

XJ 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.

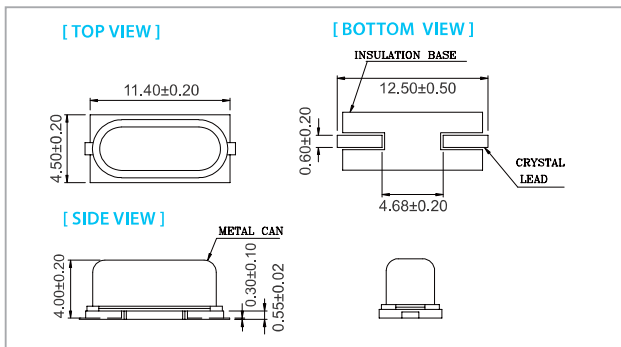
TYPICAL APPLICATION

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

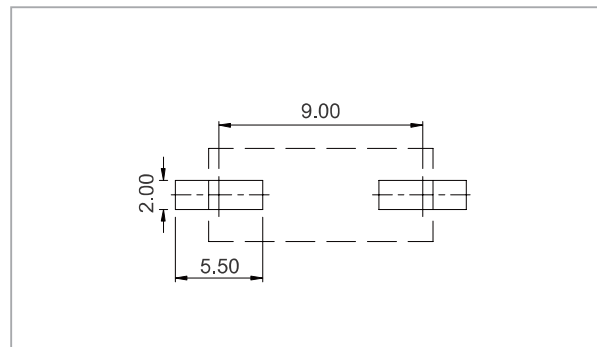


RoHS Compliant

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 |

Standard frequencies are frequencies which the crystal has been designed and does not imply a stock position.

EQUIVALENT SERIES RESISTANCE (E.S.R)

| Frequency Range | MODE | E.S.R |
|-------------------------|------|--------|
| $F_o \leq 3.58$ MHz | A1 | <140 Ω |
| 4 MHz < F_o < 5 MHz | A1 | <120 Ω |
| 5 MHz ≤ F_o < 7 MHz | A1 | <80 Ω |
| 7 MHz ≤ F_o < 9 MHz | A1 | <45 Ω |
| 9 MHz ≤ F_o < 13 MHz | A1 | <40 Ω |
| 13 MHz ≤ F_o < 16 MHz | A1 | <35 Ω |
| 16 MHz ≤ F_o < 20 MHz | A1 | <30 Ω |
| 20 MHz ≤ F_o < 30 MHz | A1 | <25 Ω |
| 30 MHz ≤ F_o < 36 MHz | A1 | <25 Ω |
| 30 MHz ≤ F_o < 36 MHz | A3 | <80 Ω |
| 36 MHz ≤ F_o ≤ 80 MHz | A3 | <80 Ω |

FREQ. STABILITY vs. LOAD CAPACITANCE

| Load Capacitance | ppm | ±5 | ±10 | ±15 | ±20 | ±30 |
|------------------|-----|----|-----|-----|-----|-----|
| 8pF | | X | X | △ | ○ | ○ |
| 10pF | | X | X | △ | ○ | ○ |
| 12pF | | X | △ | ○ | ○ | ○ |
| 16pF | | X | △ | ○ | ○ | ○ |
| Series | | △ | ○ | ○ | ○ | ○ |

* ○: Available △: Conditional X: Not available

FREQ. STABILITY vs. TEMP. RANGE

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

* ○: Available △: Conditional X: Not available