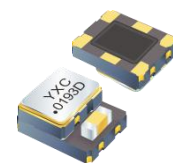


Programmable Differential Oscillator YSV322PT VCTCXO



Applications

- networking
- industrial

Features

- With low current consumption (44 mA for PECL 212.500 MHz at 3.3V)
- Low jitter design with new developed IC
- Package Size: 3.2*2.5mm, 7.0*5.0mm

Specifications

Output Type	PECL	LVDS
Frequency Range	10MHz to 1500MHz	10MHz to 1500MHz
Supply Voltage VDD	2.5V, 3.3V	2.5V, 3.3V
Operating Temperature Range	-40~+85°C, or specify	-40~+85°C, or specify
Storage Temperature Range	-55~+150°C	-55~+150°C
Output Load	50 Ω into Vcc - 2V or Thevenin equivalent	100 Ω
Rise Time/Fall Time (Tr / Tf : 10% ↔ 90% waveform)	0.2 nsec. (typ.) , 0.5 nsec. (max.)	0.2 nsec. (typ.) , 0.4 nsec. (max.)
Duty Cycle	45~55%	45~55%
Start-up Time	5.0 msec. (max.)	5.0 msec. (max.)
RMS Jitter [12 kHz ~ 20 MHz]	1.5 psec (typ.)	1.5 psec (typ.)
Current Consumption (max.) (VDD = + 2.5V)	50 MHz : 46 mA	50 MHz : 32 mA
	125 MHz : 50 mA	125 MHz : 40 mA
	200 MHz : 60 mA	200 MHz : 44 mA
Current Consumption (max.) (VDD = + 3.3V)	50 MHz : 50 mA	50 MHz : 35 mA
	125 MHz : 55 mA	125 MHz : 40 mA
	200 MHz : 62 mA	200 MHz : 44 mA
Current with Output Disabled	18 mA (Typ.)	18 mA (Typ.)
Initial Calibration Tolerance	±2.0 ppm (max.) at +25°C±2°C (at the shipment)	
Frequency Stability	Temperature (ref to +25°C)	± 2.5 ppm over -30°C to +85°C (default)
		± 1.0 ppm over -40°C to +85°C (available)
	Aging at Ta = +25°C	± 2.0 ppm max, first year at 25°C
	Voltage Change	± 0.2 ppm max, for a ±5% input voltage change.
	Load Change	± 0.2 ppm max, for a ±10% load condition change.
	Reflow	± 1.0 ppm max, 1 reflow and measured 24 hours afterwards.

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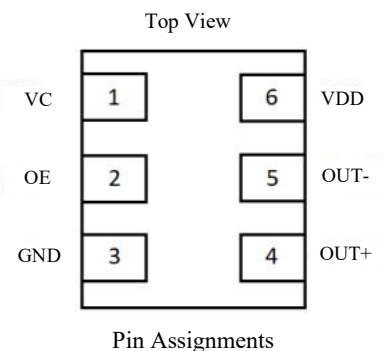


Control Voltage Function on Pad 1	
Control Voltage Center and Range	+1.5V ± 1.0V for both VDD = 2.5V and 3.3V
Frequency Pulling Range	± 8 ppm (min.)
Linearity	± 1 % (typ.) ± 10% (max.)
Transfer Function	Positive Transfer
Absolute Voltage	4.0 V (max.)
Input Impedance	770 K Ω (typ.)

Output Enable Function on pad 2	
OE Control on Pad 2	70% of VDD (min.) to enable output. (Open connection prohibit.)
	30% of VDD (max.) to disable output.
Output Enable Time / Disable Time	200 nsec. (max.) / 50 nsec. (max.)

Pin Dimension

Pin	#1	#2	#3
FUNCTION	Voltage Control	Out Enable	Ground
Pin	#4	#5	#6
FUNCTION	OUT+	OUT-	Supply Voltage



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Dimensions and Recommended land pattern

Package Size – Dimensions (Unit: mm)	Recommended Land Pattern (Unit: mm)
<p>3.2*2.5mm</p>	
<p>7.0*5.0mm</p>	

Test Circuit

PECL	LVDS
<p>No Connection for TCXO Voltage Control VCTCXO</p> <p>VDD=3.3V: R1=R3=127Ω; R2=R4=82.5Ω VDD=2.5V: R1=R3=250Ω; R2=R4=62.5Ω</p>	<p>No Connection for TCXO Voltage Control VCTCXO</p>