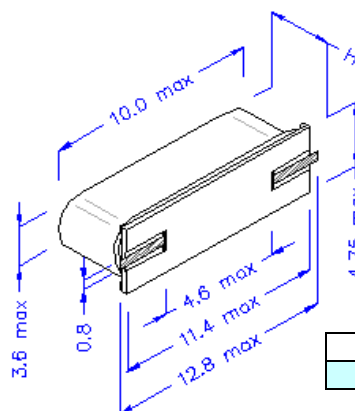


# Crystal Unit



## HC-49SM / HC-49SSM



	HC-49SM	HC-49SSM
H	4.1	3.2

### Standard Parameter

Frequency Range	3.200 MHz ~ 80.000 MHz	
Frequency Tolerance (at 25 °C)	±10ppm / ±20ppm / <b>±30ppm</b>	
Load Capacitance	<b>16pF / 20pF</b> / upon request	
Frequency Stability	±10ppm / ±30ppm	<b>±50ppm</b>
Operating Temperature Range	<b>-20 °C ~ +70 °C</b>	-40 °C ~ +85 °C
Storage Temperature Range	<b>-40 °C ~ +85 °C</b>	-55 °C ~ +125 °C
Equivalent Resistance	Refer to the following table	
Shunt Capacitance	7 pF max	
Drive Level	100 μW max	
Insulation Resistance	500MΩ min at DC100V ±15V	
Aging (at 25 °C per year)	±5ppm	

### Equivalent Series Resistance

Frequency Range	Mode of Oscillation	Series Resistance
3.200 MHz ~ 3.499 MHz	Fundamental	300 Ω
3.500 MHz ~ 3.999 MHz		150 Ω
4.000 MHz ~ 5.999 MHz		120 Ω
6.000 MHz ~ 7.999 MHz		80 Ω
8.000 MHz ~ 9.999 MHz		60 Ω
10.000 MHz ~ 11.999 MHz		50 Ω
12.000 MHz ~ 35.000 MHz		40 Ω
24.000 MHz ~ 29.999 MHz	3 <sup>rd</sup> Overtone	100 Ω
30.000 MHz ~ 70.000 MHz		80 Ω
70.001 MHz ~ 80.000 MHz		100 Ω