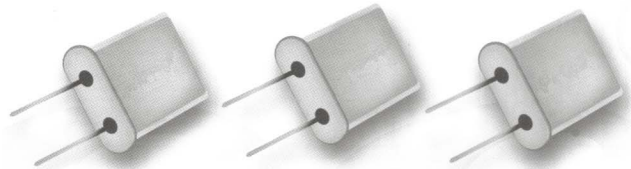


Series HC49SM
HC49SSM

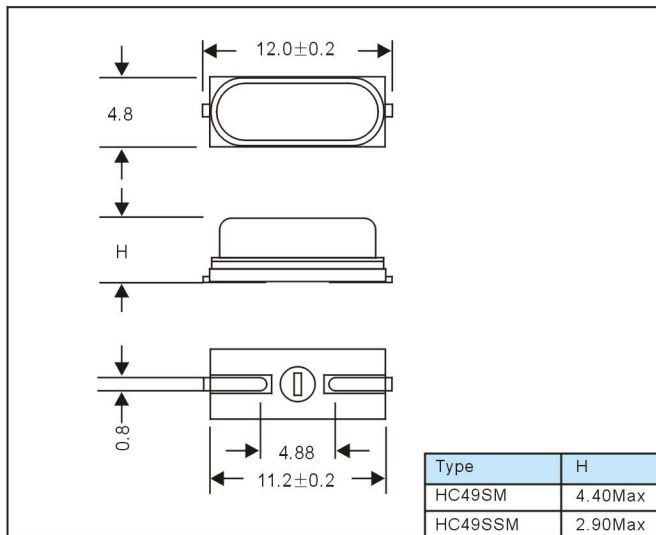


Series UM1
Um5



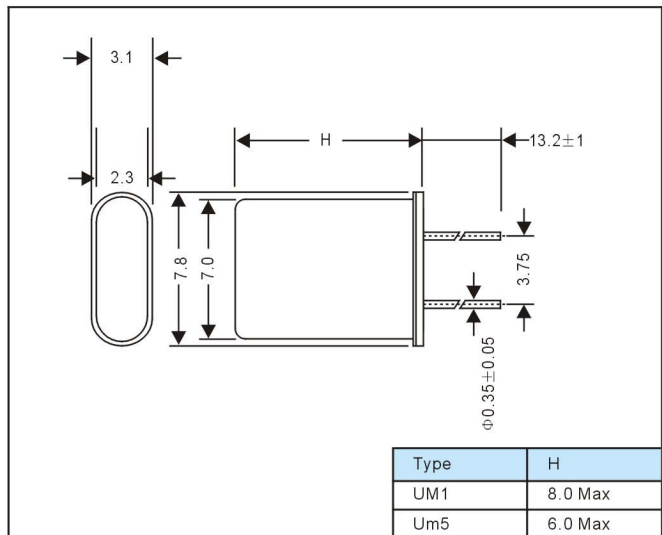
External dimensions

Unit: mm



External dimensions

Unit: mm



Item	Specification	Remarks
Nominal Frequency Range	3.500MHz to 30.000MHz	Fundamental Mode; AT cut
	20.000MHz to 40.000MHz	Fundamental Mode; BT cut
	24.000MHz to 60.000MHz	Overtone Mode; AT cut
Frequency Tolerance	±30PPM(Standard) at 25°C±3°C	Others are offered
Load Capacitance	Fund:10pF to ∞, O.T.:5pF to ∞	Please specify
Series resistance	As ESR Table	
Drive Level	10 μ W to 100 μ W	1000 μ W Max
Operating Temperature Range	-20°C to +70°C (Standard)	Others are offered
Storage Temperature Range	-55°C to +125°C	
Stability Over Temperature Range	±30PPM(Standard)	Others are offered
Insulated Resistance	500M Ω	Minimum at 100VDC
Aging	±3PPM/Year	Maximum

Item	Specification	Remarks
Nominal Frequency Range	3.500MHz to 40.000MHz	Fundamental Mode; AT cut
	25.000MHz to 100.000MHz	Fundamental Mode; BT cut
	75.000MHz to 160.000MHz	Overtone Mode; AT cut
Frequency Tolerance	±10PPM(Standard) at 25°C±3°C	Others are offered
Load Capacitance	Fund:10pF to ∞, O.T.:5pF to ∞	Please specify
Series resistance	As ESR Table	
Shunt Capacitance	7pF Max	
Drive Level	10 μ W to 100 μ W	1000 μ W Max
Operating Temperature Range	-10°C to +70°C (Standard)	Others are offered
Storage Temperature Range	-55°C to +125°C	
Stability Over Temperature Range	±30PPM(Standard)	Others are offered
Insulated Resistance	500M Ω	Minimum at 100VDC
Aging	±2PPM/Year	Maximum

Resistance of Series Resonance (ESR)

Frequency (MHz)	Mode	Ohm Max	Frequency (MHz)	Mode	Ohm Max
3.5~3.999	Fund.	120	10.0~12.999	Fund.	40
4.0~4.999	Fund.	90	13.0~19.999	Fund.	35
5.0~5.999	Fund.	90	20.0~30.0	Fund.	25
6.0~6.999	Fund.	65	20.0~36.0(BT)	Fund.	25
7.0~7.999	Fund.	55	24.0~29.999	3 rd OT	120
8.0~8.999	Fund.	50	30.0~39.999	3 rd OT	80
9.0~9.999	Fund.	45	40.0~60.0	3 rd OT	60

Remark:
All specifications subject to change without notice.

Resistance of Series Resonance (ESR)

Frequency (MHz)	Mode	Ohm Max	Frequency (MHz)	Mode	Ohm Max
3.5~3.9	Fund.	200	3.5~3.9	Fund.	---
4.0~4.99	Fund.	150	4.0~4.99	Fund.	---
5.0~9.9	Fund.	60	5.0~9.9	Fund.	---
10.0~14.9	Fund.	40	10.0~14.9	Fund.	60
15.0~40.0	Fund.	30	15.0~40.0	Fund.	35
25.0~29.9	3 rd OT	50	25.0~29.9	3 rd OT	60
30.0~49.9	3 rd OT	45	30.0~49.9	3 rd OT	50
50.0~100.0	3 rd OT	60	50.0~100.0	3 rd OT	60
75.0~160.0	3 rd OT	80	75.0~160.0	3 rd OT	90

Remark:
All specifications subject to change without notice.