

High Frequency Crystal Unit in Metal Housing UM-1 and UM-5

- **Fundamental Mode, 3rd and 5th Overtone**
- **Low ESR**
- **Low Aging**

Specifications

Parameters	Conditions	UM-1/MJ	UM-5/MJ
Frequency Range	Fundamental	15 ~ 60 MHz	20 ~ 60 MHz
	3rd Overtone	40 ~ 180 MHz	50 ~ 180 MHz
	5th overtone	80 ~ 250 MHz	90 ~ 250 MHz
Frequency Tol.	@ 25° C	± 10; ± 20; ± 30 ppm	
Drive Level		10, 50, 100µW	
ESR		25 ~ 80 Ω max.	
Shunt Capacitance		5.0 pF, 7.0 pF max.	
Load Capacitance		Series; 10 pF; 16 pF; 20 pF; 30 pF	
Aging		± 1.0 / ± 2.0 / ± 3.0 ppm (1st year)	

- Please consult us for customized specifications.

Frequency Stability @ Operating Temperature Range

Temperature	± 5 ppm	± 7.5 ppm	± 10 ppm	± 15 ppm	± 20 ppm	± 30 ppm
- 5 ~ +55° C	yes	yes	yes	yes	yes	yes
-10 ~ +60° C	yes	yes	yes	yes	yes	yes
-15 ~ +65° C	no	yes	yes	yes	yes	yes
-20 ~ +75° C	no	yes	yes	yes	yes	yes
-25 ~ +75° C	no	no	yes	yes	yes	yes
-30 ~ +80° C	no	no	no	yes	yes	yes
-35 ~ +85° C	no	no	no	yes	yes	yes
-40 ~ +85° C	no	no	no	yes	yes	yes



Equivalent Series Resistance

Mode	Frequency	UM - 1	UM - 5
Fundamental	10.000 ~ 19.900 MHz	25 Ω max.	not available
	20.000 ~ 29.900 MHz	25 Ω max.	25 Ω max.
	30.000 ~ 39.900 MHz	25 Ω max.	25 Ω max.
	40.000 ~ 60.000 MHz	30 Ω max.	30 Ω max.
3rd Overtone	35.000 ~ 44.900 MHz	40 Ω max.	not available
	45.000 ~ 54.900 MHz	40 Ω max.	45 Ω max.
	55.000 ~ 59.900 MHz	35 Ω max.	40 Ω max.
	60.000 ~ 89.900 MHz	30 Ω max.	35 Ω max.
	90.000 ~ 120.00 MHz	30 Ω max.	35 Ω max.
5th overtone	80.000 ~ 89.900 MHz	70 Ω max.	not available
	90.000 ~ 150.000 MHz	80 Ω max.	90 Ω max.
	150.000 ~ 250.000 MHz	to be defined	to be defined

● Dimensions

