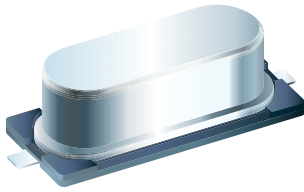




利明
49MD 系列



Type
12.5 x 4.5 mm Crystal

FEATURE

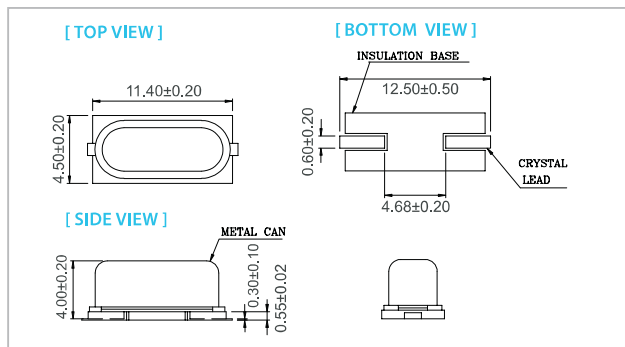
- Typical 12.5 x 4.5 x 4.0 mm metal can SMD package.
- 24mm width Tape & Reel package for automatic assembly.

TYPICAL APPLICATION

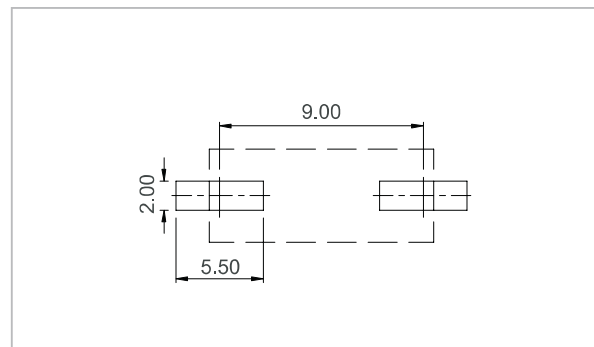
- Automotive
- Bluetooth, Wireless
- Computers, Modems, Communications
- Set-top Box, DECT/WDCT

| | |
|--|-------------------------------------|
| Frequency range | 3.00~100.00MHZ |
| Load Capacitance | Series, 6~32pf, or specify |
| Frequency Tolerance(at25 °C) | ± 10 PPM± 20 PPM± 30 PPM or specify |
| Frequency stability Over Operating Temperature Range | ± 10 PPM± 20 PPM± 30 PPM or specify |
| Operating Temperature Range | -20~+70°C -40~+85°C or specify |
| Storage Temperature Range | -40~+85°C |
| Shunt Capacitance(C0) | 7pf-Max |
| Drive Level | 1~1000uW (100uW typical) |
| Insulation Resistance | 500m Minimum at 100VDC |
| Aging(at25°C) | ± 3PPM/year Max. |

DIMENSION (mm)



SOLDER PAD LAYOUT (mm)



ELECTRICAL SPECIFICATION

| Parameter | Min. | Typical | Max. | Unit |
|------------------------------------|-------------------------------|---------|------|------------|
| Storage Temp. Range | -55 | - | 125 | °C |
| Standard Frequency | 4.096, 10.368, 16, 25, 32, 48 | | | MHz |
| Level of Drive | - | 10 | 800 | µw |
| Shunt Capacitance (Co) | - | - | 7.0 | pF |
| Insulation Resistance | 500 MΩ @ DC100V | - | - | |
| Aging (@25°C 1 st year) | | ±5.0 | | ppm / year |

FREQ. STABILITY vs. TEMP. RANGE

| Temp. (°C) | ppm | ±5 | ±10 | ±15 | ±20 |
|------------|-----|----|-----|-----|-----|
| -10 ~ +60 | | × | ○ | ○ | ○ |
| -20 ~ +70 | | × | △ | ○ | ○ |
| -40 ~ +85 | | × | × | × | ○ |



Model Numbering Guide – Crystal Units

Available options

| ① | ② | ③ | ④ | | ⑤ | | | | | | |
|--------|----------------|-----------------|-----------------------|------------------------|-----------------------|--------------------------------------|--|-------------------------------|------------|----------------|------|
| Type | package (mm) | Frequency range | Load Capacitance (pF) | Freq. Tol. @25°C (ppm) | Freq. Stability (ppm) | Temp. Range(°C) | Special Requirement | Oscillator Mode | Appearance | Lead Free | Dash |
| 1612 | 1.6x1.2 | 3.00~100.00MHZ | 6 | ± 5 | ± 5 | A:-20~+70 B:-40~+85 J:-40~+105 | For Automotive Spurious Dld No special Pullability Several | AT Fundamental At3rd Overtone | Normal | Rohs Compliant | - |
| 2016 | 2.0x1.6 | | | | | | | | | | |
| 2520 | 2.5x2.0 | | | | | | | | | | |
| 3225 | 3.2x2.5 | | | | | | | | | | |
| 5032 | 5.0x3.2(4pads) | | | | | | | | | | |
| 6035 | 6.0x3.5 | | | | | | | | | | |
| 3225 | 3.2x2.5(2pads) | | | | | | | | | | |
| 5032 | 5.0x3.2(2pads) | | | | | | | | | | |
| 8045 | 8.0x4.5 | | | | | | | | | | |
| 49S | 11.1x4.68 | | | | | | | | | | |
| 49SS | 11.05x4.65x2.5 | | | | | | | | | | |
| 49MD | 13.0x4.85 | | | | | | | | | | |
| 49SSMD | 12.2x4.8x3.0 | | | | | | | | | | |

产品编号: - - - -

① 型号 ② 频率 ③ 负载电容 ④ 频率稳定度 (X10⁻⁶, +25°C) ⑤ 温度

范例: 49MD-12.00-20-20-20/A

① ② ③ ④ ⑤

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