

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



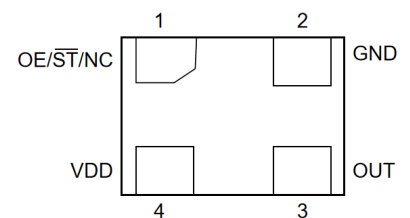
Specifications

| Parameter | 1.8V | 2.5V | 3.3V |
|--|--|----------------|----------------|
| Frequency Range | 1MHz to 125MHz | 1MHz to 200MHz | 1MHz to 200MHz |
| Supply Voltage Variation (V _{dd})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°C, or specify | | |
| Storage Temperature Range | -55~+150°C | | |
| Voltage Vol (Max.) / Vol (Min.) | VOH = 90%V _{dd} /VOL = 10%V _{dd} | | |
| 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°C) | ±3 ppm / year Max. | | |

Pin Dimension

| Pin | Symbol | Functionality | |
|-----|----------|---------------|---|
| 1 | OE/ST/NC | Output Enable | H: specified frequency output L: output is low. Specified frequency output stop. |
| | | Standby | H: specified frequency output 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>7.0*5.0mm</p> | |
| <p>5.0*3.2mm</p> | |

Reflow Soldering Profile

Pre Heating Temperature

Tp1 ~ Tp2 = + 170 °C

Heating Temperature

TMit = + 220 °C

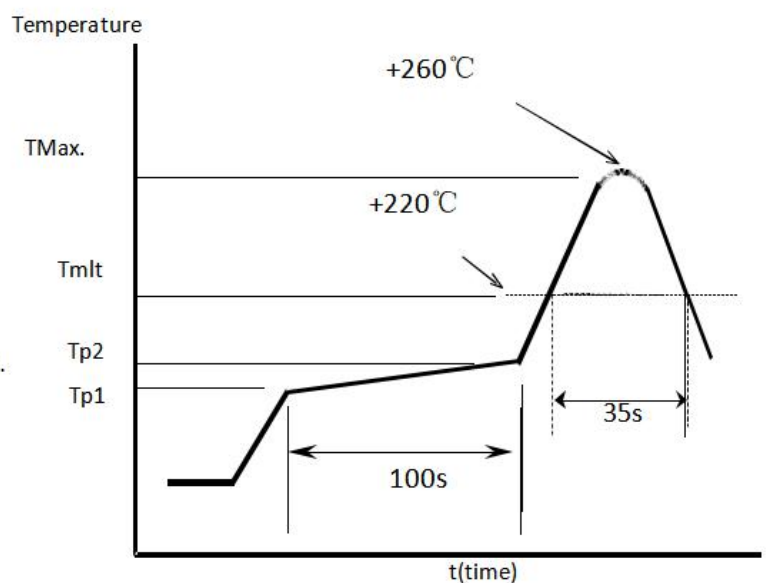
Peek Temperature

TMax. = + 260 °C

Point of measuring

In case of Solder ability Terminal.

In case of Resistance to soldering heat Surface.

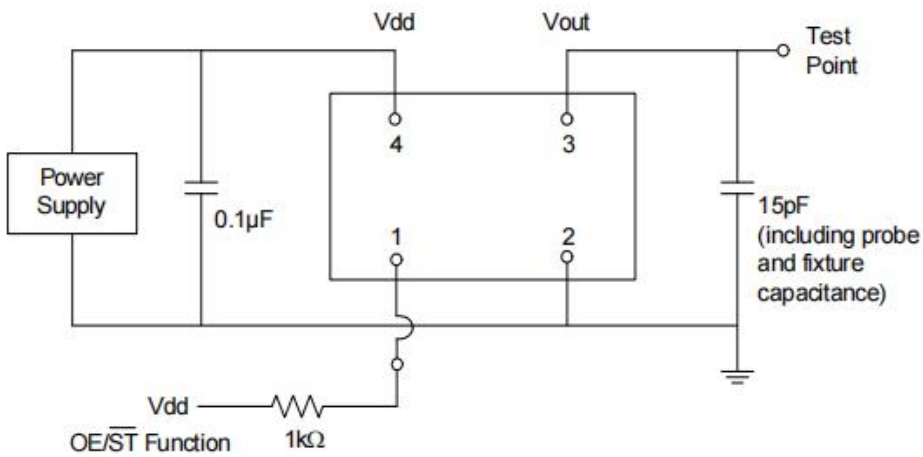


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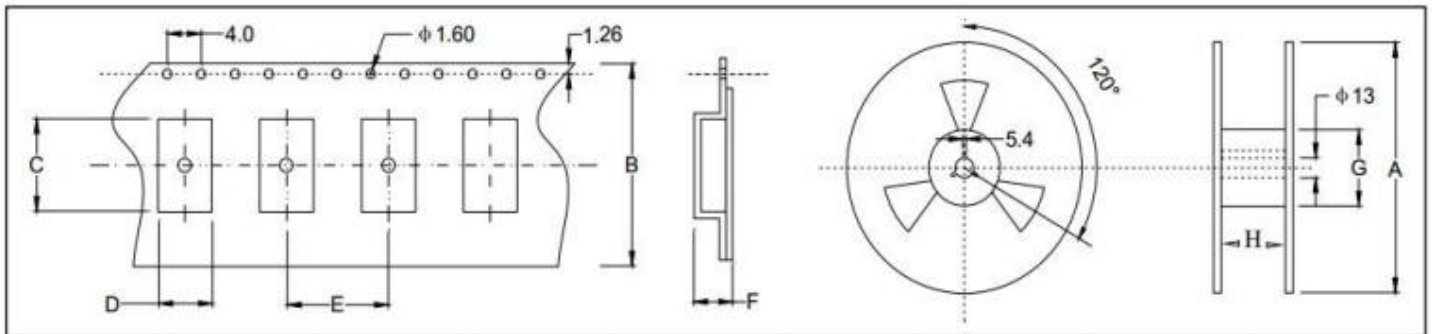
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Test Circuit



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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