

# Programmable Crystal Oscillator YSO690PR

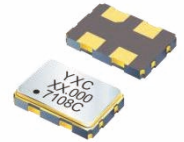


## Applications

- Consumer
- Industrial

## Features

- Fast Delivery
- 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                        |               |               |
|---------------------------------------------|-----------------------------|---------------|---------------|
| Supply Voltage<br>电源电压                      | 1.8 V                       | 2.5 V         | 3.3 V         |
| Frequency Range<br>额定频率范围                   | 1MHz ~ 125MHz               | 1MHz ~ 200MHz | 1MHz ~ 200MHz |
| Supply Voltage Variation (VDD)10%<br>电压范围   | 1.62V ~ 1.98V               | 2.25V ~ 2.75V | 2.97V ~ 3.63V |
| Standby Current<br>待机电流                     | 400uA                       |               |               |
| Frequency Tolerance<br>频率偏差                 | ±30ppm, ±50ppm or specify   |               |               |
| Output Load<br>输出负载                         | 15pF                        |               |               |
| Operating Temperature Range<br>工作温度         | -40~+85°C, or specify       |               |               |
| Storage Temperature Range<br>储存温度           | -55~+150°C                  |               |               |
| Voltage VOH ( Min. ) / VOL ( Max. )<br>输出电压 | VOH = 90%VDD / VOL = 10%VDD |               |               |
| Duty Cycle<br>占空比                           | 45~55%                      |               |               |
| Rise Time/Fall Time<br>上升沿/下降沿              | 5ns Max                     |               |               |
| Start-up Time<br>启动时间                       | 7ms Max                     |               |               |
| RMS Jitter [ 12 kHz ~ 20 MHz ]<br>相位抖动      | 1.5ps Max                   | 1.1ps Max     | 1ps Max       |
| Supply Current<br>消耗电流                      | See Below                   |               |               |
| Frequency Aging (at 25°C)<br>老化率            | ±3 ppm / year Max           |               |               |

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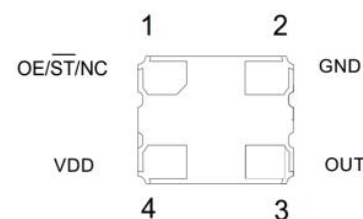
## Current Consumption (消耗电流)

| 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           |

## 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   | GND      | 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)

| Dimensions (Unit: mm) | Recommended Land Pattern (Unit: mm) |
|-----------------------|-------------------------------------|
| <p>2.0*1.6mm</p>      |                                     |

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|                                                                                                                                                                                    |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <p>2.5*2.0mm</p> <p>Top view: 2.5±0.1, 2.0±0.1, MARKING, #1, #2, #3, #4</p> <p>Bottom view: 0.68, 0.65, 0.95, 0.78, #1, #2, #3, #4</p> <p>Side view: 1.0 Max, 0.4</p>              |  |
| <p>3.2*2.5mm</p> <p>Top view: 3.2±0.10, 2.5±0.10, Marking, #1, #2, #3, #4</p> <p>Bottom view: 1.2, 0.9, 1.0, 0.65, #1, #2, #3, #4</p> <p>Side view: 1.2 Max</p>                    |  |
| <p>5.0*3.2mm</p> <p>Top view: 5.0±0.2, 3.2±0.1, MARKING, #1, #2, #3, #4</p> <p>Bottom view: 2.54±0.1, 1.0, 1.2, #1, #2, #3, #4</p> <p>Side view: 1.3 Max</p>                       |  |
| <p>7.0*5.0mm</p> <p>Top view: 7.00±0.15, 5.0±0.1, MARKING, #1, #2, #3, #4</p> <p>Bottom view: 1.4±0.15, 0.6±0.15, 2.6±0.1, 5.08±0.15, #1, #2, #3, #4</p> <p>Side view: 1.5 Max</p> |  |

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## Test Circuit (测试电路)

