

THROUGH HOLE TYPE CRYSTAL UNITS

UM Resistance Weld

- For reference oscillator
- Ultra-miniaturized holder
- Excellent frequency aging characteristics
- High frequency reproducibility
- Small deviation from the specified frequency pulling range
- Bent lead available

Specifications

Holder	UM-1	UM-1 SLIM	UM-5 SLIM	UM-4 SLIM
Frequency range	10MHz to 200MHz			
Mode of vibration	Fundamental, 3rd, 5th, 7th			
Frequency tolerance	±10ppm (at 25°C ±3°C)			
Load capacitance (C _L)	Series, 20pF, 30pF, etc.			
Frequency stability in operating temperature range	as mentioned in Diagram (2)–page 13			
Reasonance resistance (R _r)	Fundameental: 50Ω Max 3rd: 60Ω Max 5th, 7th: (90Ω) Max		Fundameental: 50Ω Max 3rd: 60Ω Max 5th: 90Ω Max 7th: (120Ω) Max	
Drive level	100μW Max			
Aging	± 1 ppm/year			

HC-49/U Resistance Weld

Features

- Low profile
- Hermetically sealed

Specifications

Holder	HC-49/U-90	
Frequency range	3.5 ~ 36MHz	36+ ~ 60MHz
Mode of vibration	Fundamental	3rd overtone
Frequency tolerance	$\pm 50\text{ppm}$ (at $25^{\circ}\text{C} \pm 3^{\circ}\text{C}$)	
Load capacitance (C_L)	16pF	
Frequency stability	$\pm 100\text{ppm}$ (0 ~ $+70^{\circ}\text{C}$, inclusive of frequency tolerance at 25°C)	
Operating temperature range	0 ~ $+70^{\circ}\text{C}$	
Resonance resistance (R_r)	3.5 ~ 4-MHz: 180 Ω Max 4 ~ 5MHz: 150 Ω Max 5+ ~ 10-MHz: 80 Ω Max 10 ~ 32MHz (Fundamental): 50 Ω Max 3rd overtone: 100 Ω Max	
Shunt capacitance (C_0)	5pF Max	
Drive level	0.5 \pm 0.1mW	
Insulation resistance	500M Ω Min / DC 100V	
Shock	$\Delta f/f = \pm 10\text{ppm}$ Max, Withstand half sine wave in each 3 directions under 1000G, 0.35 msec	
Vibration	$\Delta f/f = \pm 10\text{ppm}$ Max, Withstand each 1 hour in 3 directions under 1 to 2 minutes of 10 ~ 55 Hz, amplitude 0.7 ~ 0.9 mm (Peak to peak in vibration)	
Leak	2×10^{-9} atm-cc/sec Max	