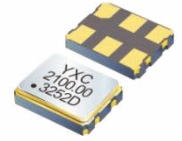


Differential Oscillator

YSO231LJ



Applications

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

Features

- Femto Second Integrated Phase Jitter (50fs typical, 12KHz ~ 20mHz)
- Output LVPECL, HCSSL 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 | | | HCSSL | |
|---|---|-------|---|-------|--------|------------------------------|-------|
| 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

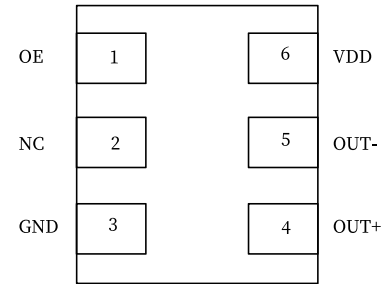
YSO231LJ



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



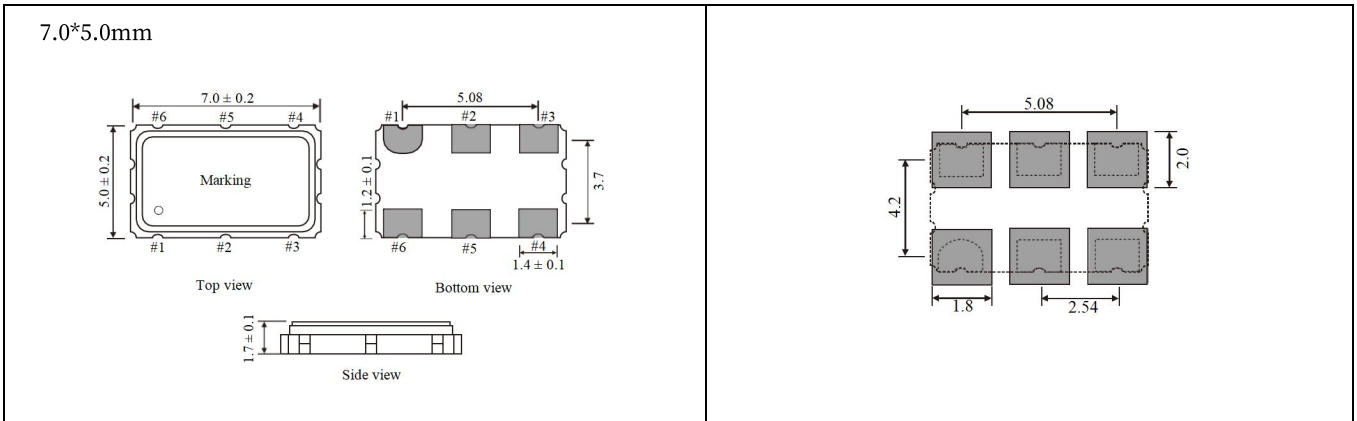
Top View

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

| Dimensions (Unit: mm) | Recommended Land Pattern (Unit: mm) |
|-----------------------|-------------------------------------|
| <p>2.5*2.0mm</p> | |
| <p>3.2*2.5mm</p> | |
| <p>5.0*3.2mm</p> | |

Differential Oscillator

YSO231LJ



Test Circuit (测试电路)

