (at 25°C)	ΔF	±10ppm to ±100ppm
Frequency drift	T _c	±10ppm to ±100ppm
Operating temperature range	T ₀	-10°C ~ +60°C to -40°C ~ +85°C
Storage temperature range	T _S	-40°C ~ +85°C to -55°C ~ +125°C
Aging (at 25°C)		±5ppm / year max.
Shunt capacitance	C ₀	7pF max.
Drive level	DL	100μW (typical)
Insulation resistance	R _i	500MΩ min. at DC100V
Load capacitance	CL	Suggested by customer

¹ Above information is for reference only. For other frequencies or specifications, please consult with our sales representatives for details.
² For HC-49U/S-SMD (two pads, height: H4 = 3.0mm max.), the lowest frequency that can be manufactured is 10.000MHz.
 For HC-49U/S-SMD (two pads, height: H3 = 3.2mm max. and height: H2 = 3.5mm max.), the lowest frequency that can be manufactured is 6.000MHz.
 For HC-49U/S-SMD (four pads, height: H2 = 4.5mm max), the lowest frequency that can be manufactured is 10.000MHz.

● Equivalent Series Resistance and Mode of Operation

Frequency range	Equivalent series resistance	Mode of operation
3.200MHz to 3.579MHz	250Ω max.	Fundamental
3.580MHz to 3.999MHz	150Ω max.	Fundamental
4.000MHz to 4.999MHz	120Ω max.	Fundamental
5.000MHz to 5.999MHz	100Ω max.	Fundamental
6.000MHz to 6.999MHz	80Ω max.	Fundamental
7.000MHz to 9.999MHz	60Ω max.	Fundamental
10.000MHz to 13.999MHz	50Ω max.	Fundamental
14.000MHz to 19.999MHz	40Ω max.	Fundamental
≥ 20.000MHz	30Ω max. (AT cut) 40Ω max. (BT cut)	Fundamental
24.000MHz to 34.999MHz	100Ω max.	3 rd overtone
≥ 35.000MHz	80Ω max.	3 rd overtone

- The above information is for reference only. For other frequencies or specifications, please consult with our sales representatives for details.