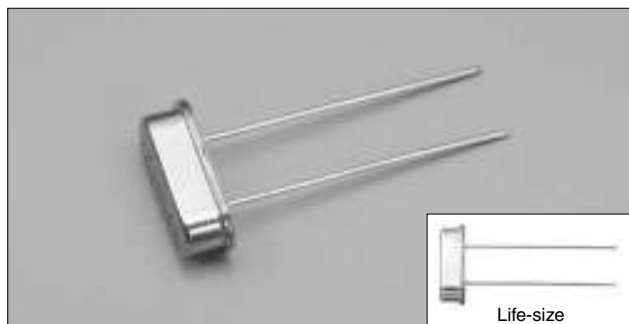


# AT-CUT CRYSTAL UNIT (Metal-can Type)

RoHS compliant

## HC-49/U-S

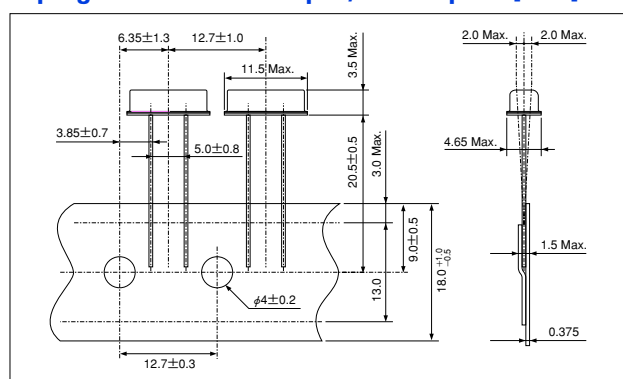
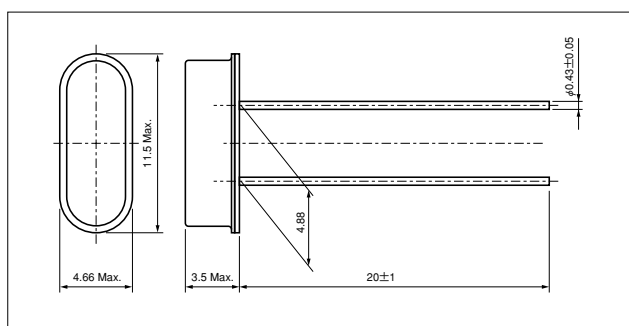


### FEATURES

- Available in Tape and reel form.
- Suitable for various applications such as communication devices, AV devices and measuring instruments.

Taping dimension : 2000pcs/Ammo pack [mm]

### DIMENSION [mm]



### STANDARD SPECIFICATIONS

| Item                                                 | Model            | HC-49/U-S                                                     | Conditions                                     |
|------------------------------------------------------|------------------|---------------------------------------------------------------|------------------------------------------------|
| Nominal Frequency                                    | $f_0$            | 3.5MHz~30.0MHz (Fundamental)                                  | Need to contact us for the available frequency |
|                                                      |                  | 30.0MHz~50.0MHz (3rd Overtone)                                |                                                |
| Frequency Tolerance                                  | $\Delta f/f_0$   | $\pm 30\text{ppm}$                                            | at 25°C                                        |
| Frequency Tolerance over Operating Temperature Range | $\Delta f/f_0$   | below 6.0MHz: $\pm 50\text{ppm}$                              | -10°C ~ +60°C                                  |
|                                                      |                  | above 6.0MHz: $\pm 30\text{ppm}$                              |                                                |
| Operating Temperature Range                          | $T_{\text{OPR}}$ | -20°C ~ +70°C                                                 |                                                |
| Storage Temperature Range                            | $T_{\text{STR}}$ | -40°C ~ +85°C                                                 |                                                |
| Motional (series) resistance                         | $R_1$            | Refer to the following table                                  | at 25°C                                        |
| Load capacitance                                     | $C_L$            | Fundamental: 10.0pF ~ $\infty$ 3rd Overtone: 5.0pF ~ $\infty$ | Need to specify your requirement               |
| Shunt capacitance                                    | $C_0$            | 7.0pF Max.                                                    |                                                |
| Level of drive                                       | $D_L$            | 100 $\mu\text{W}$                                             |                                                |
| Insulation Resistance                                | $I_R$            | 500M $\Omega$ Min.                                            | DC100V $\pm 15\text{V}$                        |
| Aging (first year)                                   | $\Delta f/f_0$   | $\pm 5\text{ppm}$ Max.                                        | 25°C $\pm 3^\circ\text{C}$                     |

### MOTIONAL (SERIES) RESISTANCE ( $R_1$ )

| Frequency Range | $3.5\text{MHz} \leq f_0 < 4.0\text{MHz}$ | $4.0\text{MHz} \leq f_0 < 6.0\text{MHz}$ | $6.0\text{MHz} \leq f_0 < 10\text{MHz}$ | $10\text{MHz} \leq f_0 < 14\text{MHz}$ | $14\text{MHz} \leq f_0 < 30\text{MHz}$ | $30\text{MHz} \leq f_0 < 36\text{MHz}$ | $36\text{MHz} \leq f_0 \leq 50\text{MHz}$ |
|-----------------|------------------------------------------|------------------------------------------|-----------------------------------------|----------------------------------------|----------------------------------------|----------------------------------------|-------------------------------------------|
| Mode            | Fundamental                              | Fundamental                              | Fundamental                             | Fundamental                            | Fundamental                            | 3rd Overtone                           | 3rd Overtone                              |
| $R_1$           | 200 $\Omega$ Max.                        | 150 $\Omega$ Max.                        | 100 $\Omega$ Max.                       | 80 $\Omega$ Max.                       | 50 $\Omega$ Max.                       | 140 $\Omega$ Max.                      | 100 $\Omega$ Max.                         |