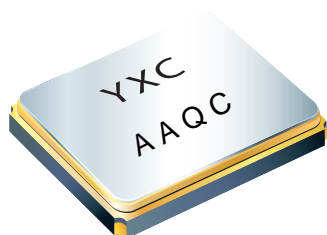


# YSX221SL



## Features

- External dimensions: 2.55 x 2.05 x 0.55 mm.
- Frequency range: 12MHz ~ 48MHz.
- High precision and high frequency stability.
- Excellent heat resistance and environmental characteristics.
- Applications: mobile phone, Bluetooth, Bluetooth, W-LAN ISM band radio, clock for MPU GPS, smart phone.

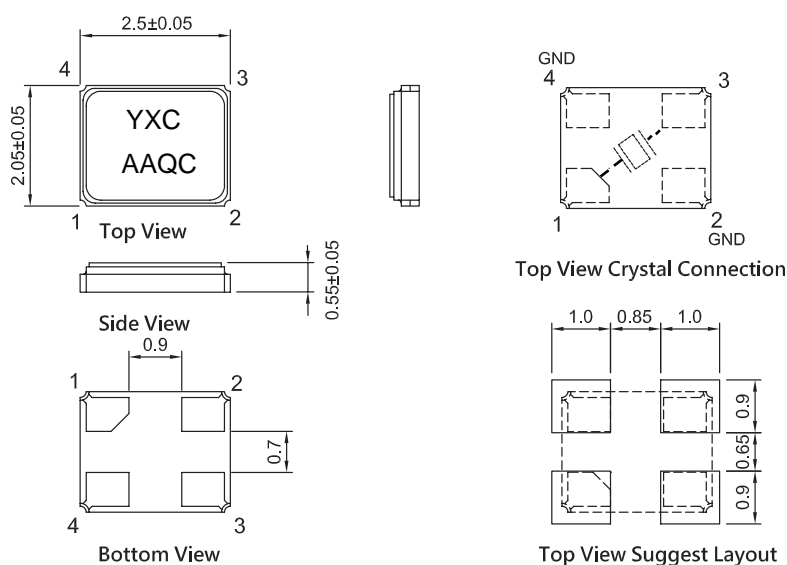
## Electrical Specifications

Item / Type	YSX221SL
Nominal Frequency Range	12 ~ 48 MHz
Vibration Mode	AT Fundamental
Load Capacitance	12pF, 20pF, or specify
Frequency Tolerance (at 25 °C)	± 10 ppm, ± 20 ppm, or specify
Frequency Versus Temperature Characteristics	±20 ppm, or specify
Operating Temperature	- 20 ~ + 70 °C , - 40 ~ + 85 °C , or specify
Storage Temperature	- 40 ~ + 85 °C , or specify
Shunt Capacitance	3 pF Max.
Level Of Drive	1~200 μW Max. (100uW typical)
Frequency Aging (at 25 °C)	± 3 ppm / year Max.

## Equivalent Series Resistance(ESR)

Fundamental	
12 ~ 13 MHz	150 Ω Max.
14 ~ 30 MHz	100 Ω Max.
30 ~ 48 MHz	60 Ω Max.

## Dimensions



Units: mm

# YSX221SL



★ PART NUMBER GUIDE 部件号示例 e.g. X252012MSB4SC

YSX221SL=2.55×2.05 SMD SEAM TYPE

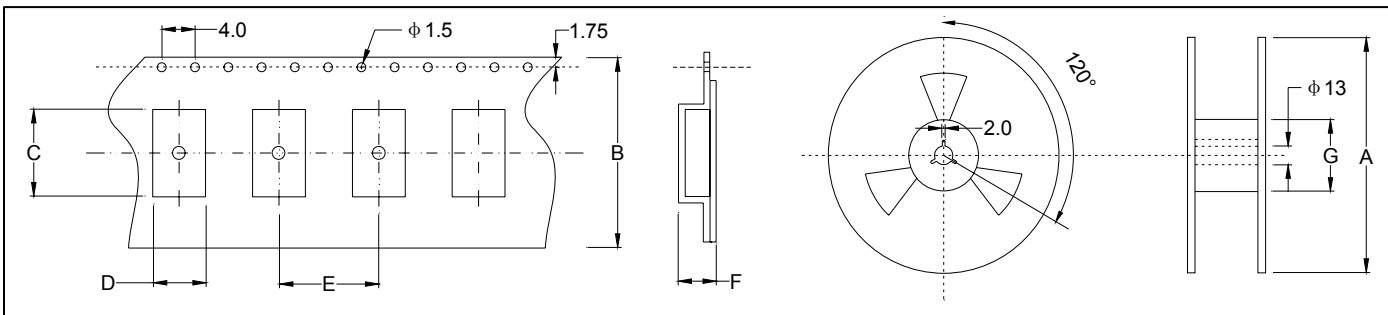
Quartz Crystal Resonator	Dimensions	Frequency (Hz)	Load Capacitance (Pf)	Frequency Stability Overall (ppm)	Pin	Material	Operating Temp. Range
X	2520	12M	S	B	4	S	C

Load Capacitance (Pf)	
X	7.4pF
G	12.5pF
L	9pF
M	10pF
O	12pF
P	15pF

Frequency tolerance	
B	±10PPM
D	±20PPM

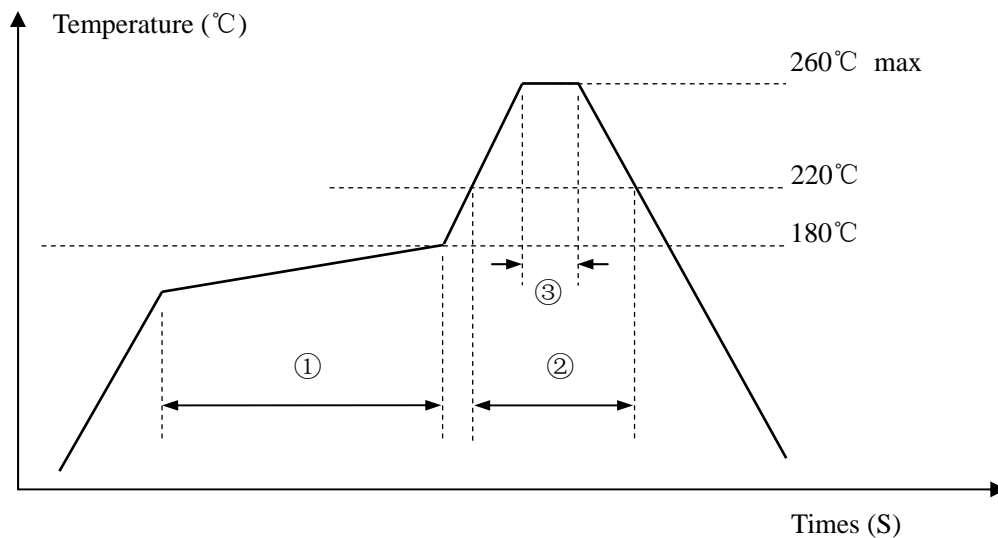
Operating temperature	
C	-20~+70°C
I	-40~+85°C
A	-40~+125°C
F	-40~+105°C

## ★ TAPING SPECIFICATION (Unit: mm) 编带规格



	A	B	C	D	E	F	G
SMD2520	178±2.0	8.0±0.3	2.70±0.05	2.25±0.05	4.0±0.1	1.05±0.05	60.5±1.0
3000 pcs per reel							

## ★ REFLOW SOLDERING PROFILE 回流焊特性



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