

# XX Type

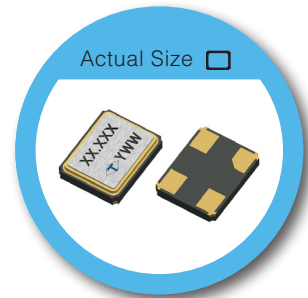
## 3.2 x 2.5 mm SMD Crystal

### FEATURE

- Typical 3.2 x 2.5 x 0.7 mm ultra thin ceramic package.
- 8mm width Tape & Reel package for automatic assembly.
- Tight tolerance 10 ppm available.

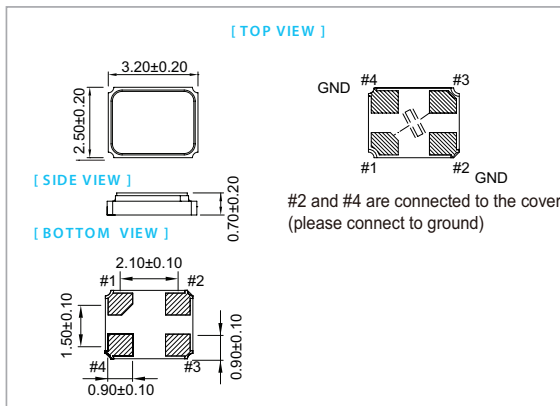
### TYPICAL APPLICATION

- Automotive
- Bluetooth, Mobile Phone, GPS
- Wireless LAN, 4G/LTE
- Hard Disk

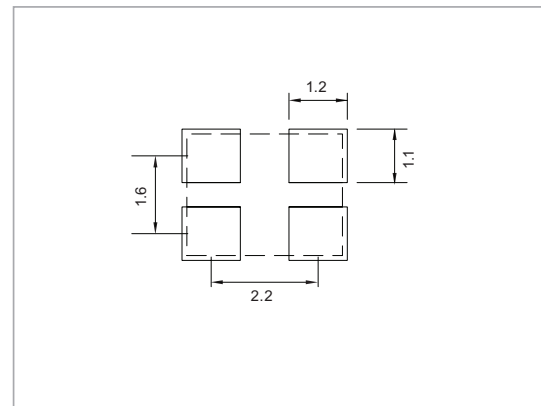


RoHS Compliant

### DIMENSION (mm)



### SOLDER PAD LAYOUT (mm)



### ELECTRICAL SPECIFICATION

Parameter	Min.	Typical	Max.	Unit
Storage Temp. Range	-55	-	125	°C
Standard Frequency		16, 24, 26, 27, 32, 40		MHz
Level of Drive	-	10	200	μw
Shunt Capacitance (Co)	-	-	3.0	pF
Insulation Resistance	500 MΩ@ DC100V	-	-	
Aging		±1.0 to ±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
12 MHz ≤ Fo ≤ 13 MHz	A1	<150Ω
13 MHz < Fo ≤ 19.5 MHz	A1	<80Ω
19.5 MHz < Fo ≤ 27 MHz	A1	<60Ω
27 MHz < Fo ≤ 60 MHz	A1	<50Ω

### FREQ. STABILITY vs. TEMP. RANGE

Temp. (°C)	ppm		
	±5	±10	±15
-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.**