

# PROGRAMMABLE CRYSTAL OSCILLATOR



## YSO691ER Low Jitter

### Applications

- Any frequency

### Features

- One time programmable
- PLL circuit provides wide frequency range application (1-200MHz)
- Low jitter design with new developed IC
- Package Size: 5.0\*3.2, 7.0\*5.0mm



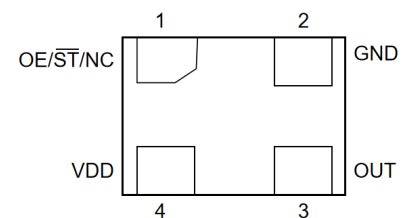
### Specifications

| Parameter                           | 1.8V                            | 2.5V           | 3.3V           |
|-------------------------------------|---------------------------------|----------------|----------------|
| 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                 | ±20ppm,±25ppm,±50ppm,or specify |                |                |
| Output Load                         | 15pF                            |                |                |
| Operating Temperature Range         | -40~+85℃,or specify             |                |                |
| Storage Temperature Range           | -55~+150℃                       |                |                |
| Voltage Vol ( Max. ) / Vol ( Min. ) | VOH = 90%Vdd/VOL = 10%Vdd       |                |                |
| Duty Cycle                          | 45~55%                          |                |                |
| Period Jitter (@12K-20Mhz)          | 1.8V<1.5ps 2.5V<1.1ps 3.3V< 1ps |                |                |
| Start-up Time                       | 7ms Max.                        |                |                |
| Supply Current                      | See Below                       |                |                |
| Frequency Aging (at 25℃)            | ±3 ppm / year Max.              |                |                |

### Pin Dimension

| 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



### Current Consumption

| 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               | 23mA max          | 24mA max         | 25mA max          | 26mA max           | 27mA max           |

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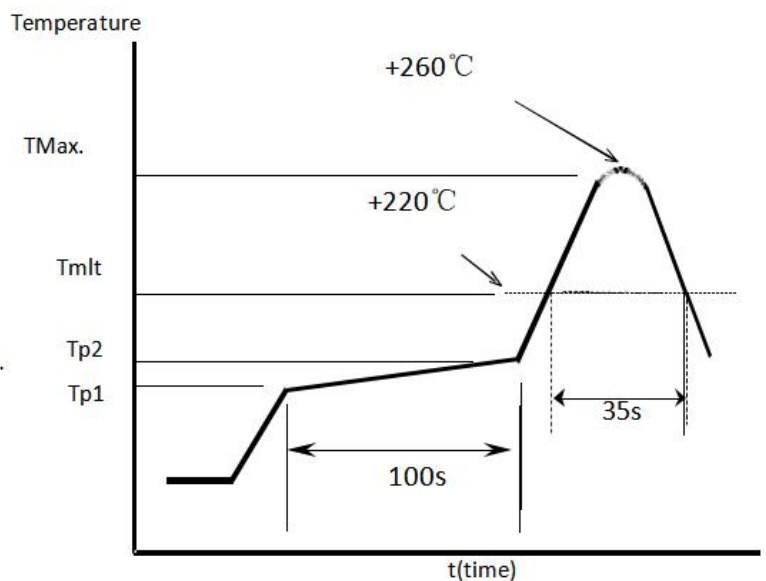
Dimensions and Patterns [unit:mm]

| Package Size – Dimensions (Unit: mm) | Recommended Land Pattern (Unit: mm) |
|--------------------------------------|-------------------------------------|
| <p><b>7.0*5.0mm</b></p>              |                                     |
| <p><b>5.0*3.2mm</b></p>              |                                     |

### Reflow Soldering Profile

- Pre Heating Temperature
- Tp1 ~ Tp2 = + 170 °C
- Heating Temperature
- TMit = + 220 °C
- Peek Temperature
- TMax. = + 260 °C

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

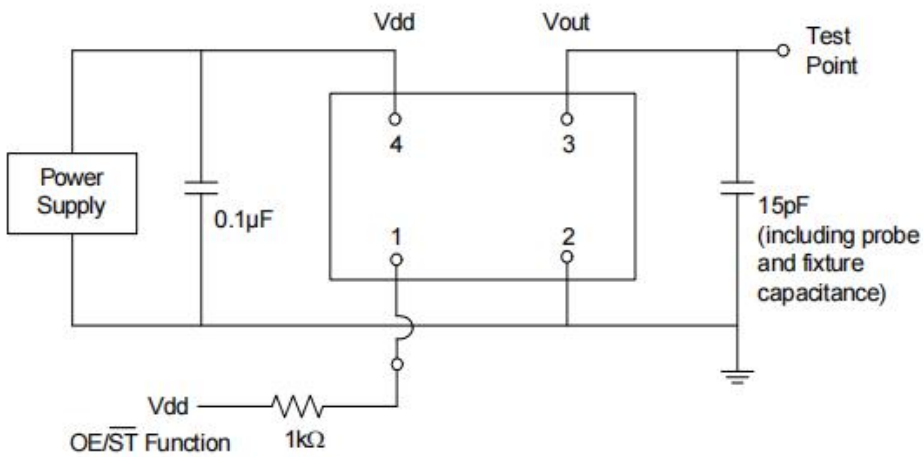


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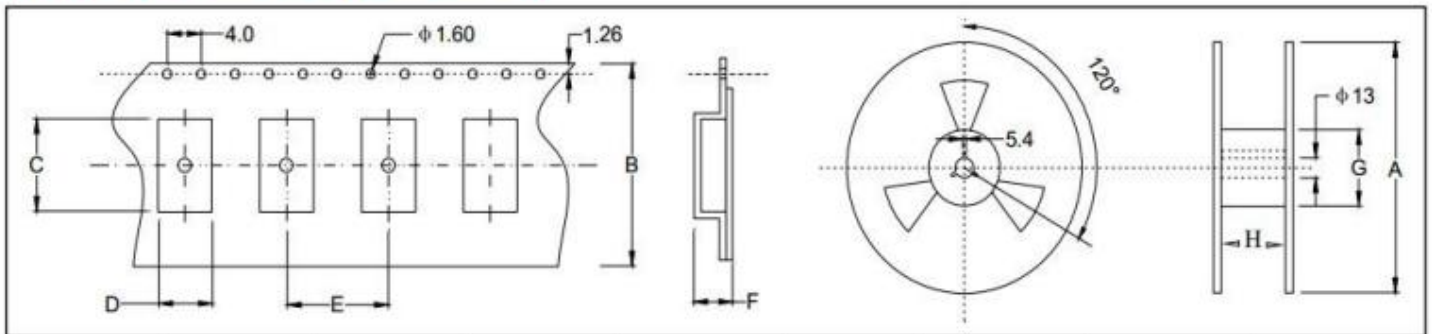
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### Test Circuit



### Taping Specification (Unit: mm)



| Size(OSC) | A       | B        | C        | D        | E       | F        | G        | H        |
|-----------|---------|----------|----------|----------|---------|----------|----------|----------|
| SMD-7050  | 180±2.0 | 16.0±0.3 | 7.90±0.1 | 5.60±0.1 | 8.0±0.1 | 1.90±0.1 | 61.0±1.0 | 16.0±1.0 |
| SMD-5032  | 180±2.0 | 12.0±0.3 | 5.60±0.1 | 3.60±0.1 | 8.0±0.1 | 1.90±0.1 | 61.0±1.0 | 12.0±1.0 |

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