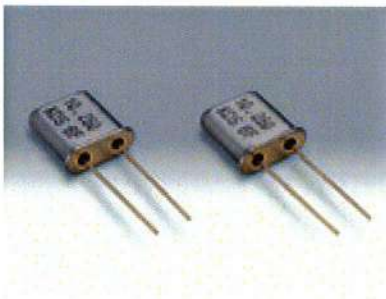
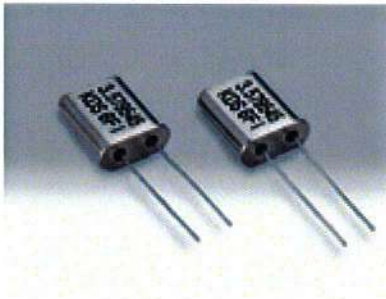


Crystal Resonators / MHz Band Crystal Resonators

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

■ Series Resistance

Frequency	Type	Overtone Order	UM-4 Ω max.	UM-5 Ω max.	UM-1 Ω max.	HC-49/T Ω max.	HC-50/T 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	-	-	-	150	150	90	90
4.0~ 7.0MHz		F	-	-	-	90	90	60	60
7.0~ 10MHz		F	-	-	-	45	45	35	35
10~ 15MHz		F	50	50	50	45	45	35	35
15~ 20MHz		F	50	50	50	25	25	25	25
20~ 25MHz		F/3	50/-	50/-	50/-	25/60	25/60	25/50	25/50
25~ 30MHz		F/3	50/-	50/-	50/-	25/40	25/40	25/40	25/40
30~ 75MHz		3	70	70	70	40	40	40	40
75~100MHz		3/5	70/-	70/80	70/80	-/60	-/60	-/60	-/60
100~125MHz		5	80	80	80	60	60	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 38 for standard specification.

■ Frequency Range

1.8~200MHz

■ Overtone Order

Fundamental, 3rd overtone, 5th overtone, 7th overtone

■ Drive Level

10μW, 50μW, 100μW, 500μW

■ Load Capacitance

Series, 12pF, 16pF, 20pF, 32pF (fundamental)
8pF, 10pF, 12pF, 16pF (3rd, 5th, 7th overtone)

■ Frequency Tolerance (at 25°C)

$\pm 5 \times 10^{-6}$, $\pm 10 \times 10^{-6}$, $\pm 15 \times 10^{-6}$,
 $\pm 20 \times 10^{-6}$, $\pm 30 \times 10^{-6}$

■ Frequency Characteristics over Temperature (Ref. to 25°C)

$\pm 5 \times 10^{-6}$, $\pm 10 \times 10^{-6}$, $\pm 20 \times 10^{-6}$,
 $\pm 30 \times 10^{-6}$, $\pm 50 \times 10^{-6}$

■ Operating Temperature Range

-10°C~+60°C

■ Storage Temperature Range

-30°C~+80°C

■ Aging Characteristics

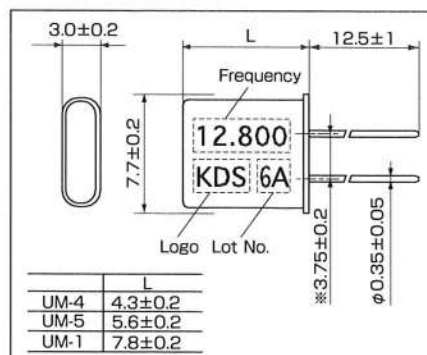
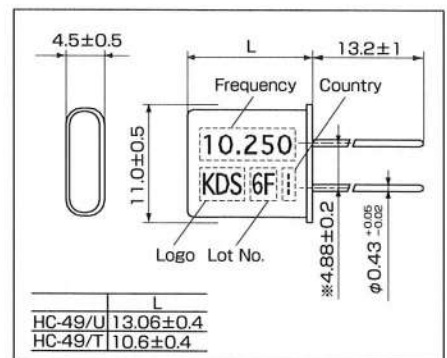
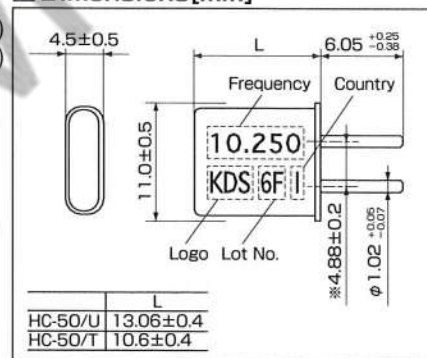
UM Series:

$\pm 1 \times 10^{-6}$, $\pm 2 \times 10^{-6}$, $\pm 3 \times 10^{-6}$ /
year (max.)

HC Series:

$\pm 5 \times 10^{-6}$ /year (max.)

■ Dimensions [mm]



※ Measurement between the root of the leads.