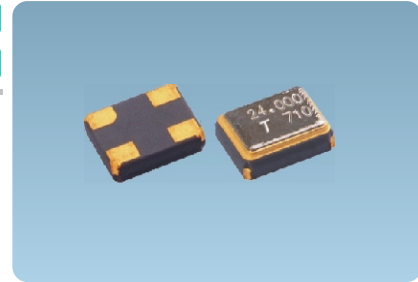


## XY Type

2.5x2.0x0.55mm typ  
12MHz up to 60MHz



### Feature

A small surface mount type crystal unit, especially suited for small-sizing requirements.

- Ultra compact and thin. (2.5x2.0x0.55mm typ.)
- Tight Tolerance 10 ppm available.
- Application : Bluetooth ; Mobile phone ; W-LAN ; Office

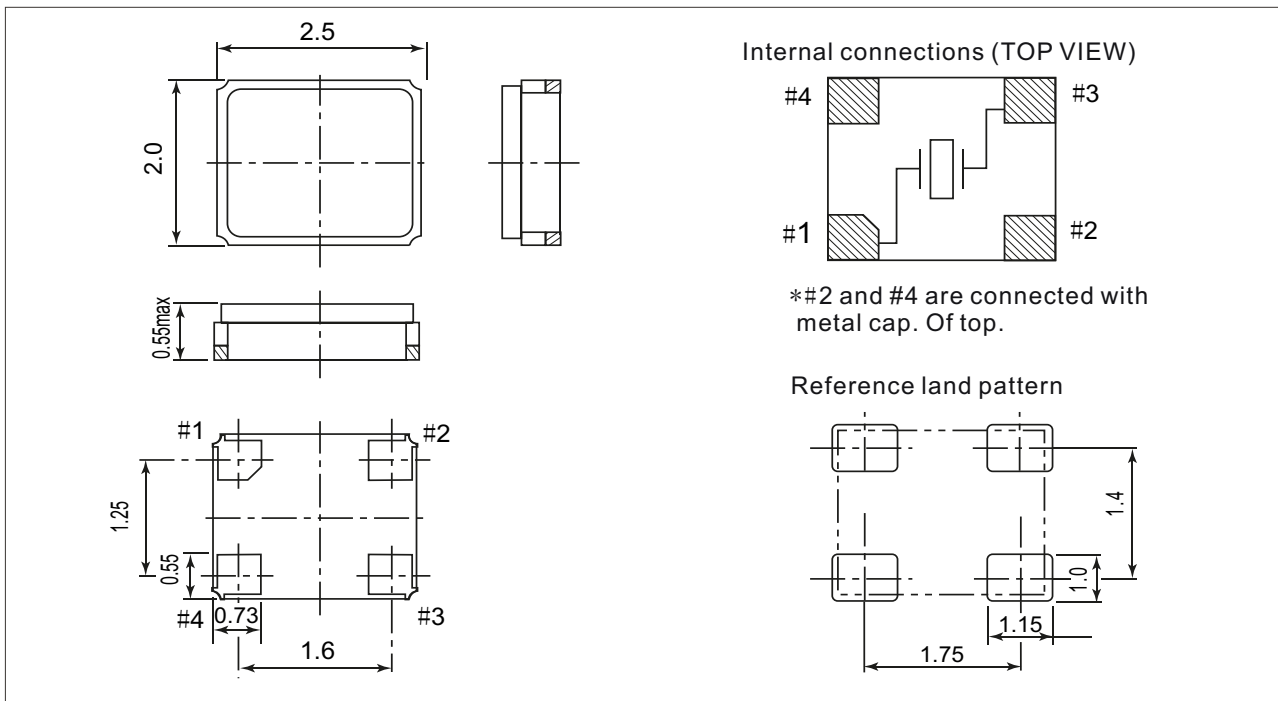
Automation ; Audio & Video.

- Meets the requirements for re-flow profiling using lead-free solder.

### Specifications

Item	Type	XY-Type				
Frequency Range		12~13MHz	13~16MHz	16~20MHz	20~30MHz	30~60MHz
Oscillator Mode		Fundamental				
Load Capacitance		Series,8pF,10pF,12pF				
Drive Level		10μW(100μW max.)				
Frequency Tolerance		±10×10 <sup>-6</sup> ,±20×10 <sup>-6</sup> ,±30×10 <sup>-6</sup> ,±50×10 <sup>-6</sup> (at 25°C)				
Series Resistance		200Ω max.	100Ω max.	80Ω max.	60Ω max.	40Ω max.
Operating Temperature Range		-10~+60°C, -20~+70°C, -40~+85°C				
Storage Temperature Range		-40~+85°C				
Packing Unit		3000pcs./reel(Ø180)				

### Outline Drawing



### Frequency Stability Vs. Temperature Range

Temp.(°C)	Ppm	±5	±10	±15
-10 ~ +60		+	✓	✓
-20 ~ +70		×	✓	✓
-40 ~ +85		×	×	✓

✓Standard +Available(case by case) × Not Available

### Oscillation Circuit of Fundamental Mode

