

# Programmable Differential Oscillator YSO211PJ

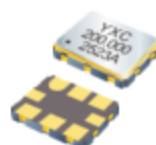


## Applications

- Networking
- Industrial

## Features

- Wide Frequency Range : 150 ~ 2100MHz
- Low Jitter Design with New Developed IC
- Ultra-low RMS Jitter : 159fsec (Typ)
- Package Size: 5.0\*3.2mm, 7.0\*5.0mm
- @ 3.3V, 156.250MHz



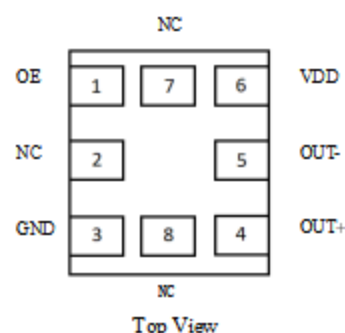
## Specifications (规格参数)

| Item/Type                                                 | LVPECL                                                                                       | LVDS                       | HCSL                       | CML                        |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------|----------------------------|----------------------------|----------------------------|
| Output Frequency Range<br>额定频率范围                          | 150MHz ~ 2100MHz                                                                             | 150MHz ~ 2100MHz           | 150MHz ~ 700MHz            | 150MHz ~ 2100MHz           |
| Supply Voltage<br>电源电压                                    | 2.5V, 3.3V                                                                                   | 1.8V, 2.5V, 3.3V           | 1.8V, 2.5V, 3.3V           | 1.8V, 2.5V, 3.3V           |
| Total Stability<br>频率偏差                                   | $\pm 25\text{ppm}$ , $\pm 50\text{ppm}$ , $\pm 100\text{ppm}$ or specify                     |                            |                            |                            |
| Output Load<br>输出负载                                       | 50 $\Omega$ into VDD - 2V or Thevenin equivalent                                             | 100 $\Omega$               | 50 $\Omega$ to GND         | 50 $\Omega$ to VDD         |
| Operating Temperature Range<br>工作温度                       | -40 ~ +85°C, or specify                                                                      |                            |                            |                            |
| Storage Temperature Range<br>储存温度                         | -55 ~ +150°C                                                                                 |                            |                            |                            |
| Rise Time / Fall Time<br>(20% to 80% Waveform)<br>上升沿/下降沿 | 0.4nS Max                                                                                    |                            |                            |                            |
| Duty Cycle<br>占空比                                         | 45~55%                                                                                       |                            |                            |                            |
| Voltage Voh (Min) / Vol (Max)<br>输入电压                     | VOH = 90%VDD / VOL = 10%VDD                                                                  |                            |                            |                            |
| Start-up Time<br>启动时间                                     | 5 msec (Typ); 10 msec (Max)                                                                  |                            |                            |                            |
| RMS Jitter (Typ) (12 KHz to 20 MHz)<br>相位抖动               | 156.250MHz : 159 fsec ; 491.520MHz : 155 fsec<br>644.530MHz : 151 fsec ; 2,000MHz : 163 fsec |                            |                            |                            |
| Current Consumption (VDD = +3.3 V)<br>消耗电流                | 100mA (Typ)<br>120mA (Max)                                                                   | 75mA (Typ)<br>90mA (Max)   | 94mA (Typ)<br>115mA (Max)  | 70mA (Typ)<br>85mA (Max)   |
| Disable Current<br>禁用电流                                   | 99mA (Typ)                                                                                   | 74mA (Typ)                 | 93mA (Typ)                 | 69mA (Typ)                 |
| Output Voltage Swing<br>输出电压摆幅                            | 595mV (Min)<br>930mV (Max)                                                                   | 250mV (Min)<br>450mV (Max) | 450mV (Min)<br>700mV (Typ) | 200mV (Min)<br>600mV (Typ) |
| Enable/Disable Time<br>启动/禁用时间                            | 2.5 msec (Max) / 10 usec (Max)                                                               |                            |                            |                            |
| Aging at Ta = +25°C<br>老化率                                | +3 ppm (Max) for first year ; $\pm 2$ ppm (Max) per year thereafter                          |                            |                            |                            |

## Pin Dimension (脚位尺寸)

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

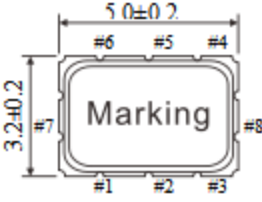
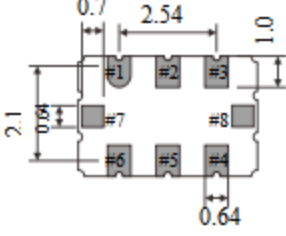
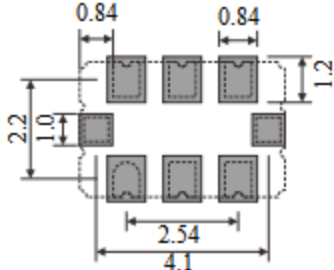
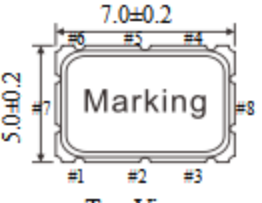
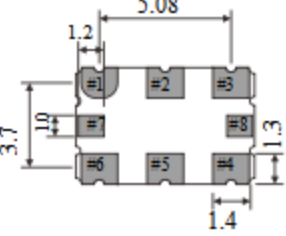
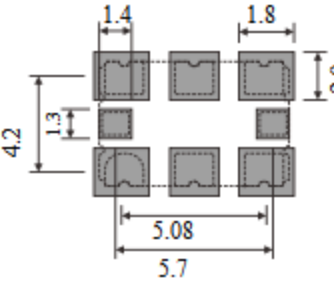
## Pin Assignments



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

| Dimensions (Unit: mm)                                                                                                                                                                                                                                                                                                            | Recommended Land Pattern (Unit: mm)                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| <p>5.0*3.2mm</p>  <p>Top View</p>  <p>Bottom View</p>  <p>Side</p>            |  <p>Recommended soldering Pattern</p>   |
| <p>7.0*5.0mm</p>  <p>Top View</p>  <p>Bottom View</p>  <p>Side View</p> |  <p>Recommended soldering Pattern</p> |

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## Test Circuit (测试电路)

