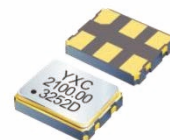


Differential Oscillator

YSO231LJ



Applications

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

Features

- Femto Second Integrated Phase Jitter (50fs typical, 12KHz ~ 20mHz)
- Output LVPECL, HCSL or LVDS
- Superior Phase Noise (-157 dBc/Hz at 100 KHz and -164 dBc/Hz at 10mHz offset)
- Package Size: 2.5*2.0mm, 3.2*2.5mm, 5.0*3.2mm, 7.0*5.0mm

Specifications (规格参数)

Item / Type	LVPECL		LVDS			HCSL	
Output Frequency Range 额定频率范围	100 ~ 250MHZ		100 ~ 250MHZ			100 ~ 175MHZ	
Supply Voltage 电源电压	2.5V, 3.3V		1.8V, 2.5V, 3.3V			1.8V, 2.5V, 3.3V	
Operating Temperature Range 工作温度	-40~+85°C, or specify						
Storage Temperature Range 储存温度	-55 ~ +150°C						
Total Stability 频率偏差	±25ppm, ±50ppm, ±100ppmor specify						
Current Consumption 消耗电流	52mA (Typ) 65mA (Max)		22mA (Typ) 30mA (Max)			32mA (Typ) 40mA (Max)	
Output Swing (single-end) 输出电压摆幅	400mV (Min)		200mV (Min)			450mV (Min)	
Output Load Condition 输出负载	50Ω into VDD - 2.0V or Thevenin equivalent		100Ω between output and complimentary output			50Ω to ground on each output	
Input Voltage 输入电压	VIH=70% VDD Min, VIL=30%VDD Max						
Duty Cycle 占空比	45~55%						
Rise Time/Fall Time (20%↔80% of waveform) 上升沿/下降沿	0.4nS (Max)		0.3nS (Max)			0.6nS (Max)	
Start-up Time 启动时间	1ms (Typ) ; 5ms (Max)						
Aging at Ta = +25°C 老化率	± 3 ppm (Max) first year ; ± 2 ppm (Max) per year thereafter						
RMS Jitter (12 KHz to 20mHz) 相位抖动	50 fsec (Typ) , 300 fsec (Max) [For 125mHz , LVDS , 3.3V]						
Phase Noise [dBc / Hz (Typ)] 相位噪声	Offset	100Hz	1KHz	10KHz	100KHz	1MHz	10MHz
	125.0MHz	-114	-135	-147	-157	-163	-164
	156.250MHz	-108	-132	-141	-152	-160	-161

Differential Oscillator

YSO231LJ



Pin Dimension (脚位尺寸)

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

Pin Assignments

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

Top View

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

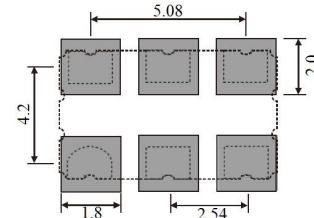
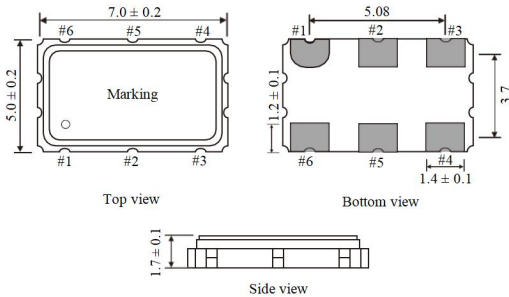
Dimensions (Unit: mm)	Recommended Land Pattern (Unit: mm)
2.5*2.0mm Top view Bottom view Side view	
3.2*2.5mm Top view Bottom view Side view	
5.0*3.2mm Top view Bottom view Side view	

Differential Oscillator

YSO231LJ

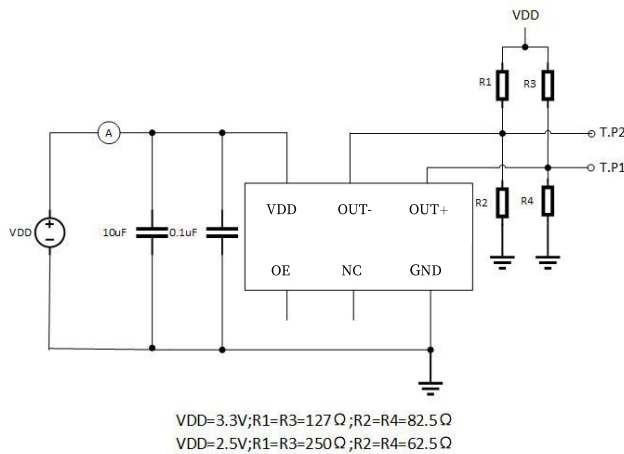


7.0*5.0mm

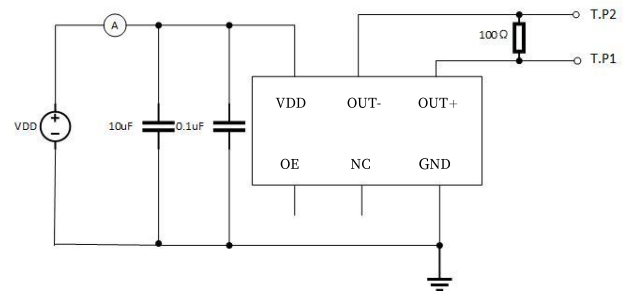


Test Circuit (测试电路)

LVPECL



LVDS



HCSL

