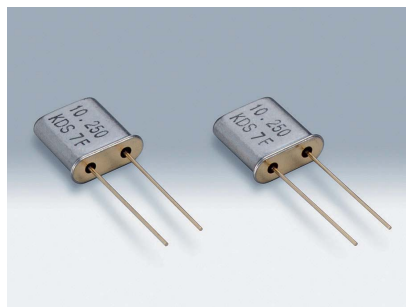


Crystal Resonators / MHz Band Crystal Resonators

UM-1, UM-4, UM-5, HC-49/U, HC-50/U



The UM series of resonators offers excellent frequency stability and are ideal for a wide range of mobile radio communications. The designs offer excellent shock resistance and reliability, and despite the small size there is no trade off with the performance. In addition, the HC series is designed for use in microprocessors and other standard clocks, offering excellent frequency stability.

■ Features

- Resonator with a high frequency stability ideal for use in mobile radio communications.
- High precision and high reliability
- Taped and reeled allowing for automatic surface mounting. (HC-49/U)
- Transform the SMD version by being encased in a metal package. (UM-1J, UM-4J, UM-5J)



■ Standard Specification

Item	Type	UM-1	UM-5	UM-4	HC-49/U	HC-50/U
Frequency Range		10~200MHz		10~150MHz	2.4~125MHz	3.5~125MHz
Overtone Order		Fundamental, 3rd overtone, 5th overtone, 7th overtone				
Load Capacitance		Series, 12pF, 16pF, 20pF, 32pF (Fundamental)				
		8pF, 10pF, 12pF, 16pF (3rd, 5th, 7th overtone)				
Drive level		10μW, 50μW, 100μW, 500μW				
Frequency Tolerance		$\pm 5 \times 10^{-6}$, $\pm 10 \times 10^{-6}$, $\pm 15 \times 10^{-6}$, $\pm 20 \times 10^{-6}$, $\pm 30 \times 10^{-6}$ (at 25°C)				
Series Resistance		50~120Ω max.		50~100Ω max.	25~350Ω max.	25~90Ω max.
Frequency Characteristics over Temperature		$\pm 5 \times 10^{-6}$, $\pm 10 \times 10^{-6}$, $\pm 20 \times 10^{-6}$, $\pm 30 \times 10^{-6}$, $\pm 50 \times 10^{-6}$ (Ref. to 25°C)				
Operating Temperature Range		-10~+60°C				
Storage Temperature Range		-30~+80°C				
Standard Specification		Refer to page 39				

■ Series Resistance

Consult our sales representative for other specifications.

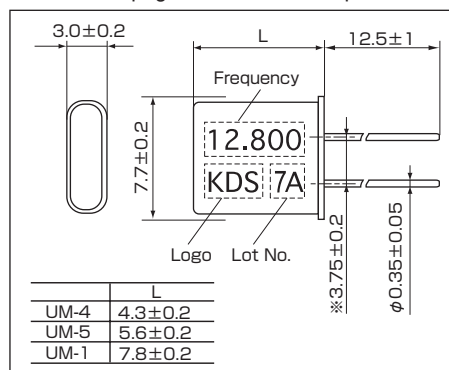
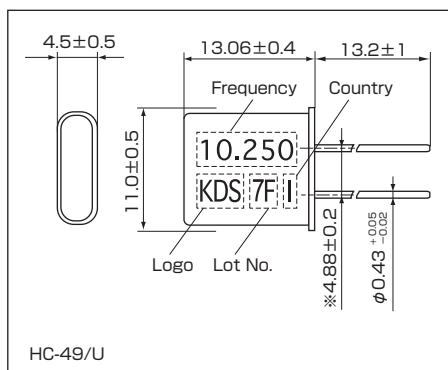
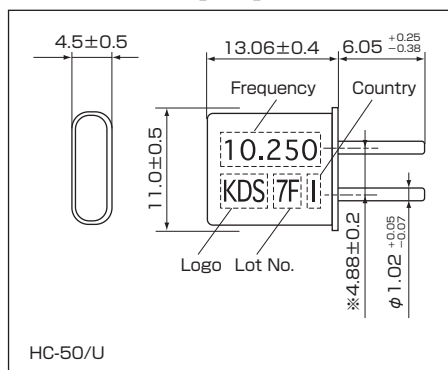
Frequency	Type	Overtone Order	UM-4 Ω max.	UM-5 Ω max.	UM-1 Ω max.	HC-49/U Ω max.	HC-50/U Ω max.
2.4~ 3.0MHz		F	—	—	—	350	—
3.0~ 3.5MHz		F	—	—	—	150	—
3.5~ 4.0MHz		F	—	—	—	90	90
4.0~ 7.0MHz		F	—	—	—	60	60
7.0~ 10MHz		F	—	—	—	35	35
10~ 15MHz		F	50	50	50	35	35
15~ 20MHz		F	50	50	50	25	25
20~ 25MHz		F/3	50/—	50/—	50/—	25/50	25/50
25~ 30MHz		F/3	50/—	50/—	50/—	25/40	25/40
30~ 75MHz		3	70	70	70	40	40
75~ 100MHz		3/5	70/—	70/80	70/80	—/60	—/60
100~ 125MHz		5	80	80	80	60	60
125~ 150MHz		5	100	100	100	—	—
150~ 200MHz		7	—	120	120	—	—

Consult our sales representative for other specifications.

F: fundamental 3: 3rd overtone 5: 5th overtone 7: 7th overtone

Refer to page 39 for standard specification.

■ Dimensions[mm]



※Measurement between the root of the leads.