

# Programmable Crystal Oscillator

## YSO690PR Low Jitter



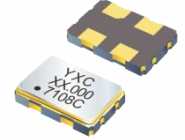
### Applications

- Consumer Electronics
- Industrial Control
- IOT

### Features

- One time programmable
- PLL circuit provides wide frequency range application (1-200MHz)

- Low jitter design with new developed IC
- Package Size: 2.0\*1.6, 2.5\*2.0, 3.2\*2.5, 5.0\*3.2, 7.0\*5.0mm



## Specifications (规格参数)

| Item / Type                         | CMOS                      |                |                |
|-------------------------------------|---------------------------|----------------|----------------|
|                                     | 1.8 V                     | 2.5 V          | 3.3 V          |
| Parameter                           | 1.8 V                     | 2.5 V          | 3.3 V          |
| Frequency Range                     | 1MHz to 125MHz            | 1MHz to 200MHz | 1MHz to 200MHz |
| Supply Voltage Variation (Vdd)10%   | 1.62V~1.98V               | 2.25V~2.75V    | 2.97V~3.63V    |
| Standby Current                     | 400uA                     |                |                |
| Frequency Tolerance                 | ±30ppm, ±50ppm or specify |                |                |
| Output Load                         | 15pF                      |                |                |
| Operating Temperature Range         | -40~+85°C, or specify     |                |                |
| Storage Temperature Range           | -55~+150°C                |                |                |
| Voltage Vol ( Max. ) / Vol ( Min. ) | VOH = 90%Vdd/VOL = 10%Vdd |                |                |
| Duty Cycle                          | 45~55%                    |                |                |
| Start-up Time                       | 7ms Max                   |                |                |
| Period Jitter (@12K-20Mhz)          | 1.5ps max.                | 1.1ps max.     | 1ps max.       |
| Supply Current                      | See Below                 |                |                |
| Frequency Aging (at 25°C)           | ±3 ppm / year Max         |                |                |

## Current Consumption (功耗)

| Supply Voltage (V) | Power Dissipation |                  |                   |                    |                    |
|--------------------|-------------------|------------------|-------------------|--------------------|--------------------|
|                    | 1.000~30.000MHz   | 31.000~75.000MHz | 76.000~110.000MHz | 111.000~166.000MHz | 167.000~200.000MHz |
| 1.8V               | 18mA max.         | 19mA max.        | 20mA max.         | 20mA max.          | 20mA max.          |
| 2.5V               | 21mA max.         | 22mA max.        | 23mA max.         | 24mA max.          | 25mA max.          |
| 3.3V               | 24mA max.         | 24mA max.        | 25mA max.         | 26mA max.          | 27mA max.          |

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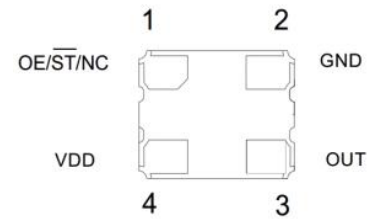
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### Pin Dimension (脚位尺寸)

| Pin | Symbol   | Functionality |   |
|-----|----------|---------------|---|
| 1   | OE/ST/NC | Output Enable | H: specified frequency output<br>L: output is low. Specified frequency output stop.   |
|     |          | Standby       | H: specified frequency output<br>L: output is low. Device goes to sleep mode. Supply current reduces to 400uA(Standby Current). |
|     |          | No Connect    | Pin 1 = VDD or Pin 1 is Open : Specified frequency output. Pin 1 has no function  |
| 2   | GNG      | Power         | Electrical ground   |
| 3   | OUT      | Output        | Oscillator output   |
| 4   | VDD      | Power         | Power supply voltage  |

### Pin Assignments

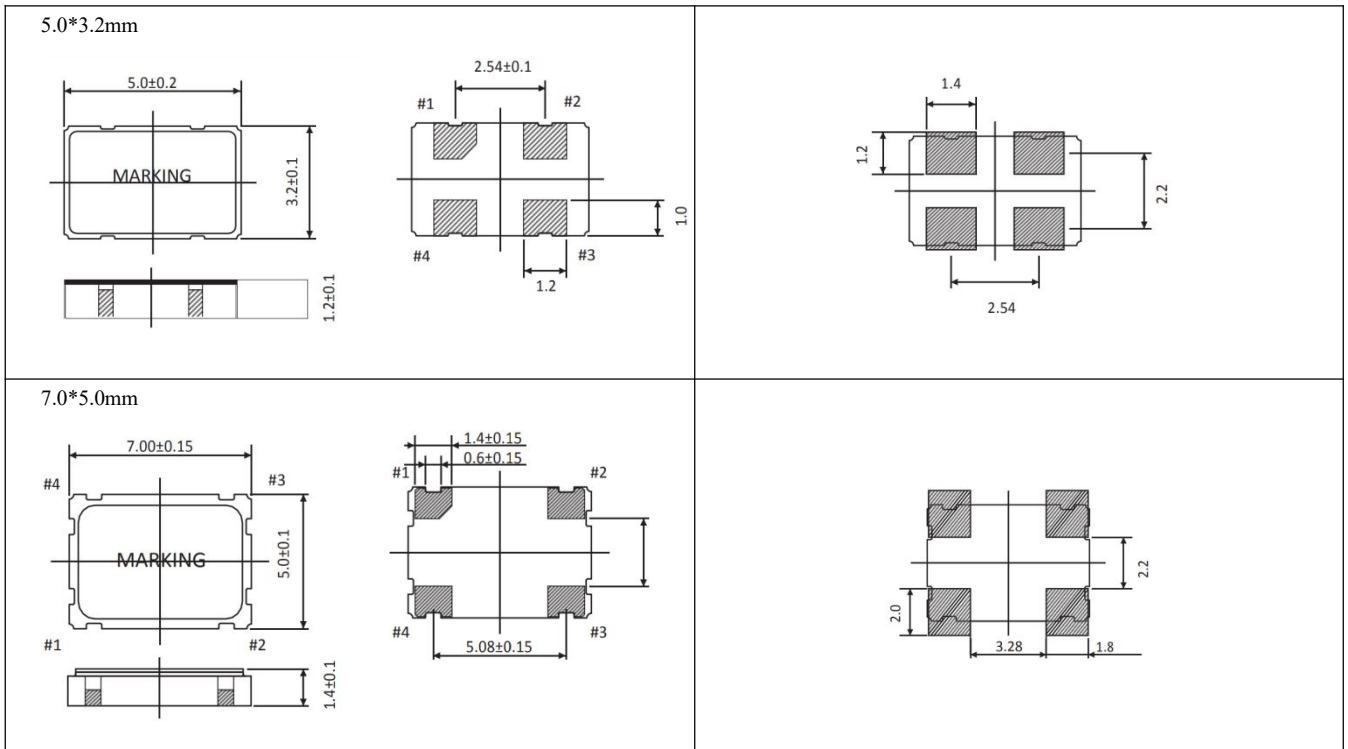


### Dimensions and Recommended land pattern (外观尺寸及推荐焊盘)

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

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### Test Circuit (测试电路)

