

# Differential Oscillator



## YSO251PJ TCXO - Low Jitter



### Applications

- Networking
- Satellite Navigation
- Communications

### Features

- RMS Jitter (12KHz ~ 20MHz) : 250 fsec typ. ( at 156.250MHz, 3.3V)
- Multiple Output: PECL、LVDS、HCSL、CML
- Package Size: 3.2\*2.5mm, 5.0\*3.2mm



## Specifications (规格参数)

| Output Type  | PECL  | LVDS  | HCSL            | CML             |
|--|---|---|-----------------|-----------------|
| Frequency Range<br>额定频率范围  | 15MHz ~ 2100MHz   | 15MHz ~ 2100MHz   | 15MHz ~ 700MHz  | 15MHz ~ 1500MHz |
| Supply Voltage VDD<br>电源电压   | 2.5V, 3.3V  | 1.8, 2.5V, 3.3V   | 1.8, 2.5V, 3.3V | 1.8, 2.5V, 3.3V |
| Operating Temperature Range<br>工作温度                                | -40 ~ +85°C, or specify   |   |                 |                 |
| Storage Temperature Range<br>储存温度                                  | -55 ~ +150°C  |   |                 |                 |
| Output Load<br>输出负载  | 50Ω into Vcc - 2V or Thevenin equivalent                                    | 100 Ω between output and complimentary output                   | 50 Ω to GND     | 50 Ω to VDD     |
| Rise Time / Fall Time<br>(Tr / Tf : 10% ↔ 90% waveform)<br>上升沿/下降沿 | 0.4 nsec ( max. )   |   |                 |                 |
| Duty Cycle<br>占空比  | 45~55%  |   |                 |                 |
| Start-up Time<br>启动时间  | 5.0msec ( typ. )  |   |                 |                 |
| RMS Jitter [ 12 kHz ~ 20 MHz ]<br>相位抖动                             | 15 MHz ~ 50 MHz : 500 fsec ( typ. ) ; 51MHz ~ 1,200 MHz : 250 fsec ( typ. ) |   |                 |                 |
| Current Consumption ( max. )<br>( VDD = + 3.3V )<br>消耗电流           | 99 mA ( typ. )  | 74 mA ( typ. )  | 79 mA ( typ. )  | 69 mA ( typ. )  |
| Initial Calibration Tolerance<br>初始校准公差                            | ±2.0ppm ( max. ) at +25°C ±2°C ( at the shipment )                          |   |                 |                 |
| Frequency Stability<br>频率稳定度                                       | Temperature<br>(ref to +25°C)   | ± 2.5 ppm over -40 °C to +85°C ( typical )                      |                 |                 |
|  |   | ± 1.5 ppm over -40°C to +85°C ( available )                     |                 |                 |
|  | Aging at Ta = +25°C   | ± 1.0ppm max, pear year at 25°C                                 |                 |                 |
|  | Voltage Change  | ± 0.2 ppm ( max. ) , for a ± 5% input voltage change.           |                 |                 |
|  | Load Change   | ± 0.2 ppm ( max. ) , for a ± 10% load condition change.         |                 |                 |
|  | Reflow  | ± 1.0 ppm ( max. ) , 1 reflow and measured 24 hours afterwards. |                 |                 |
| Output Enable /<br>Disable Function                                | 70% of VDD ( min. ) to enable output.                                       |   |                 |                 |
|  | 30% of VDD ( max. ) to disable output.                                      |   |                 |                 |

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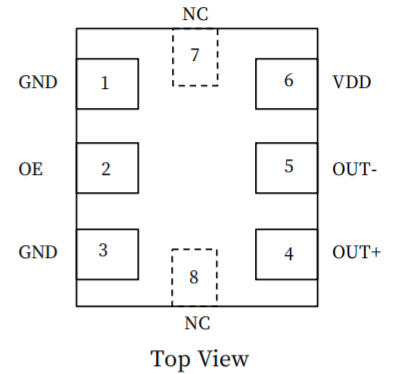
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### Pin Dimension (脚位尺寸)

Pin Assignments

|          |               |                |               |               |
|----------|---------------|----------------|---------------|---------------|
| Pin      | #1            | #2             | #3            | #4            |
| FUNCTION | Ground        | Output Enable  | Ground        | Output        |
| Pin      | #5            | #6             | #7            | #8            |
| FUNCTION | Complementary | Supply Voltage | No Connection | No Connection |



### Dimensions and Recommended Land Pattern (外观尺寸及推荐焊盘)

| Dimensions (Unit: mm) | Recommended Land Pattern (Unit: mm) |
|-----------------------|-------------------------------------|
| <p>3.2*2.5mm</p>      |                                     |
| <p>5.0*3.2mm</p>      |                                     |

