Low NoisePLL Based Crystal Oscillator

Features

- Output programmable to any frequency from 200 kHz to 1.5GHz with 10ppt resolution.
- Ultra Low Jitter:
  - 70fs Typ Jrms,12kHz–20MHz
  - 26fs Typ Jrms,12kHz–20MHz with 4MHz
- Fractional N fully integrated PLL
- Compatible with 3.3V,2.5V and 1.8V supply
- I2C Interface supports Standard (100KHz) and Fast Mode(400KHz)
- Best in class PSRR performance of - 85dBC typical
- LVPECL,HCSL-LP,LVDS,LVDS-Boost, HCSL,AC Coupled CML output options available on differential output pads.
- HCSL-LP Output Driver type frequency support is from 200kHz to 500MHz
- +/-25ppm stability (-40°C to 85°C)
- Availablein 8pin 3.2mmx2.5mm LGA Package

Applications

- 100G/200G/400G OTN,coherent optics
- 10G/40G/100G optical ethernet
- 3G-SDI/12G-SDI/24G-SDI broadcast video
- Datacenter
- Test and measurement
- Clock and data recovery
- FPGA/ASIC clocking

General Description

YDO810PU is a PLL-based crystal oscillator that can be programmed to a wide range of output frequencies.The device can be programmed by the user via I²C to provide any frequency between 200kHz and 1.5GHz.

YDO810PU is factory-configured with various user-specified parameters,including the I²C address,output format,and OE pin position /polarity.With on-chip non-volatile memory (NVM) and factory programming,it can meet customer needs with extremely short lead times.

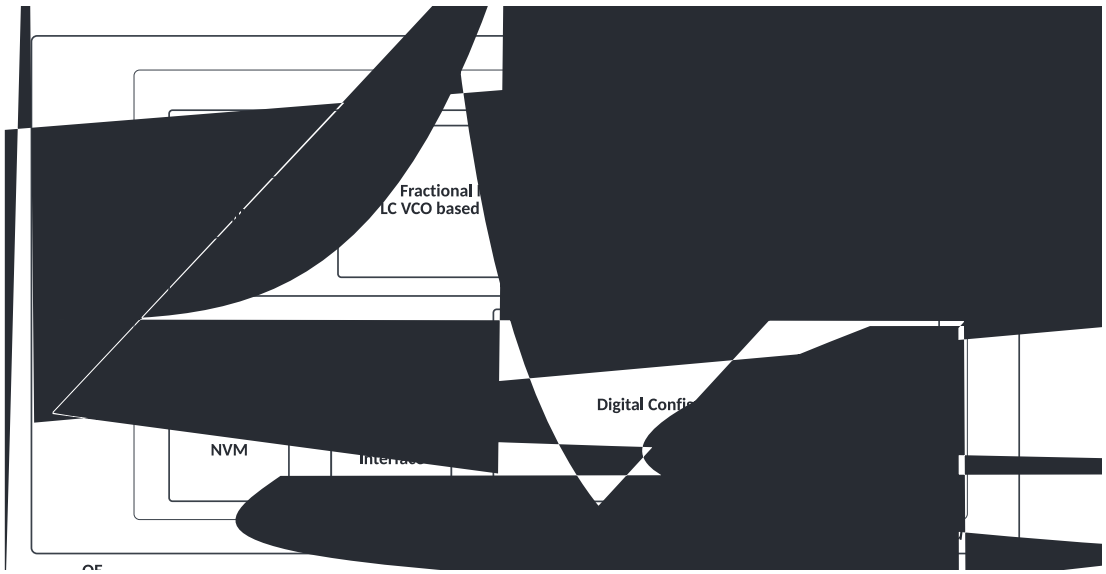

Figure 1 Functional Overview

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1 Pin Description

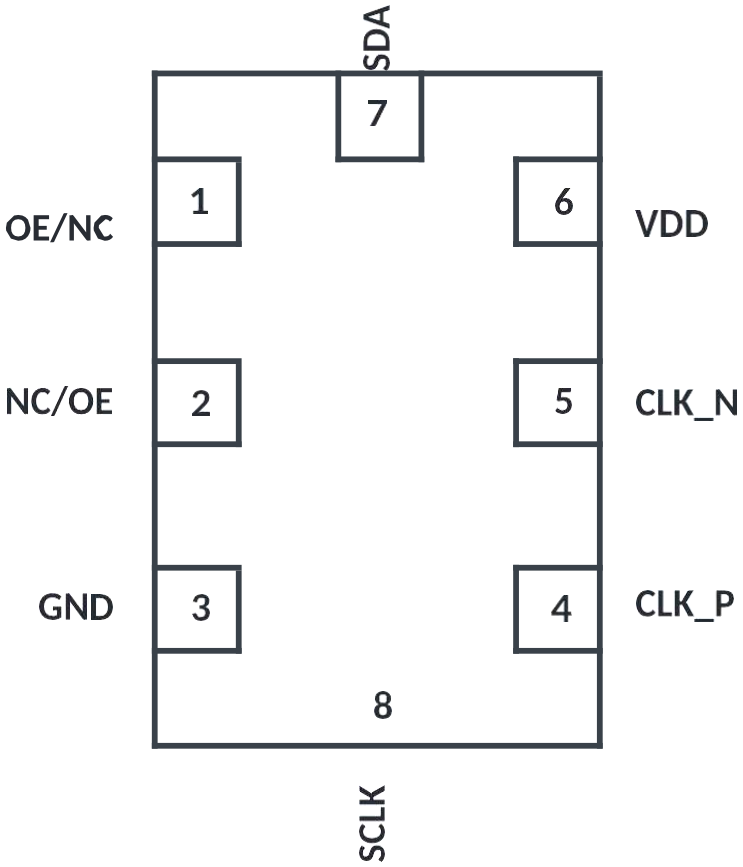

Figure1 YDO810PU Top View

Table 1 Pin Description

Pin Name	Pin No.	I/O Type	Function
OE/NC	1, 2	Input	Selectable by Ordering Information OE = Output Enable; NC = No connect
GND	3		GND
CLK_P	4	Output	Clock + for differential Output. Single Ended CMOS Output
CLK_N	5	Output	Clock - for differential Output. Single Ended CMOS Output
VDD	6	Power	Chip Power Supply
SDA	7	Input/Output	I2C Serial Data
SCLK	8	Input	I2C Serial Clock

Notes:The Output Enable Pin can be confgured as Active High or Low based on the customer requirement. Refer to the Ordering Information section for more details.

2 Package Information

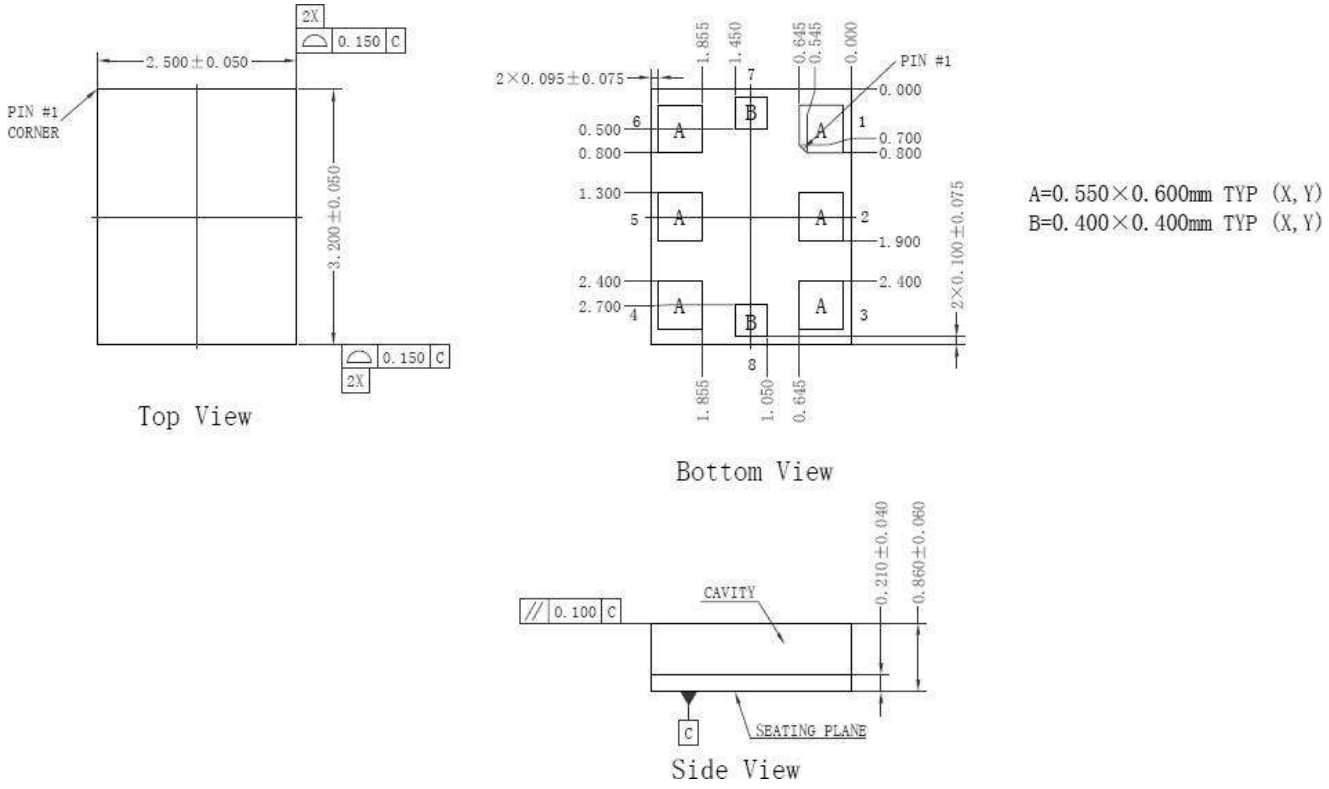

Figure 2 . Package Diagram 3.2mm x 2.5mm