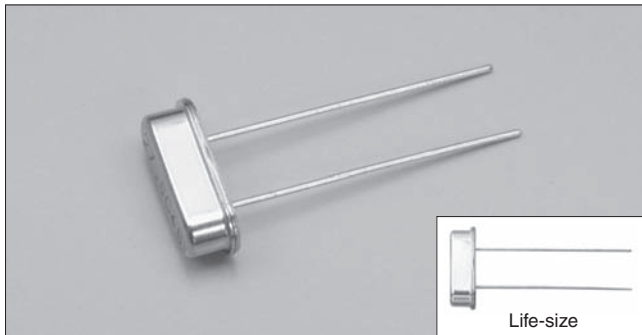


# AT-CUT CRYSTAL UNIT (Metal-can Type)

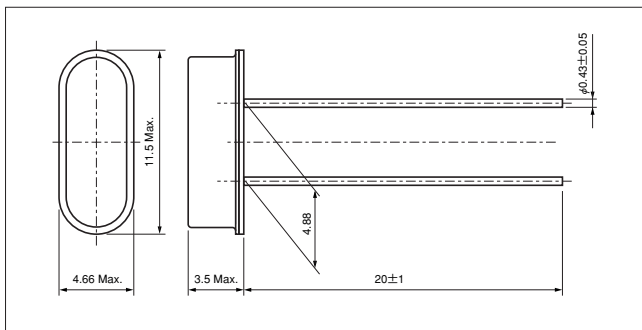
## HC-49/U-S



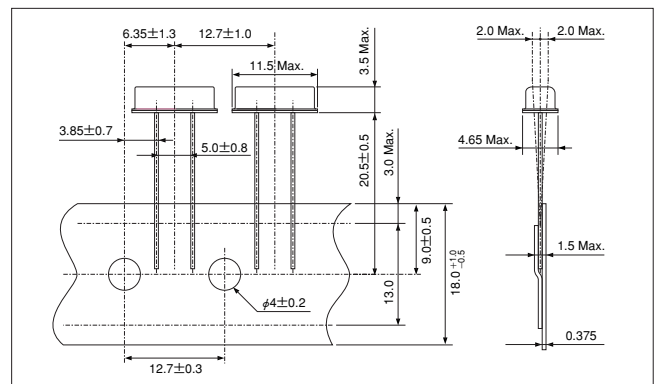
### FEATURES

- High performance miniature crystal units with Citizen's ultra-precise processing technology.
- Available in Tape and reel form.
- Suitable for various applications such as communication, AV, automotive and measurement devices.

### DIMENSION [mm]



### Taping dimension : 2000pcs/Ammo pack [mm]



### STANDARD SPECIFICATIONS

Item	Model	HC-49/U-S	Conditions
Nominal Frequency	f <sub>0</sub>	3.5MHz~30.0MHz (Fundamental)	Need to contact us for the available frequency
		30.0MHz~50.0MHz (3rd Overtone)	
Frequency Tolerance	Δ f/f <sub>0</sub>	±30ppm	at 25°C
Frequency Tolerance over Operating Temperature Range	Δ f/f <sub>0</sub>	below 6.0MHz: ±50ppm	-10°C ~ +60°C
		above 6.0MHz: ±30ppm	See figure 3 in P4
Operating Temperature Range	T <sub>OPR</sub>	-20°C ~ +70°C	
Storage Temperature Range	T <sub>STR</sub>	-40°C ~ +85°C	
Motional (series) resistance	R <sub>1</sub>	Refer to the following table	at 25°C
Load capacitance	C <sub>L</sub>	16.0pF, 18.0pF	Need to specify your requirement
Shunt capacitance	C <sub>0</sub>	7.0pF Max.	
Level of drive	D <sub>L</sub>	100 μW	
Insulation Resistance	I <sub>R</sub>	500MΩ Min.	DC100V±15V
Aging (first year)	Δ f/f <sub>0</sub>	±5ppm Max.	25°C ±3°C

### MOTIONAL (SERIES) RESISTANCE (R<sub>1</sub>)

Frequency Range	3.5MHz ≤ f <sub>0</sub> < 4.0MHz	4.0MHz ≤ f <sub>0</sub> < 6.0MHz	6.0MHz ≤ f <sub>0</sub> < 10MHz	10MHz ≤ f <sub>0</sub> < 14MHz	14MHz ≤ f <sub>0</sub> < 30MHz	30MHz ≤ f <sub>0</sub> < 36MHz	36MHz ≤ f <sub>0</sub> ≤ 50MHz
Mode	Fundamental	Fundamental	Fundamental	Fundamental	Fundamental	3rd Overtone	3rd Overtone
R <sub>1</sub>	200 Ω Max.	150 Ω Max.	100 Ω Max.	80 Ω Max.	50 Ω Max.	140 Ω Max.	100 Ω Max.