



MEC

QUARTZ CRYSTAL UNIT

Product Brief Introduction

SMD SERIES:

SMD49S & SMD49SS

Application:

Radio communication, Audio-visual equipment, Office automation equipment, Consumer product

Specification

| | |
|---|---------------------------------|
| Frequency range | See table 1 |
| Vibration mode | AT cut: fundamental. Third |
| Frequency tolerance at 25 °C | ±10, ±15, ±20, ±30, ±50 ppm |
| Operating temperature range and frequency stability | See Table 2 |
| Equivalent series resistance | See Table 1 |
| Shunt capacitance | 5.0pF max or special |
| Measure instrument | S&A 250B PI system |
| Load capacitance | Series, 16, 20, 30pF or special |
| Drive level | 10,100, 300, 500uW or special |
| Insulation resistance | 500 M Ω min/DC 100V |
| Aging | ±1, 3, 5ppm/ year |
| Storage temperature range | -40 ~ +85°C |

Table 1/ Frequency range & Equivalent Series resistance

| Frequency (MHz) | Vibration mode | HC-49S(Ω) |
|-----------------|----------------|-----------|
| 3.2~3.79 | Fundamental /F | 180 |
| 3.8~4.49 | Fundamental /F | 150 |
| 4.5~5.99 | Fundamental /F | 120 |
| 6.0~7.99 | Fundamental /F | 100 |
| 8.0~9.99 | Fundamental /F | 80 |
| 10.0~11.9 | Fundamental /F | 70 |
| 12.0~15.9 | Fundamental /F | 60 |
| 16.0~19.9 | Fundamental /F | 50 |
| 20.0~26.0 | Fundamental /F | 40 |
| 26.0~39.9 | Third/ O3 | 100 |
| 40.0~60.0 | Third/ O3 | 80 |
| 60.0~80.0 | Third/ O3 | 60 |
| 80.0~100.0 | Third/ O3 | 60 |

Table 2/Operating temperature range and frequency stability

| TEMP | PPM | ±10 | ±15 | ±20 | ±30 | ±50 |
|-----------|-----|-----|-----|-----|-----|-----|
| 0~+50°C | | ☆ | ☆ | ☆ | ☆ | ☆ |
| -10~+60°C | | ☆ | ☆ | ☆ | ☆ | ☆ |
| -20~+70°C | | ☆ | ☆ | ☆ | ☆ | ☆ |
| -30~+80°C | | | | ☆ | ☆ | ☆ |
| -40~+90°C | | | | | ☆ | |

The mark " ☆ " denotes our achieved level

1. Crystal enclosure seal : resistance weld
2. Crystal enclosure medium : Nitrogen

