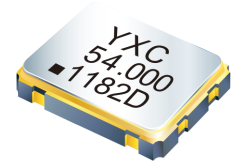


CRYSTAL OSCILLATOR

YSO110TR Wide Voltage



Applications

- Consumer Electronics
- Industrial Control
- IOT

Features

- Frequency range:1MHz-54MHz
- Ultra Small SMD seam sealed crystal oscillator units.

- Package Size: 1.6*1.2 , 2.0*1.6
2.5*2.0 , 3.2*2.5 , 5.0*3.2 , 7.0*5.0mm

Specifications

| | |
|--|---------------------------------------|
| Frequency Range | 1MHz to 54MHz, or specify |
| Supply Voltage | 1.8V~3.3V |
| Output Type | CMOS |
| Frequency Tolerance(at 25°C) | ±10ppm, ±20ppm, or specify |
| Output Load | 15pF |
| Operating Temperature Range | -40~+85°C, -40~+125°C, or specify |
| Storage Temperature Range | -55~+125°C |
| Frequency Versus Temperature Characteristics | ± 20ppm, ± 30ppm, ± 50ppm, or specify |
| Voltage Vol (Max.) / Vol (Min.) | VOH = 90%Vdd/VOL = 10%Vdd |
| Duty Cycle | 45~55% |
| Start-up Time | 3ms Max. |
| Rise Time/Fall Time | 4nS Max |
| Supply Current | See Below |
| Frequency Aging (at 25°C) | ±3 ppm / year Max. |

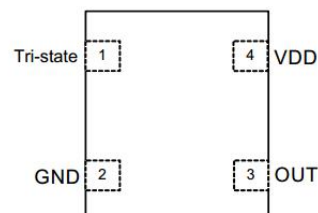
Current Consumption

| Power Dissipation Vcc=1.8~3.3V 15pF only | | | | |
|--|-----------------|----------------|---------------------|-----------|
| Supply Voltage (V) | 1.000~40.000MHZ | | 41.000~54.000MHZ | |
| | 7050/5032/3225 | 2520/2016/1612 | 7050/5032/3225/2520 | 2016/1612 |
| 1.8V | 4mA max | 4mA max | 9mA max | 10mA max |
| 2.5V | 4.5mA max | | 10mA max | |
| 3.3V | 5mA max | | 12mA max | |

Pin Dimension

| Pin | #1 | #2 | #3 | #4 |
|----------|-----------|-----|--------|-----|
| FUNCTION | Tri-state | GND | OUTPUT | VDD |

Pin Assignments



CRYSTAL OSCILLATOR

YSO110TR *Wide Voltage*

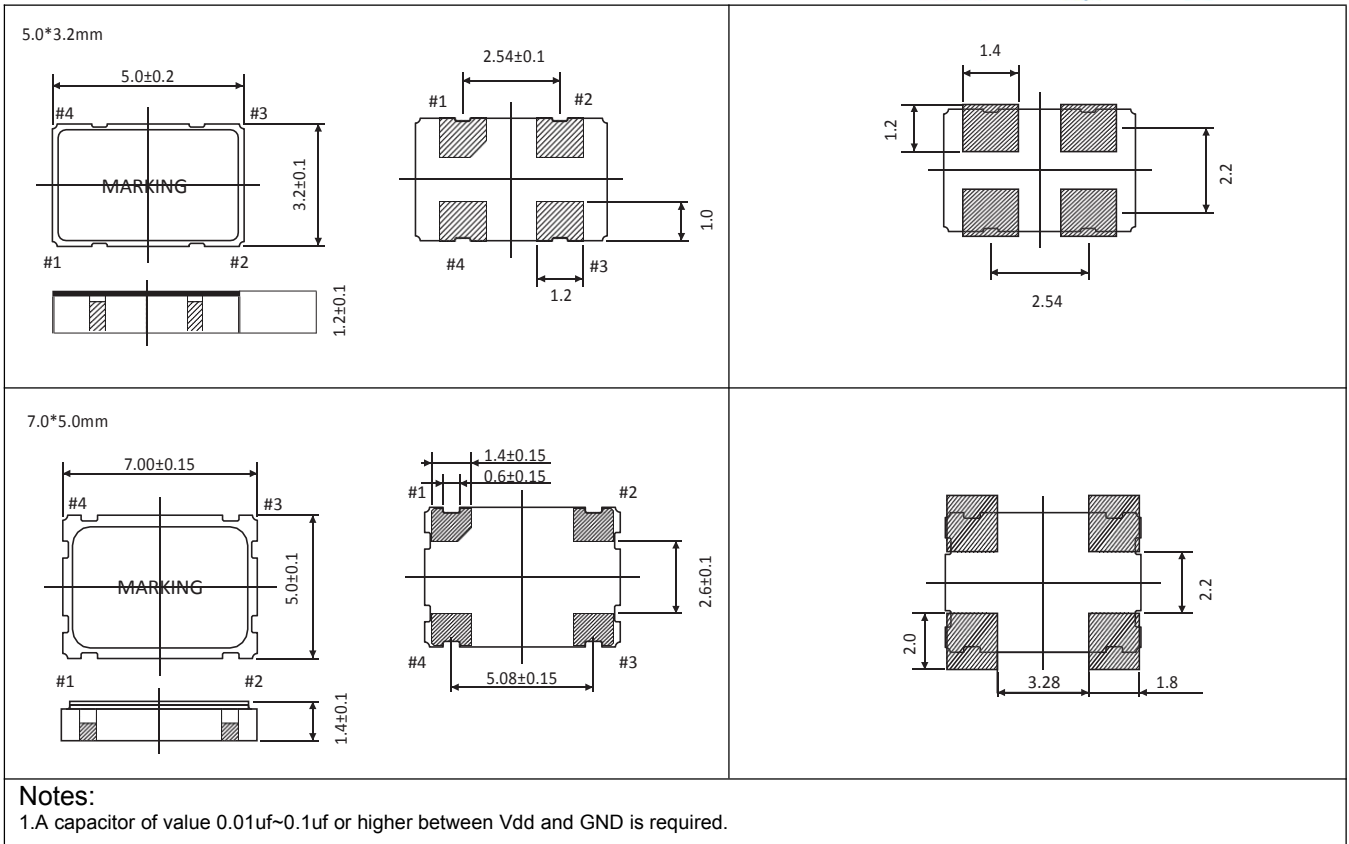


Dimensions and Patterns [unit:mm]

| Package Size – Dimensions (Unit: mm) | Recommended Land Pattern (Unit: mm) |
|--------------------------------------|-------------------------------------|
| <p>1.6*1.2mm</p> | |
| <p>2.0*1.6mm</p> | |
| <p>2.5*2.0mm</p> | |
| <p>3.2*2.5mm</p> | |

CRYSTAL OSCILLATOR

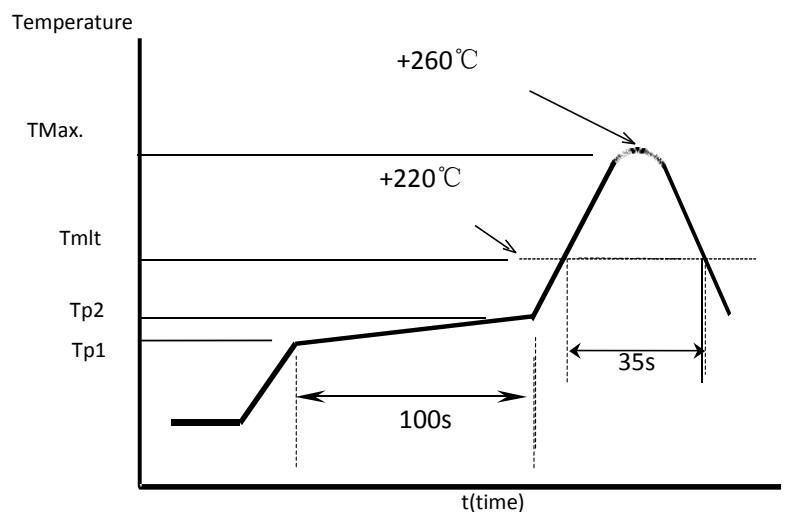
YSO110TR *Wide Voltage*



Reflow Soldering Profile

Pre Heating Temperature
 Tp1 ~ Tp2 = + 170 °C
 Heating Temperature
 TMI = + 220 °C
 Peak Temperature
 TMax. = + 260 °C

Point of measuring
 In case of Solder ability Terminal.
 In case of Resistance to soldering heat Surface.



CRYSTAL OSCILLATOR

YSO110TR *Wide Voltage*



Test Circuit



Taping Specification (Unit: mm)



| Size(OSC) | A | B | C | D | E | F | G | H |
|-----------|---------|----------|----------|----------|---------|----------|----------|----------|
| SMD-7050 | 180±2.0 | 16.0±0.3 | 7.50±0.1 | 5.50±0.1 | 8.0±0.1 | 2.00±0.1 | 61.0±1.0 | 16.0±1.0 |
| SMD-5032 | 180±2.0 | 12.0±0.3 | 5.40±0.1 | 3.60±0.1 | 8.0±0.1 | 1.70±0.1 | 61.0±1.0 | 12.0±1.0 |
| SMD-3225 | 180±2.0 | 8.0±0.3 | 3.40±0.1 | 2.70±0.1 | 4.0±0.1 | 1.50±0.1 | 61.0±1.0 | 8.0±1.0 |
| SMD-2520 | 180±2.0 | 8.0±0.3 | 2.90±0.1 | 2.40±0.1 | 4.0±0.1 | 1.20±0.1 | 61.0±1.0 | 8.0±1.0 |
| SMD-2016 | 180±2.0 | 8.0±0.3 | 2.30±0.1 | 1.90±0.1 | 4.0±0.1 | 0.95±0.1 | 61.0±1.0 | 8.0±1.0 |
| SMD-1612 | 180±2.0 | 8.0±0.3 | 1.80±0.1 | 1.40±0.1 | 4.0±0.1 | 0.80±0.1 | 61.0±1.0 | 8.0±1.0 |