



## HC-49SMD(2pads/3pads) SMD Crystal UNITS

### Features

- ▶ Small size , Light weight , 2pads/3pads.
- ▶ High dependability by means of resistance weld hermetic seal.
- ▶ Tape and reel available.
- ▶ RoHS compliant and lead free.

RoHS / Pb Free

### Specifications

| Type   | HC-49SMD(2pads/3pads)            |
|--|----------------------------------|
| Freq. range  | 3.0 ~ 150.0MHz                   |
| Vibration mode                                       | AT cut , Fundamental , 3rd       |
| Frequency tolerance(at 25°C)                         | -/+10ppm , -/+30ppm , or specify |
| Equivalent series resistance                         | See table No.1                   |
| Frequency stability over operating temperature range | -/+10ppm , -/+30ppm , or specify |
| Operating temperature range                          | -10 ~ +60 °C , or specify        |
| Drive Level  | 300uW Max.                       |
| Shunt capacitance                                    | 5.0pF Max.                       |
| Load capacitance                                     | 16pF, 18pF, 20pF, or specify     |
| Aging  | -/+2ppm/year. -/+5ppm/year       |
| Min. Packing   | 2,000pcs/Reel                    |

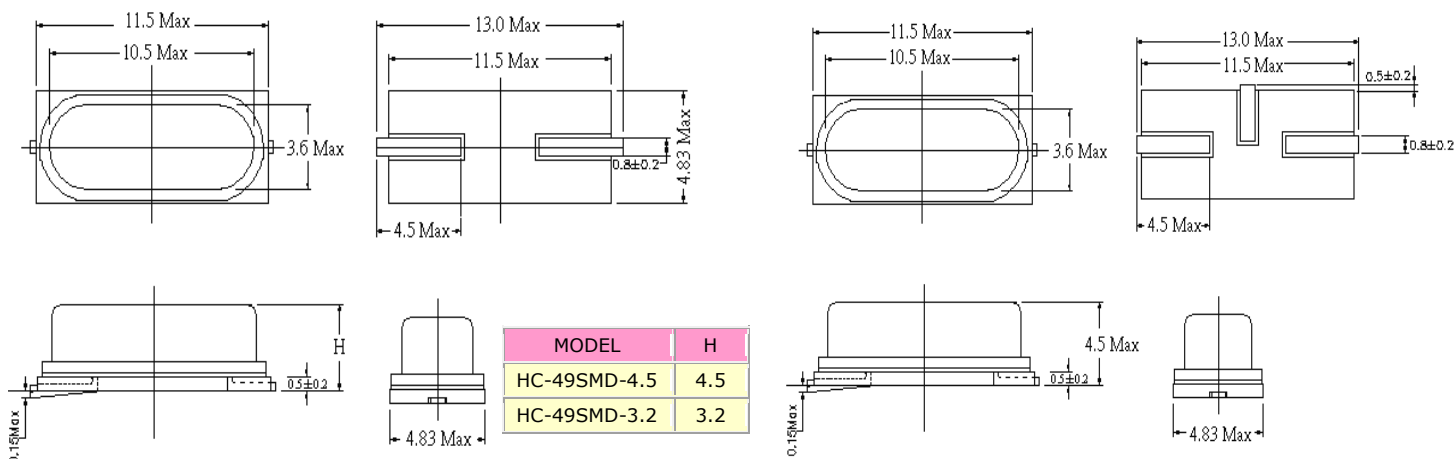
### Equivalent series resistance(ESR) Table No. 1

| Frequency     | Mode        | ESR           |
|---------------|-------------|---------------|
| 3.0~3.9MHz    | Fundamental | 150 ohms Max. |
| 4.0~4.9MHz    | Fundamental | 130 ohms Max. |
| 5.0~5.9MHz    | Fundamental | 120 ohms Max. |
| 6.0~7.9MHz    | Fundamental | 100 ohms Max. |
| 8.0~9.9MHz    | Fundamental | 80 ohms Max.  |
| 10.0~14.9MHz  | Fundamental | 60 ohms Max.  |
| 15.0~54.0MHz  | Fundamental | 40 ohms Max.  |
| 36.0~150.0MHz | 3rd         | 70 ohms Max.  |

### Dimensions (Unit:mm)

49SMD(2pads)

49SMD(3pads)



\*Specifications described are subject to change without notice for improvement.