

# Programmable Crystal Oscillator YSO210PR



## Applications

- 10 GB Ethernet, SONET, SATA, SAS, Fibre Channel

## Features

- Wide Frequency Range: 10 ~ 1500MHz
- Output LVPECL or LVDS
- Package Size: 3.2\*2.5, 5.0\*3.2, 7.0\*5.0mm
- Quartz Crystal Programmable Differential Oscillator



## Specifications (规格参数)

Item/Type	LVPECL	LVDS	Remarks
Output Frequency Range 额定频率范围	10MHZ ~ 1500MHZ		
Supply Voltage 电源电压	2.5V, 3.3V		
Total Stability 频率偏差	±25ppm, ±50ppm, or specify		Inclusive of Initial tolerance at 25°C, 1st year aging at 25°C, and variations over operating temperature
Operating Temperature Range 工作温度	-40~+85°C, or specify		
Storage Temperature Range 储存温度	-55~+150°C		
Current Consumption 消耗电流	80mA Max	50mA Max	OE=VDD, LVPECL=(50)Ω or LVDS=(100)Ω
Disable Current 禁用电流	16mA Typ.		OE=GND
Output Voltage (LVPECL) 输出电压 (LVPECL)	VOH=VDD-1.03 Min	--	DC characteristics
	VOL=VDD-1.6 Max	--	
Output Voltage (LVDS) 输出电压 (LVDS)	--	VOH=1.6 Max	DC characteristics
	--	VOL=0.9 Min	
Output Load Condition 输出负载	L_PECL=50Ω	--	Terminated to VDD-2.0V
	--	L_LVDS=100Ω	Connected between OUT to OUT
Input Voltage 输入电压	VIH=70% VDD Min, VIL=30%VDD Max		OE terminal
Rise Time/Fall Time 上升沿/下降沿	1nS Max		LVPECL: Between 20% and 80% of (VOH-VOL), LVDS: Between 20% and 80% Differential Output peak to peak voltage

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Item/Type	LVPECL	LVDS	Remarks
Duty Cycle 占空比	45~55%		
Start-up time 启动时间	10mS		Time at Minimum Supply Voltage to be 0s
RMS Jitter [ 12 kHz ~ 20 MHz ] 相位抖动	1.0ps Typ.		200MHZ ~ 800MHZ
	2.0ps Typ.		801MHZ ~ 1500MHZ
Aging 老化率	±3ppm		25°C First year, VDD=2.5V, 3.3V

## Pin Dimension (脚位尺寸)

Pin	#1	#2	#3	#4	#5	#6
FUNCTION	OE	NC	GND	OUT+	OUT-	VDD

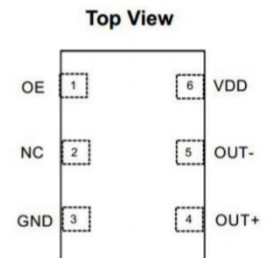


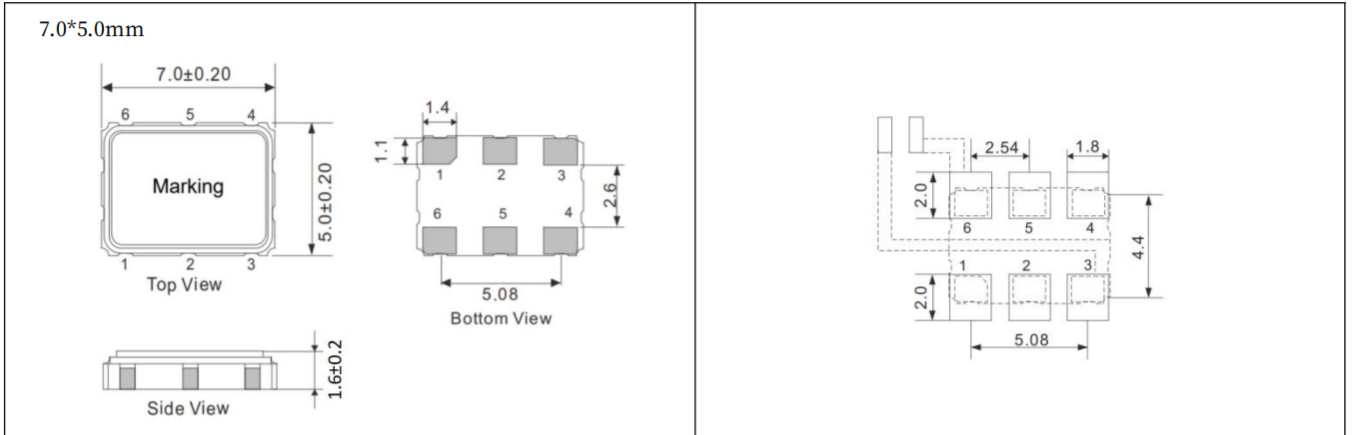
Figure 1. Pin Assignments

**Notes:** To maintain stable operation provide a 0.01uF to 0.1uF by-pass capacitor at a location as near as possible to the power source terminal of the crystal product (between VDD-GND).

## 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>	

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## Test Circuit (测试电路)

