

# 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.

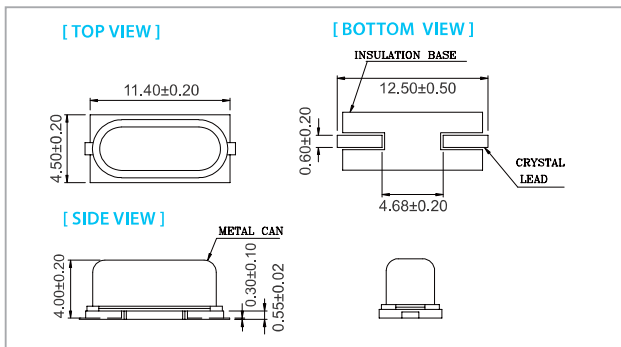
### TYPICAL APPLICATION

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

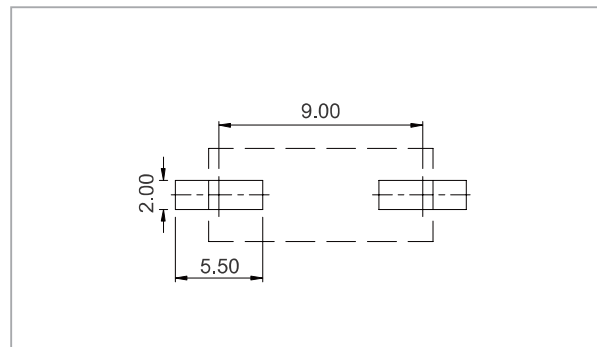


**RoHS Compliant**

### 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 <sup>st</sup> 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