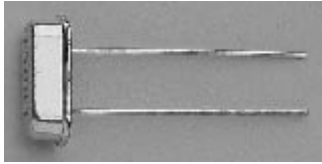


# HC-49/U-S

(2,000pcs/AmmoPack reel)



## ■ FEATURES:

- The HC-49/U-S is a high-performance miniature crystal unit manufactured with Citizen's ultrahigh-precision processing technology.
- Excellent vibration resistance, shock resistance and environmental characteristics.
- Can be automatically mounted, as units provided with taping are available by request.

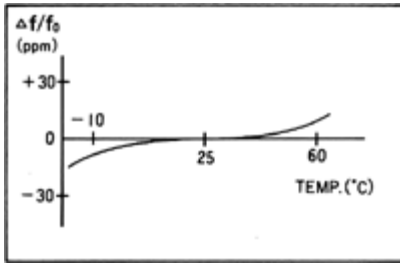
## ■ APPLICATIONS:

- Can be used for a wide range of applications including use in AV equipment, OA equipment, communication equipment and measuring instruments.

## ■ STANDARD SPECIFICATIONS

Item		HC-49/U-S	Conditions
Nominal frequency	$f_0$	3.5MHz to 30MHz (Fund) 30.0MHz to 70.0MHz (3rd OT)	Please contact us for changes in frequency.
Frequency tolerance	$\Delta f/f_0$	$\pm 30\text{ppm}$ or $\pm 50\text{ppm}$	(25°C) Reference temperature
Frequency vs. Temperature Characteristics	$\Delta f/f_0$	$\pm 30\text{ppm}$ or $\pm 50\text{ppm}$	-10°C to + 60°C
Operating temperature range	$T_{opr}$	-20°C to +70°C	
Storage temperature range	$T_{stg}$	-40°C to + 85°C	
Equivalent series resistance	$R_1$	See drawing	at 25°C
Load capacitance	$C_L$	16.0pF TYP.	Please specify
Shunt capacitance	$C_0$	7.0pF MAX.	
Drive level	DL	50 to 100 $\mu$ W	
Insulation resistance	IR	500M ohm MIN.	DC100V $\pm$ 15V
Aging (First year)	$\Delta f/f_0$	$\pm 5\text{ppm}$ MAX.	25°C $\pm$ 3°C
Sealing		$1 \times 10^{-2} \mu \text{ Pa} \cdot \text{m}^3 / \text{s}$ MAX.	
Shock resistance		$\pm 10\text{ppm}$ MAX. Drop test of 3 times on a hardboard from 75cm height or shock test of 3000G x 0.3ms x 1/2sin wave x 3 directions	Conditions will vary depending on the frequency.

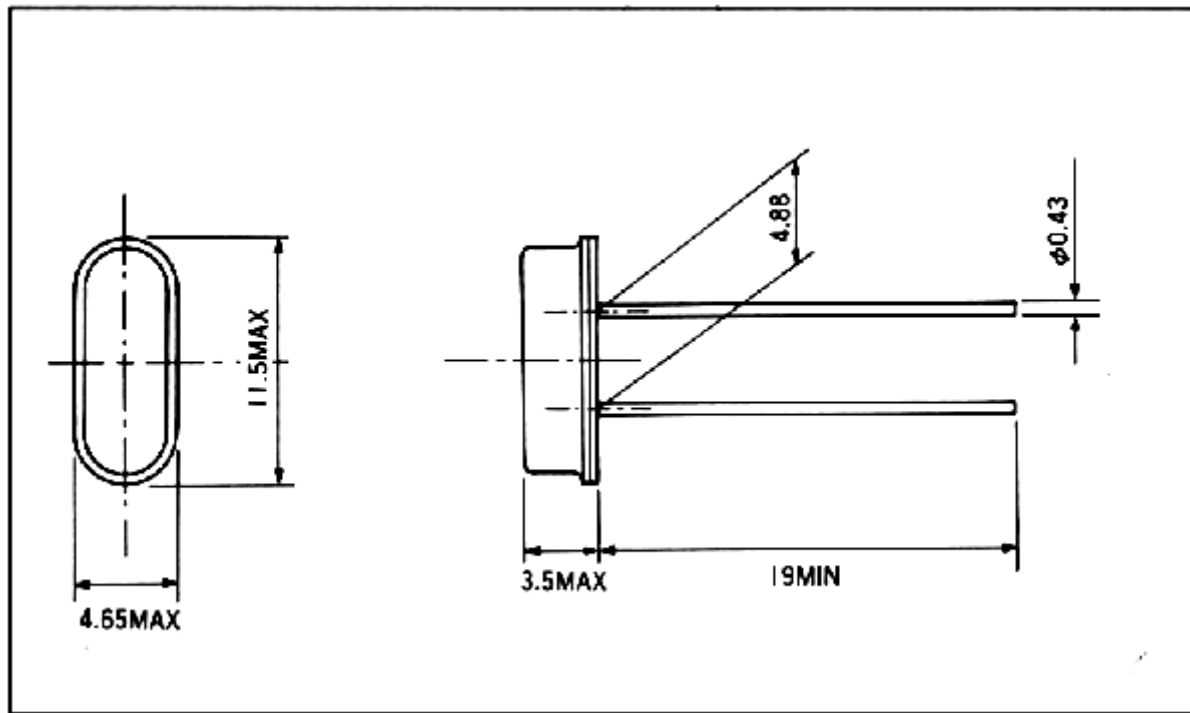
## ■ FREQUENCY vs TEMPERATURE CURVE



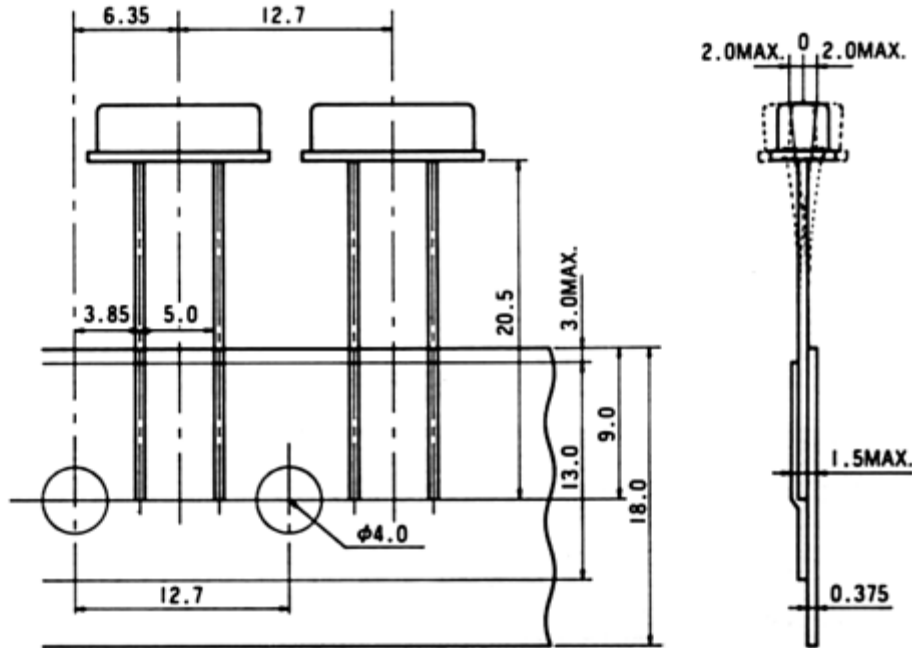
■ EQUIVALENT SERIES RESISTANCE (ESR, R1)(Ohm MAX.)

Frequency	R1
3.5MHz < (=) f <sub>0</sub> < 4.0MHz	200
4.0MHz < (=) f <sub>0</sub> < 6.0MHz	150
6.0MHz < (=) f <sub>0</sub> < 10.0MHz	100
10.0MHz < (=) f <sub>0</sub> < 14.0MHz	80
14.0MHz < (=) f <sub>0</sub> < (=) 30.0MHz	50
30MHz < f <sub>0</sub> < (=) 36.0MHz	140
36MHz < f <sub>0</sub> < (=) 70.0MHz	100

■ DIMENSIONS: (UNIT=mm)



※ External dimensions for taping (Reference value)



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