

Programmable Differential Oscillator

YSV221PJ VCXO

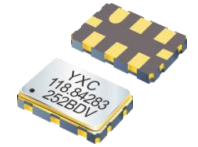


Applications

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

Features

- Freq. Range: 15MHz~2100MHz. - Package Size: 5.0*3.2, 7.0*5.0mm.
- Output: LVPECL, LVDS, HCSL, CML - Ultra-low RMS phase jitter.



Specifications

Item / Type	LVPECL	LVDS	HCSL	CML
Output Frequency Range	15MHz~2100MHz	15MHz~2100MHz	15MHz~700MHz	15MHz~2100MHz
Supply Voltage	2.5V, 3.3V	1.8V, 2.5V, 3.3V	1.8V, 2.5V, 3.3V	1.8V, 2.5V, 3.3V
Total Stability	±25ppm, ±50ppm, ±100ppm or specify			
Absolute Pull Range	±100ppm (min), ± 200 ppm (available)			
Operating Temperature Range	-40~+85°C or specify			
Storage Temperature Range	-55~+150°C			
Input Impedance	5 Mohms (min)			
Current Consumption (VDD = + 3.3 V)	100 mA (typ.), 120 mA (max.)	75 mA (typ.), 90 mA (max.)	80 mA (typ.), 100 mA (max.)	70 mA (typ.), 85 mA (max.)
Output Logic " High " , " 1 "	VDD - 1.165 V (min.) VDD - 0.8 V (max.)	VDD : 1.4V (typ.) VDD : 1.6 V (max.)	VDD:0.66V (min.) VDD:1.15V (max.)	VDD - 0.085V (min.) VDD = (max.)
Current with Output Disabled	99 mA (typ.)	74 mA (typ.)	79 mA (typ.)	69 mA (typ.)
Output Logic " Low " , " 0 "	VDD - 2.0 V (min.) VDD - 1.55 V (max.)	VDD : 1.1 V (typ.) VDD : 0.9 V (min.)	VDD : -0.15V (min.) VDD : 0.15V (max.)	VDD - 0.6V (min.) VDD - 0.32V (max.)
Output Voltage Swing	595 mV (min.) 930 mV (max.)	250 mV (min.), 450 mV (max.)	450 mV (min.), 700 mV (typ.)	200 mV (min.), 600 mV (typ.)
Output Load	50 Ω into VDD - 2V or Thevenin equivalent	100 Ω between OUT and OUTN	50 Ω to GND	50 Ω to VDD
Duty Cycle	50 % ± 5% ; 50 % ± 10%			
Rise Time / Fall Time (20% to 80% Waveform)	0.4 nsec (max.) (10% to 90% Waveform)			
Start-up Time	5 msec. (typ.) ; 10 msec. (max.)			
Aging	± 3 ppm (max.) for first year ; ± 2 ppm (max.) per year thereafter			
RMS Jitter [12 KHz ~ 20 MHz]	156.250 MHz : 159 fsec (typ.) ; 491.520 MHz : 155 fsec (typ.) ; 644.530 MHz : 151 fsec (typ.) ; 2,000 MHz : 163 fsec (typ.)			
Control Voltage Function on Pad 1				
Vcontrol Center	+ 0.9 V for VDD = + 1.8 V	+ 1.25 V for VDD = + 2.5 V	+ 1.65 V for VDD = + 3.3 V	
Vcontrol Range	+ 0.0V ~ +1.8V	+ 0.25V ~ +2.25V	+ 0.3V ~ +3.0V	
Linearity	± 1%(typ.) ; ±10% (max.)			
Transfer Function	Positive Transfer			
Input Impedance	5 MΩ (min.)			
Bandwidth	10 KHz (typ.) Measured at -3 dB			
Output Enable Function on Pad 2				
Output Enable / Disable Function	80% of VDD (min.) to enable output.			
	20% of VDD (max.) to disable output.			
Output Enable Time / Disable Time	2.5 msec (max.) / 10 usec (max.)			

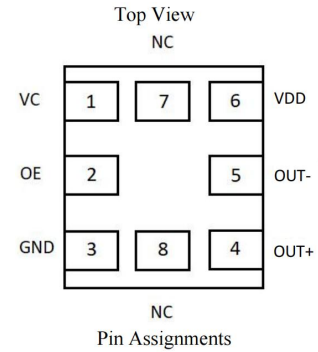
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Pin Dimension



Pin	#1	#2	#3	#4
FUNCTION	VC	OE	GND	OUT+
Pin	#5	#6	#7	#8
FUNCTION	OUT-	VDD	NC	NC



Dimensions and Recommended land pattern

Package Size – Dimensions (Unit: mm)	Recommended Land Pattern (Unit: mm)
<p>5.0*3.2mm</p> <p>Top view</p> <p>Bottom view</p> <p>Side view</p>	
<p>7.0*5.0mm</p> <p>Top view</p> <p>Bottom view</p> <p>Side view</p>	

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Test Circuit

