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## SMD QUARTZ CRYSTAL RESONATOR

SMD X'TAL 1.2×1.0×0.30mm

### Applications

Smart Wearable  
Mobile Communications  
Bluetooth  
Wireless LAN and Automotive

### Features

Dimensions:1.20 x 1.00 x 0.30mm  
Refflow soldering is available  
Extremely good for reducing EMI effect  
High precision and high frequency stability



### Specifications

Project	项目	SPECIFICATION 规格
Frequency Range	频率范围	24M~60MHz
Operation Mode	振动模式	Fundamental
Loading Capacitance	负载电容	9pF Std. 8 to 22pF , Series available
Drive Level	激励电平	10μW ( 100μW Max )
Frequency Tolerance	频率偏差	±10ppm ~ ±30PPM ( at 25°C )
Equivalent Resistance	谐振电阻	See Below
Frequency Stability	频率稳定性	±10ppm ~ ±50PPM
Operating Temp. Range	工作温度范围	-20~+70°C to -40~+85°C
Storage Temp. Range	储存温度范围	-55 ~ +125°C

Table 1: Operating temperature range and frequency stability

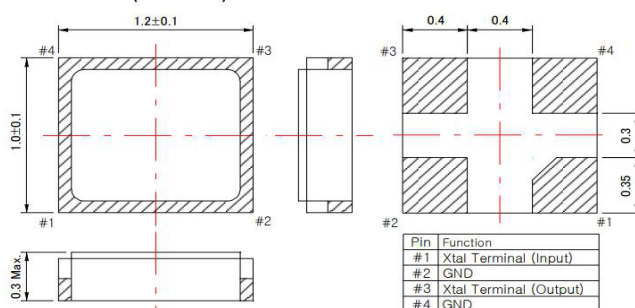
Table 2: Equivalent series resistance

Operation Temperature Range	Frequency Stability				
	±10PPM	±15PPM	±20PPM	±30PPM	±50PPM
-10°C~+60°C	●	●	●	●	●
-20°C~+70°C	●	●	●	●	●
-40°C~+85°C	○	○	●	●	●

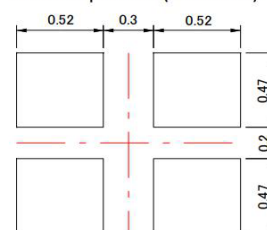
Frequency (MHz)	Overtone Order	ESR (Ω MAX)
24~31.999MHz	Fundamental	80Ω(MAX)
32~40.999MHz	Fundamental	70Ω(MAX)
41~52.999MHz	Fundamental	60Ω(MAX)
53~60MHz	Fundamental	50Ω(MAX)

### Dimensions and Patterns [unit:mm]

Dimensions (unit: mm)



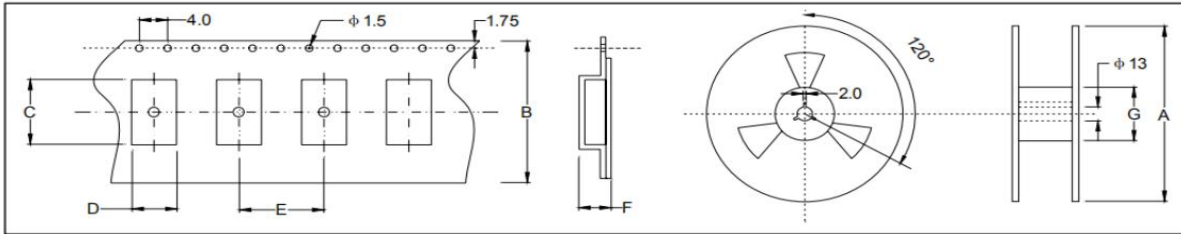
Land pattern (unit: mm)



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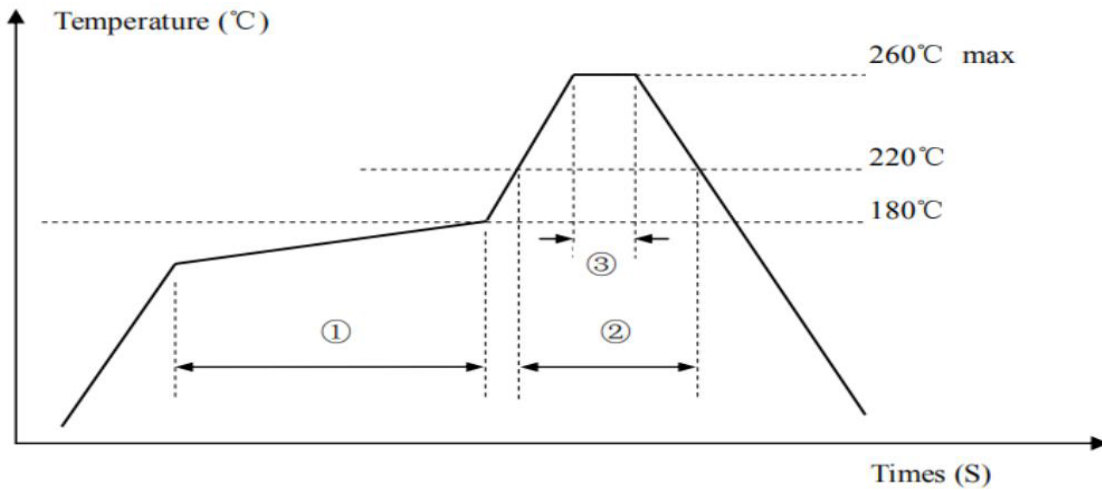
Taping Specification(Unit: mm)



	A	B	C	D	E	F	G
SMD1210	178±2.0	8.0±0.3	2.70±0.05	2.25±0.05	4.0±0.1	0.65±0.05	60.5±1.0

3000 PCS Per reel

**REFLOW SOLDERING PROFILE**



Pb free reflow A	①	Preheat	160~180°C	120sec. max
	②	Primary heat	220°C	60sec. max
	③	Peak	260°C	10sec. max.