

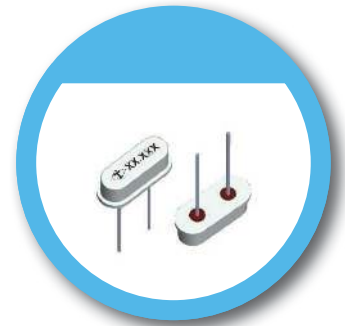
XI Type 10.8 x 4.5 mm Crystal

FEATURE

- Typical 10.8 x 4.5 x 3.4 mm standard footprint.
- Low profile for close PCB stacking.

TYPICAL APPLICATION

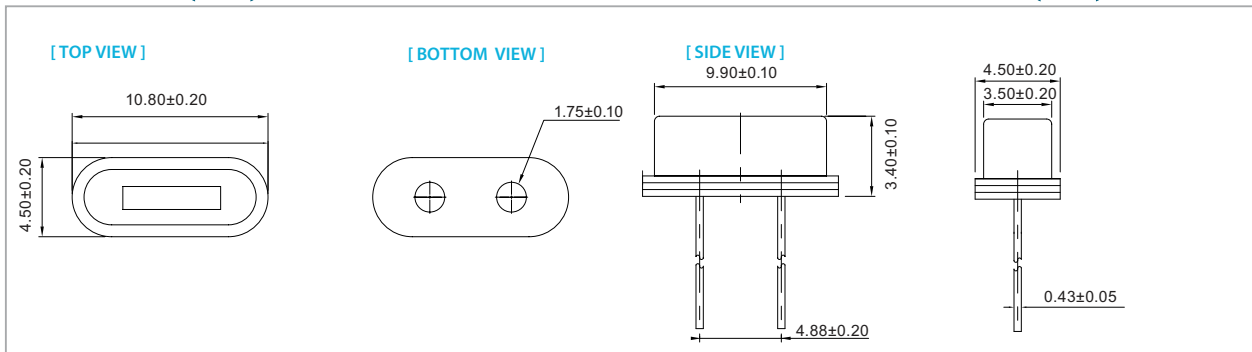
- Automotive
- Bluetooth, Wireless
- Computers, Modems, Communications
- Set-top Box, DECT/WDCT



RoHS Compliant

DIMENSION (mm)

SOLDER PAD LAYOUT (mm)



ELECTRICAL SPECIFICATION

| Parameter | Min. | Typical | Max. | Unit |
|------------------------|-----------------|---------|------|------------|
| Storage Temp. Range | -55 | - | 125 | °C |
| Level of Drive | - | 10 | 800 | μw |
| Shunt Capacitance (Co) | - | - | 7.0 | pF |
| Insulation Resistance | 500 MΩ @ DC100V | - | - | |
| Aging | | ±5 | | 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 $\leq F_o$ < 7 MHz | A1 | <80 Ω |
| 7 MHz $\leq F_o$ < 9 MHz | A1 | <45 Ω |
| 9 MHz $\leq F_o$ < 13 MHz | A1 | <40 Ω |
| 13 MHz $\leq F_o$ < 16 MHz | A1 | <35 Ω |
| 16 MHz $\leq F_o$ < 20 MHz | A1 | <30 Ω |
| 20 MHz $\leq F_o$ < 30 MHz | A1 | <25 Ω |
| 30 MHz $\leq F_o$ < 36 MHz | A1 | <25 Ω |
| 30 MHz $\leq F_o$ < 36 MHz | A3 | <80 Ω |
| 36 MHz $\leq F_o \leq 80$ 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

Note: not all combination of options are available. Other specifications may be available upon request.