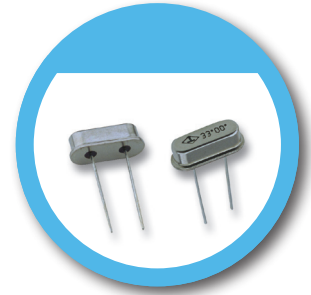


## 11.1 x 4.68 mm Crystal – XI Type

### FEATURE

- Typical 11.1 x 4.68 x 3.51 mm standard footprint.
- Low profile for close PCB stacking.
- Packing: Plastic bag 200/500 pcs or Ammopack 1000pcs (800pcs).



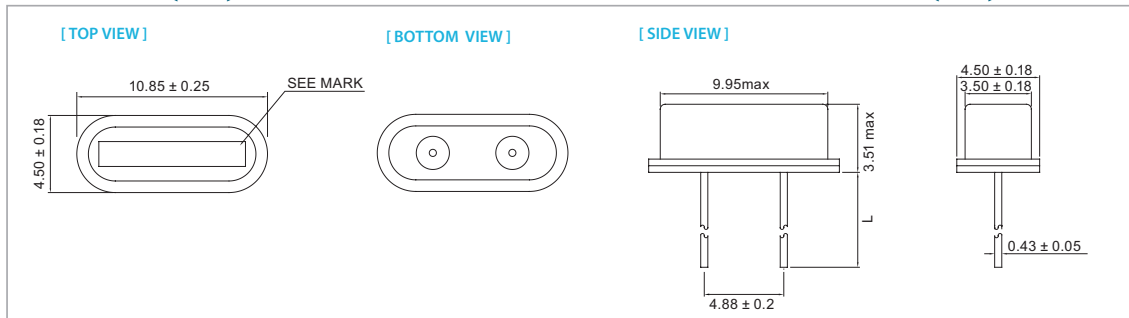
### TYPICAL APPLICATION

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

**RoHS Compliant Standard**

### 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	First year: ±5.0 ; Sub 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)

TYPE FREQUENCY	MODE	E. S. R
Freq. ≤ 4 MHz	A1	140 Ω
4 MHz < Freq. < 5 MHz	A1	120 Ω
5 MHz ≤ Freq. < 7 MHz	A1	80 Ω
7 MHz ≤ Freq. < 9 MHz	A1	45 Ω
9 MHz ≤ Freq. < 13 MHz	A1	40 Ω
13 MHz ≤ Freq. < 16 MHz	A1	35 Ω
16 MHz ≤ Freq. < 20 MHz	A1	30 Ω
20 MHz ≤ Freq. < 30 MHz	A1	25 Ω
30 MHz ≤ Freq. < 36 MHz	A1	25 Ω
30 MHz ≤ Freq. < 36 MHz	A3	80 Ω
36 MHz ≤ Freq. < 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