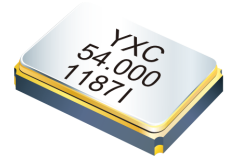


CRYSTAL UNIT

YSX531SL



X503212MLB4SI



Applications Features

- Industrial Control Consumers.
- Dimensions: 5.00 x 3.20 x 0.90 mm.
 - Standard Frequency: 12MHz
- High precision and high frequency stability.
 - Extremely good for reducing EMI effect.

Specifications

Standard Frequency	12 MHz
Vibration Mode	AT Fundamental
Load Capacitance	9 pF
Frequency Tolerance (at 25 °C)	±10ppm
Frequency Versus Temperature Characteristics	±20ppm
Operating Temperature	-40~+85°C
Storage Temperature	-55~+125°C
Shunt Capacitance	5 pF Max.
Level of Drive	1~200µWMax. (100uW typical)
Aging (at 25 °C)	±3ppm/year Max.

Equivalent Series Resistance(ESR)

Fundamental	
8 ~ 12 MHz	60~80 Ω Max.
12 ~ 25 MHz	40~60 Ω Max.
25 ~ 54 MHz	30~40 Ω Max.

Dimensions and Patterns [unit:mm]

Package Size – Dimensions (Unit: mm)

The technical drawings show the following dimensions and features:

- Top View:** Overall dimensions are 5.0±0.15 mm by 3.2±0.15 mm. Pin locations are numbered 1, 2, 3, and 4.
- Side View:** The package height is 0.9±0.15 mm. The lead thickness is 0.4 mm.
- Bottom View:** The distance between pins 1 and 2 is 2.6 mm. The distance between pins 3 and 4 is 1.4 mm.
- Top View Crystal Connection:** Shows the internal connection between the crystal and the pads, with GND connections at pins 1 and 2.
- Top View Suggested Layout:** Shows the recommended pad dimensions: 2.0 mm for the crystal pads, 1.7 mm for the distance between pads, and 1.2 mm for the pad width.

CRYSTAL UNIT

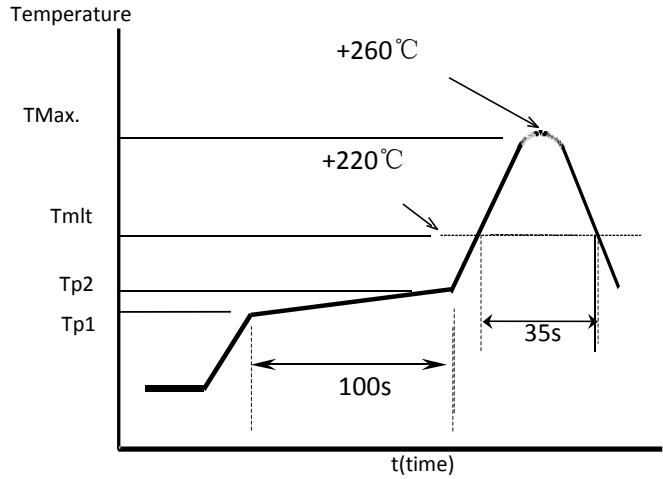
YSX531SL



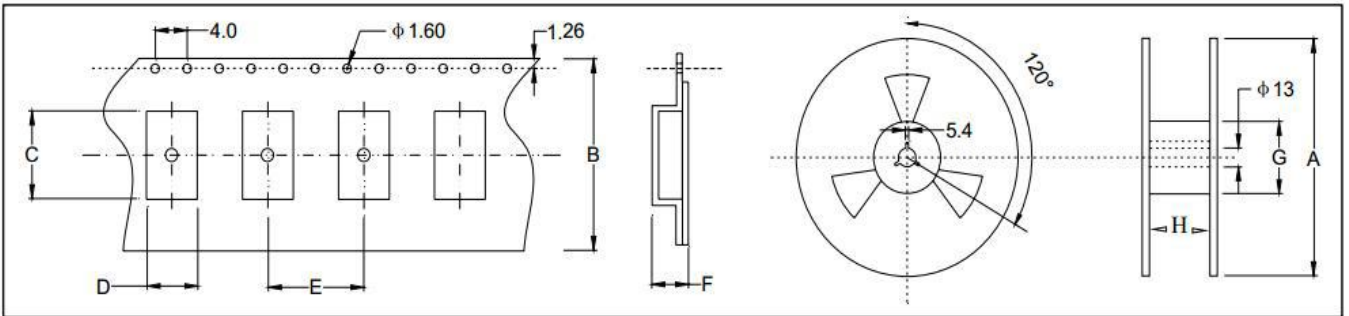
X503212MLB4SI

Reflow Soldering Profile

Pre Heating Temperature
 Tp1 ~ Tp2 = + 170 °C
 Heating Temperature
 TMLt = + 220 °C
 Peek Temperature
 TMax. = + 260 °C
 Point of measuring
 In case of Solder ability
 Terminal.
 In case of Resistance to soldering heat
 Surface.



Taping Specification(Unit: mm)



Size	A	B	C	D	E	F	G	H
SMD-5032	180±2.0	12.0±0.3	5.40±0.1	3.60±0.1	8.00±0.3	1.45±0.1	61.0±1.0	12.0±1.0

1000 pcs per reel