

XI Type

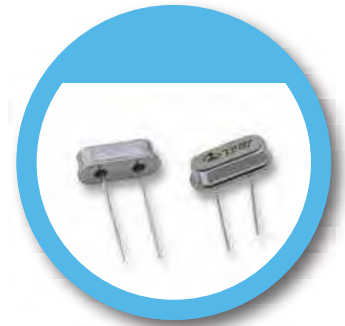
10.8 x 4.5 mm Crystal

FEATURE

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

TYPICAL APPLICATION

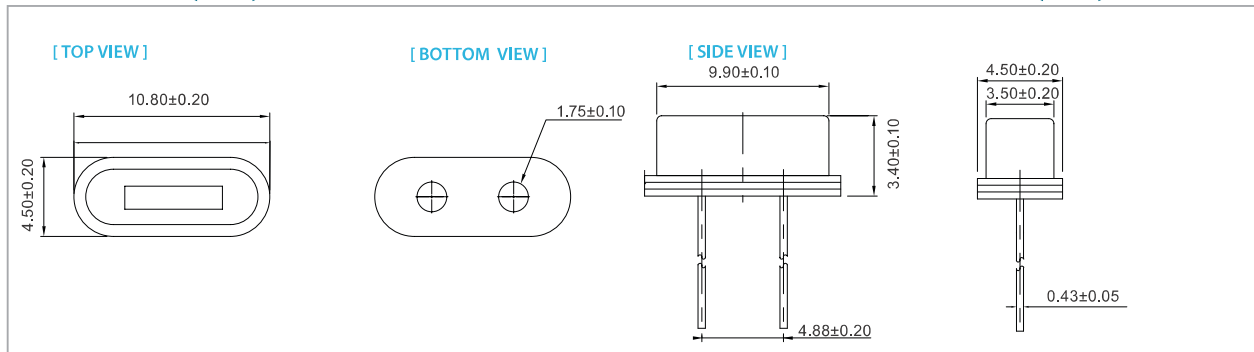
- Automotive
- Bluetooth, Wireless
- Computers, Modems, Communications
- Set-top Box, DECT/WDCT



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
$F_o \leq 3.58 \text{ MHz}$	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