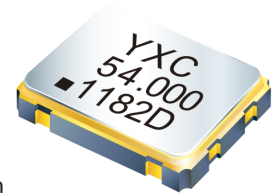


# CRYSTAL OSCILLATOR



## AEC-Q200

# YSO140TC



### Applications

- Automotive electronics

### Features

- Frequency range:1MHz-54MHz.
- AEC-Q200.

- Package Size: 1.6x1.2, 2.0x1.6, 2.5x2.0, 3.2x2.5, 5.0x3.2, 7.0x5.0mm

## Specifications

Frequency Range	1MHz to 54MHz, or specify
Parameter	1.8~3.3V
Output Type	CMOS
Total Tolerance	±50ppm, ±100ppm, or specify
Output Load	15pF
Operating Temperature Range	-40~+85°C, -40~+125°C, or specify
Storage Temperature Range	-55~+125°C
Voltage Vol ( Max. ) / Vol ( Min. )	VOH = 90%Vdd/VOL = 10%Vdd
Duty Cycle	45~55%
Rise(Tr) /Fall(Tf) Time	5ns Max.
Start-up Time	3ms Max.
Supply Current	See Below
Frequency Aging (at 25°C)	±3 ppm / year Max.

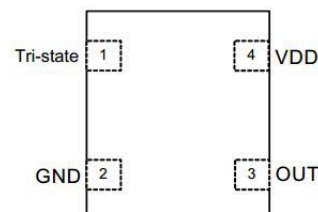
## Current Consumption

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



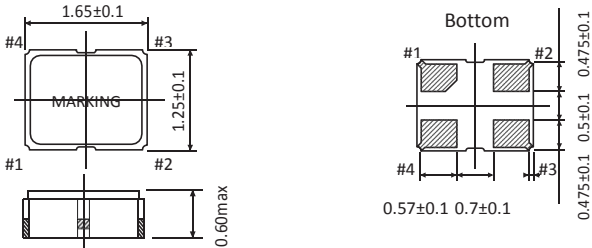
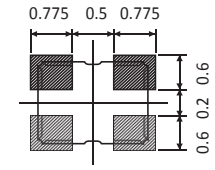
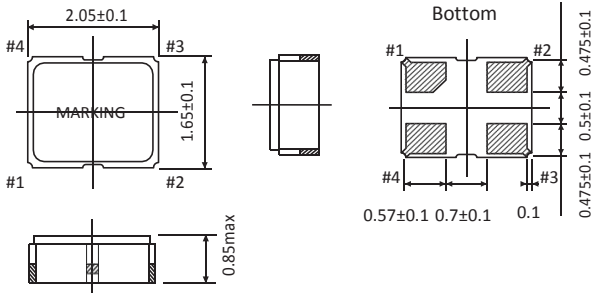
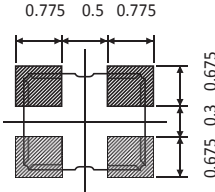
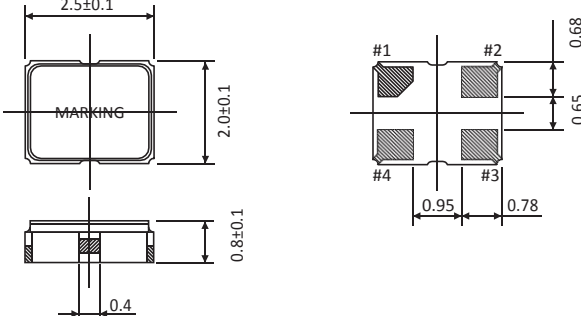
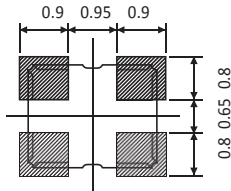
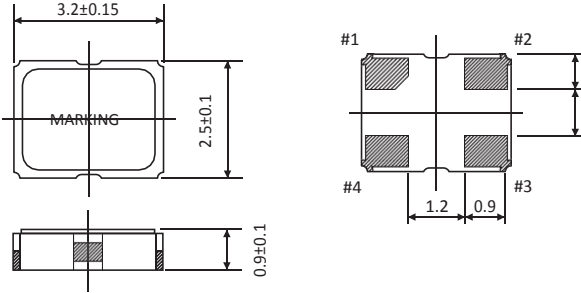
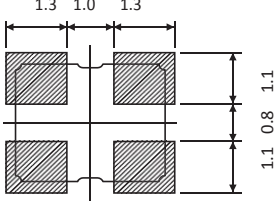
# CRYSTAL OSCILLATOR

## AEC-Q200

# YSO140TC



### Dimensions and Patterns [unit:mm]

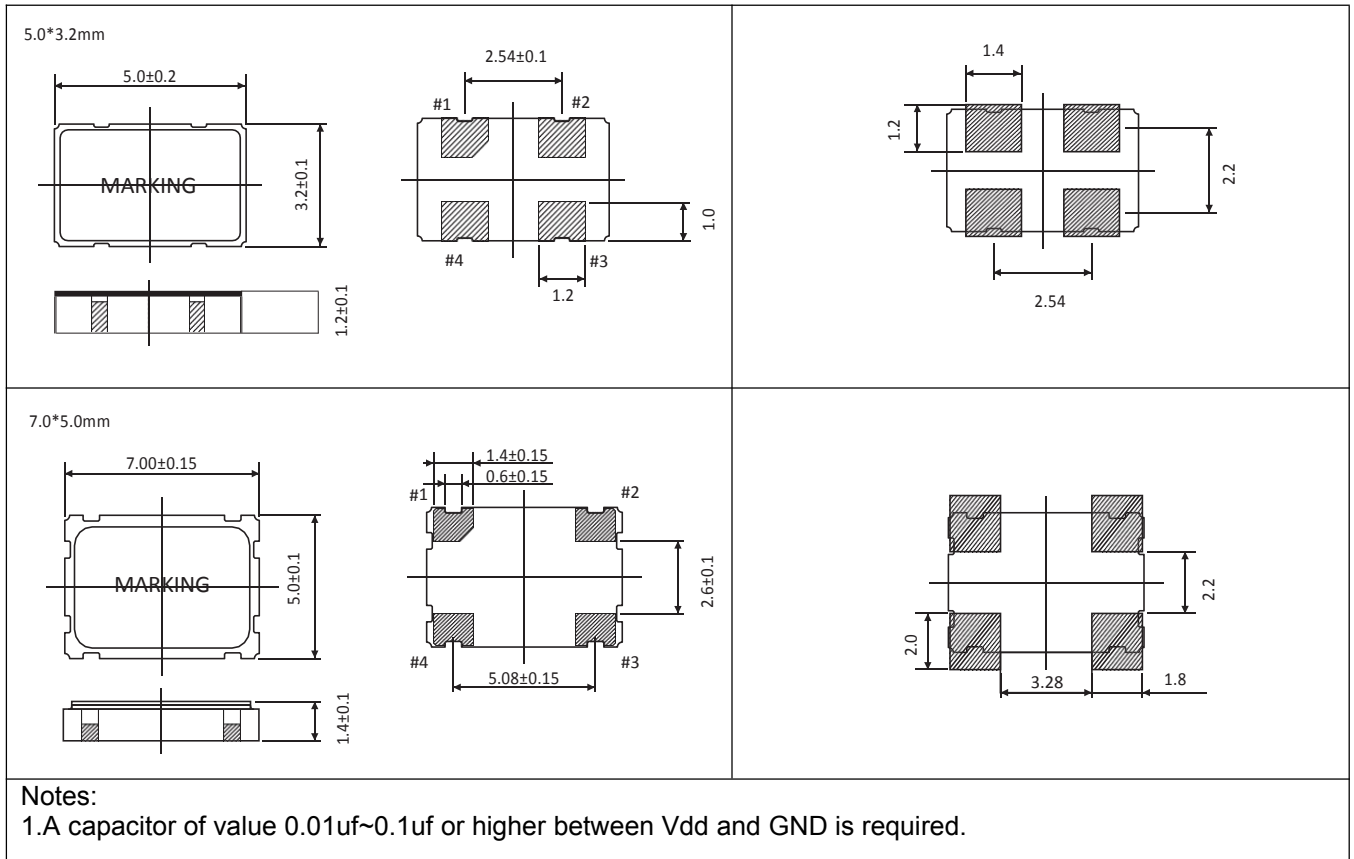
Package Size – Dimensions (Unit: mm)	Recommended Land Pattern (Unit: mm)
<p>1.6x1.2mm</p>  <p>Top view: 1.65±0.1, 1.25±0.1, MARKING, #1, #2, #3, #4</p> <p>Bottom view: #1, #2, #3, #4, 0.57±0.1, 0.7±0.1, 0.475±0.1, 0.475±0.1</p> <p>Side view: 0.60max</p>	 <p>0.775 0.5 0.775</p> <p>0.6 0.2 0.6</p>
<p>2.0x1.6mm</p>  <p>Top view: 2.05±0.1, 1.65±0.1, MARKING, #1, #2, #3, #4</p> <p>Bottom view: #1, #2, #3, #4, 0.57±0.1, 0.7±0.1, 0.1, 0.475±0.1, 0.475±0.1</p> <p>Side view: 0.85max</p>	 <p>0.775 0.5 0.775</p> <p>0.675 0.3 0.675</p>
<p>2.5x2.0mm</p>  <p>Top view: 2.5±0.1, 2.0±0.1, MARKING, #1, #2, #3, #4</p> <p>Bottom view: #1, #2, #3, #4, 0.68, 0.65, 0.95, 0.78</p> <p>Side view: 0.8±0.1, 0.4</p>	 <p>0.9 0.95 0.9</p> <p>0.8 0.65 0.8</p>
<p>3.2x2.5mm</p>  <p>Top view: 3.2±0.15, 2.5±0.1, MARKING, #1, #2, #3, #4</p> <p>Bottom view: #1, #2, #3, #4, 1.0, 0.65, 1.2, 0.9</p> <p>Side view: 0.9±0.1</p>	 <p>1.3 1.0 1.3</p> <p>1.1 0.8 1.1</p>

# CRYSTAL OSCILLATOR



## AEC-Q200

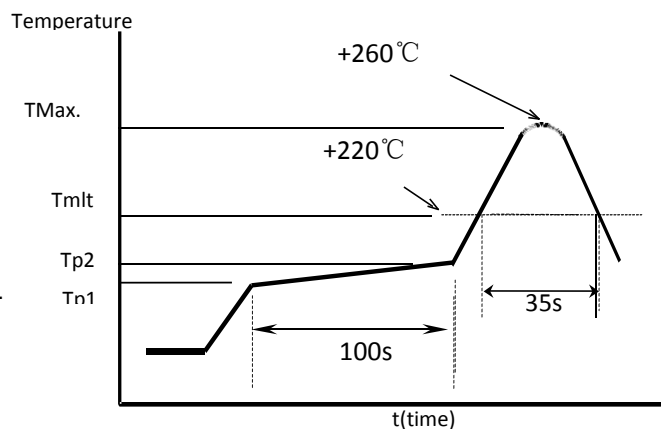
## YSO140TC



### Reflow Soldering Profile

- Pre Heating
- Temperature  $T_{p1} \sim T_{p2} = +170\text{ }^{\circ}\text{C}$
- Heating Temperature
- $T_{Mit} = +220\text{ }^{\circ}\text{C}$
- Peak Temperature
- $T_{Max.} = +260\text{ }^{\circ}\text{C}$

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



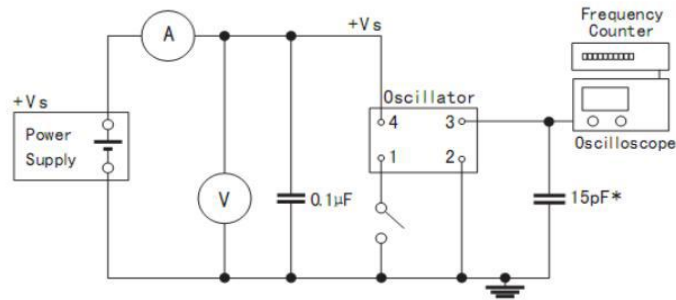
# CRYSTAL OSCILLATOR



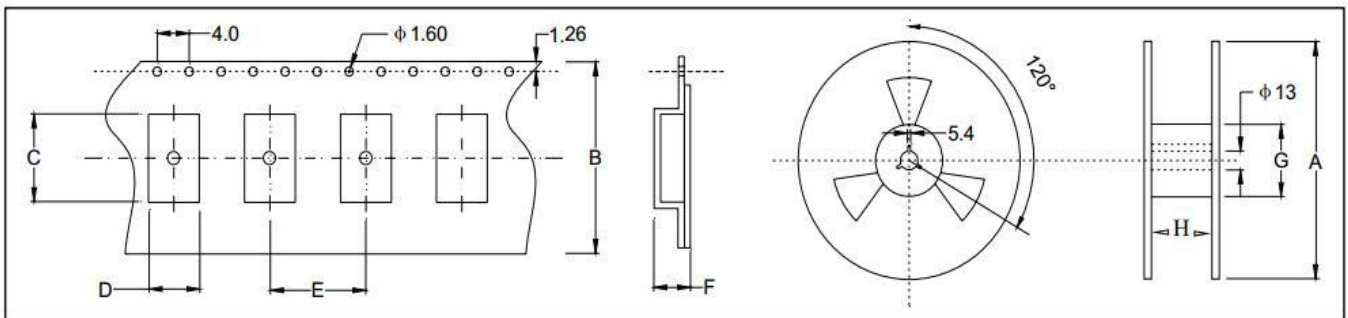
AEC-Q200

## YSO140TC

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