



## 1、 Specifications

|    |                                      |                   |
|----|--------------------------------------|-------------------|
| 1  | 规格型号 Holder Type                     | HC-49S            |
| 2  | 标称频率 Nominal Frequency               | 9.81563MHZ        |
| 3  | 振动模式 Mode of Oscillation             | 基频                |
| 4  | 调整频差 Frequency Tolerance at 25°C     | ±20ppm            |
| 5  | 温度频差 Temperature Frequency Stability | ±30ppm            |
| 6  | 工作温度 Operating Temperature Range     | -40~85°C          |
| 7  | 贮存温度 Storage Temperature Range       | -40~90°C          |
| 8  | 负载电容 Load Capacitance                | 10 pF             |
| 9  | 静电容 Shunt capacitance                | ≤7 pF             |
| 10 | 等效电阻 Equivalent Series Resistance    | 80 Ω Max          |
| 11 | 激励功率 Drive Level                     | 50uW              |
| 12 | 绝缘阻抗 Insulation Resistance           | 500MΩ min./DC100V |

## 2、 Frequency stability over temperature range (AT cut)

| Temperature Range | Frequency Stability |       |         |        |        |        |        |        |
|-------------------|---------------------|-------|---------|--------|--------|--------|--------|--------|
|                   | ±3PPM               | ±5PPM | ±7.5PPM | ±10PPM | ±20PPM | ±30PPM | ±50PPM | ±70PPM |
| 0°C~+50°C         | ☆                   | ☆     | ☆       | ☆      | ☆      | ☆      | ☆      | ☆      |
| -10°C~+60°C       |                     |       | ☆       | ☆      | ☆      | ☆      | ☆      | ☆      |
| -20°C~+70°C       |                     |       |         | ☆      | ☆      | ☆      | ☆      | ☆      |
| -30°C~+70°C       |                     |       |         |        | ☆      | ☆      | ☆      | ☆      |
| -40°C~+85°C       |                     |       |         |        |        | ☆      | ☆      | ☆      |
| -40°C~+125°C      |                     |       |         |        |        | ☆      | ☆      | ☆      |

3、Dimensions (unit:mm)



4、Recommended Reflow profile

Condition:



## 5、Reliability specifications

| NO | Item                         | Condition  | Standard   |
|----|------------------------------|--|--|
| 1. | Drop Test                    | Free drop from 75cm height on a hard wooden board for 3 times. (Board is thickness more than 30 mm.)                           | Frequency change:<br>≤5ppm<br>Rr as specification  |
| 2. | Mechanical Shock             | Half sine wave, 1000G, 0.5mS, three times for all 3 directions   | Frequency change:<br>≤5ppm<br>Rr as specification  |
| 3. | Vibration                    | Frequency range:10~55hz<br>Amplitude:1.52mm<br>Sweep time:1mintutes<br>perpendicular axes each test time:2Hrs                  | Frequency change:<br>≤5ppm<br>Rr as specification  |
| 4. | Solderability                | Temperature:245℃±5℃<br>Immersing depth:0.5mm minimum<br>Immersion time:5±1sec.<br>Flux:Rosin resin methyl alcohol solvent(1:4) | 90% exhibit tin ok                                 |
| 5. | Resistance to soldering heat | Test temperature:260℃±5℃<br>Test time :10±1sec.  | Frequency change:<br>≤10ppm<br>Rr as specification |
| 6. | High Temp & Humidity         | 85±3℃ & RH85%, 500±12 hours  | Frequency change:<br>≤10ppm<br>Rr as specification |
| 7. | Low temperature storage      | -40±3℃, 500±12 hours   | Frequency change:<br>≤10ppm<br>Rr as specification |
| 8. | High temperature storage     | +85±3℃, 500±12 hours   | Frequency change:<br>≤10ppm<br>Rr as specification |
| 9. | Temperature cycling          | -40±3℃/10min~+85±3℃/10min, 100cycles   | Frequency change:<br>≤10ppm<br>Rr as specification |

## 6、Packaging standard

Dimension of Inside Package

内包装尺寸图

Dimensions of outside Package



外包装尺寸图



### 7-1. MARKING

- (1) Marking Labels are affixed to reel, inner carton and outer carton.
- (2) Each label contains the following information.
  - (a) Manufacture's name or symbol
  - (b) Parts name or type
  - (c) Frequency
  - (d) Quantity
  - (e) Reel number
  - (f) Manufacturer's code (EIAJ code)

### 7-2. QUANTITY

200pcs/bag

### 7-3. STORAGE ENVIRONMENT

- ✧ Storage the reel at normal temperature and humidity
- ✧ Open the packing just before using
- ✧ Do not expose the sun
- ✧ Do not storage with some erosive chemicals
- ✧ Nothing is allowed to put on the reel or carton to prevent mechanical damage

### 7-4. HANDLING

- ✧ Handle with care to prevent the damage of tape, reel and products.