

Features

- External dimensions: 2.55 x 2.05 x 0.55 mm.
- Frequency range: 12MHz ~ 54MHz.
- High precision and high frequency stability.
- Excellent heat resistance and environmental characteristics.
- Applications: mobile phone, Bluetooth, W-LAN ISM band radio, clock for MPU GPS, smart phone.

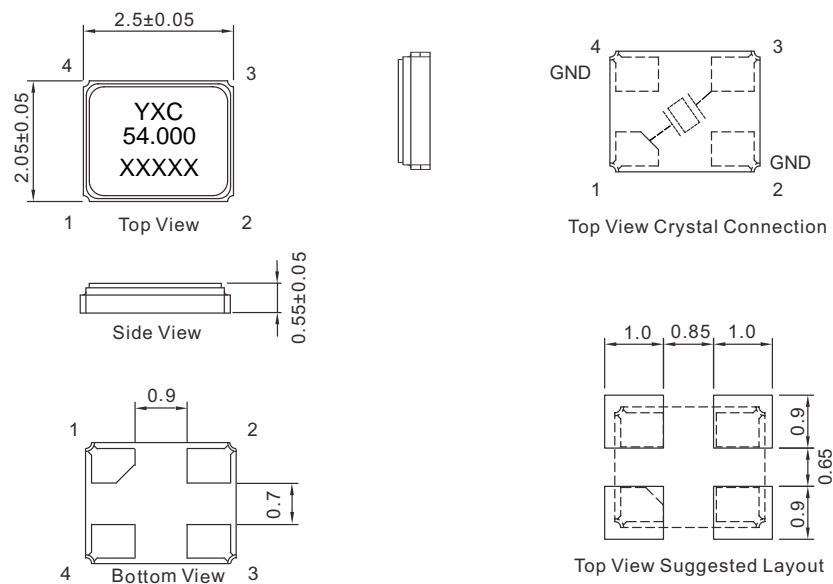
Electrical Specifications

| Item / Type | YSX221SL |
|--|--|
| Nominal Frequency Range | 12 ~ 54 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 ~ 14 MHz | 150 Ω Max. |
| 14 ~ 30 MHz | 100 Ω Max. |
| 30 ~ 48 MHz | 60 Ω Max. |
| 48 ~ 54 MHz | 50 Ω Max. |

Dimensions

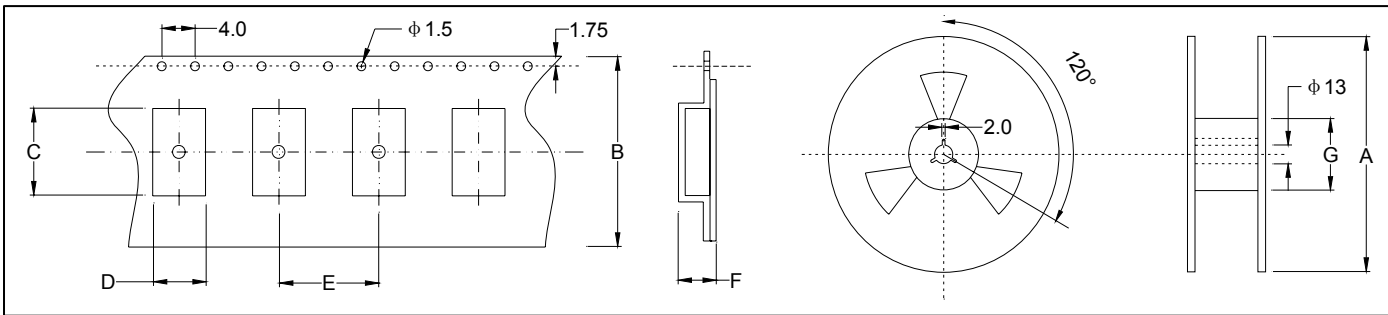


Units: mm

★ **PART NUMBER GUIDE 部件号示例** e.g. X252012MSB4SC YSX221SL=2.55×2.05 SMD SEAM TYPE

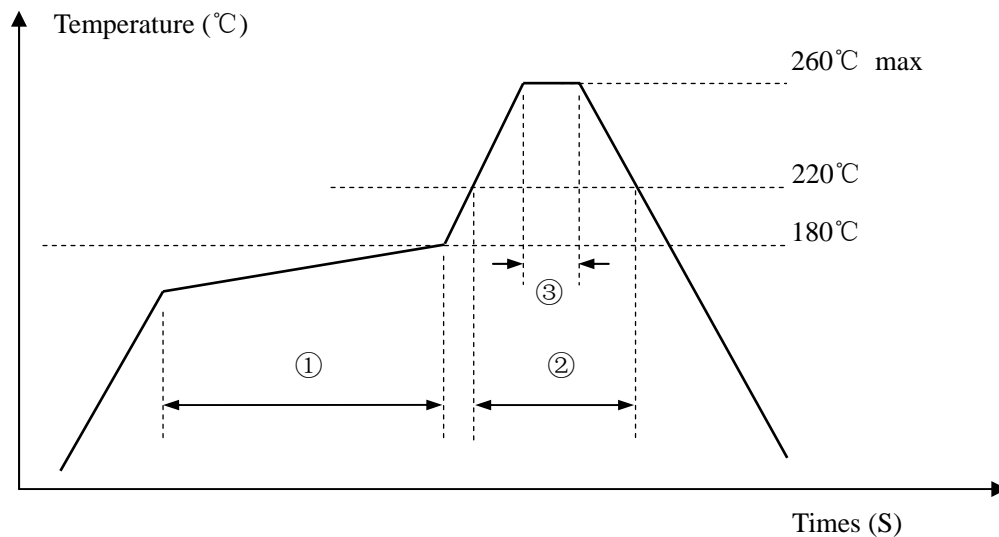
| Quartz Crystal Resonator | Dimensions | Frequency (Hz) | Load Capacitance (Pf) | Frequency Stability Overall (ppm) | Pin | Material | Operating Temp. Range |
|--------------------------|------------|----------------|-----------------------|-----------------------------------|-----|----------|-----------------------|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

★ **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. |