

# C F Type

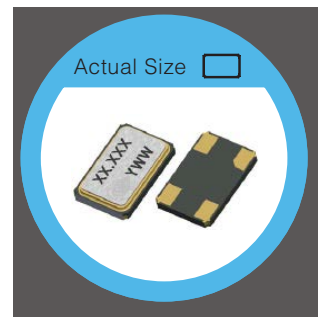
## 5.0 x 3.2 mm SMD Crystal

### FEATURE

- Typical 5.0 x 3.2 x 0.8 mm ceramic SMD package.
- 12 mm width Tape & Reel package for automatic assembly.
- Tight tolerance 10 ppm available.

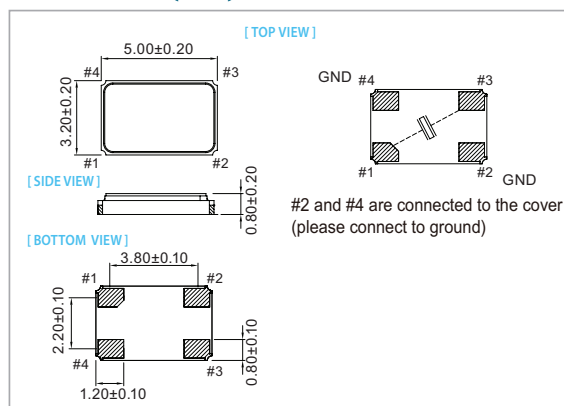
### TYPICAL APPLICATION

- Bluetooth, GPS
- Display, TV(FPD/FTF LCD)
- Computer Peripherals

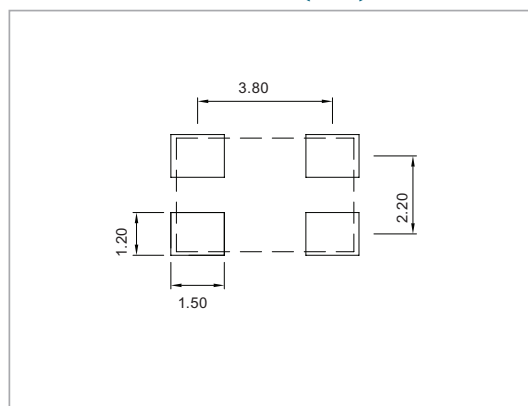


RoHS Compliant

### DIMENSION (mm)



### SOLDER PAD LAYOUT (mm)



### ELECTRICAL SPECIFICATION

Parameter	Min.	Typical	Max.	Unit
Storage Temp. Range	-55	-	125	°C
Standard Frequency	12, 16, 20, 25, 27, 28, 40			MHz
Level of Drive	-	10	300	μw
Shunt Capacitance (Co)	-	-	5.0	pF
Insulation Resistance	500 MΩ@ DC100V	-	-	
Aging	±3.0			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
8 MHz ≤ Fo < 11 MHz	A1	<100Ω
11 MHz ≤ Fo < 12 MHz	A1	<65Ω
12 MHz ≤ Fo < 13 MHz	A1	<60Ω
13 MHz ≤ Fo < 16 MHz	A1	<55Ω
16 MHz ≤ Fo < 24 MHz	A1	<50Ω
24 MHz ≤ Fo < 48 MHz	A1	<45Ω
48 MHz ≤ Fo < 53.125 MHz	A1	<40Ω
Fo = 80 MHz	A3	<60Ω

### FREQ. STABILITY vs. TEMP. RANGE

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

\* ○: Available △: Conditional X: Not available

### FREQ. STABILITY vs. WIDE TEMP. RANGE

Temp. (°C)	ppm			
	±15	±20	±30	±50
-40 ~ +105	△	○	○	○
-40 ~ +125	X	X	△	○

\* ○: Available △: Conditional X: Not available

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