



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: [info@chipsmall.com](mailto:info@chipsmall.com) Web: [www.chipsmall.com](http://www.chipsmall.com)

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



## 2.5V PECL Low Jitter XO

**PD**


5.0 x 3.2mm Ceramic SMD

### Product Features

- 38.88 to 162 MHz Frequency Range
- <1 ps RMS jitter with non-PLL design
- Designed for standard reflow & washing techniques
- IBIS models available
- Pb-free & RoHS/Green compliant

### Product Description

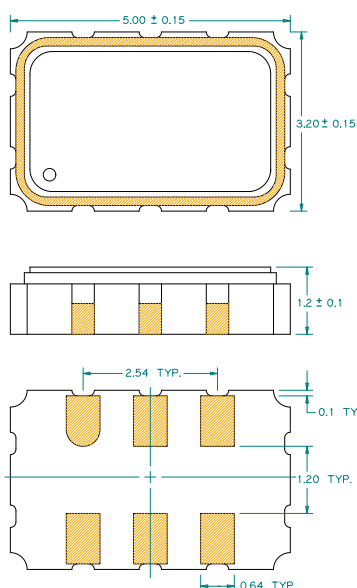
The PD Series 2.5V crystal clock oscillator achieves superb jitter and stability over a broad range of operating conditions and frequencies. The output clock signal, generated internally with a non-PLL oscillator design, is compatible with LVPECL logic levels. The device, available on tape and reel, is contained in a 5.0 x 3.2mm surface-mount ceramic package.

### Applications

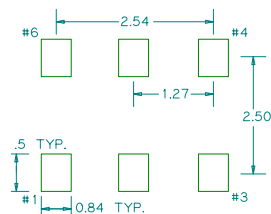
The PD Series is ideal for high-speed applications requiring low jitter, including:

- 1/10 Gigabit Ethernet
- 2/4/10G FibreChannel
- Serial Attached SCSI (SAS)
- Server & Storage platforms
- SONET/SDH linecards
- Passive Optical Network (PON) devices
- HD Video Systems

### Package:



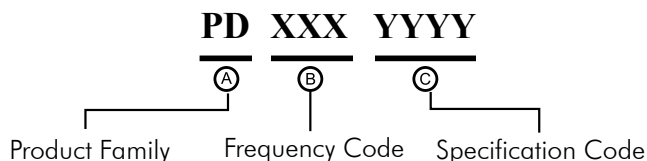
### Recommended Land Pattern:



### Pin Functions:

| Pin | Function         |
|-----|------------------|
| 1   | OE or NC         |
| 2   | NC or OE         |
| 3   | Ground           |
| 4   | Q Output         |
| 5   | $\bar{Q}$ Output |
| 6   | V <sub>CC</sub>  |

### Part Ordering Information:



Following the above format, Saronix-eCera part numbers will be assigned upon confirmation of exact customer requirements.

## Electrical Performance

| Parameter                       | Min.   | Typ. | Max.                   | Units        | Notes                         |
|---------------------------------|--|------|------------------------|--------------|-------------------------------|
| Output Frequency                | 38.88  |      | 162                    | MHz          | As specified                  |
| Supply Voltage                  | 2.25   | 2.50 | 2.75                   | V            |                               |
| Supply Current, enabled         |  | 55   | 88                     | mA           |                               |
| Supply Current, Disabled        |  |      | 0.03                   | mA           |                               |
| Frequency Stability             |  |      | ±20 to ±50             | ppm          | See Note 1 below              |
| Operating Temperature Range     | -20  |      | +70                    | °C           | Commercial (standard)         |
|                                 | -40  |      | +85                    |              | Industrial (standard)         |
| Output Logic 0, V <sub>OL</sub> |  |      | V <sub>CC</sub> - 1.62 | V            |                               |
| Output Logic 1, V <sub>OH</sub> | V <sub>CC</sub> - 1.025                          |      |                        | V            |                               |
| Output Load                     | 50Ω connected connected to V <sub>CC</sub> - 2 V |      |                        |              | output requires termination   |
| Duty Cycle                      | 45   |      | 55                     | %            | measured 50% of waveform      |
| Rise and Fall Time              |  | 500  | 850                    | ps           | measured 20/80% of waveform   |
| Jitter, Phase                   |  | 0.5  | 1                      | ps RMS (1-σ) | 12kHz to 20MHz frequency band |
| Jitter, Total                   |  |      | 25                     | ps pk-pk     | 100,000 random periods        |

## Notes:

1. Stability includes all combinations of operating temperature, load changes, rated input (supply) voltage changes, initial calibration tolerance (25°C), aging (5 year at 40°C average effective ambient temperature), shock and vibration.
2. For specifications other than those listed, please contact sales.

## Output Enable / Disable Function

| Parameter  | Min. | Typ. | Max. | Units | Notes                   |
|--|------|------|------|-------|-------------------------|
| Input Voltage (pin OE), Output Enable                      | 0.7  |      |      | V     | or open                 |
| Input Voltage (pin OE), Output Disable (low power standby) |      |      | 0.3  | V     | Outpus disabled to Hi-Z |
| Internal Pullup Resistance                                 | 50   |      |      | kΩ    |                         |
| Output Disable Delay                                       |      |      | 200  | ns    |                         |
| Output Enable Delay  |      |      | 10   | ms    |                         |

## Absolute Maximum Ratings

| Parameter           | Min. | Typ. | Max. | Units | Notes |
|---------------------|------|------|------|-------|-------|
| Storage Temperature | -55  |      | +125 | °C    |       |

For the latest product information visit: [http://www.pericom.com/products/timing/oscillators/PD\\_2.5V/](http://www.pericom.com/products/timing/oscillators/PD_2.5V/)

For test circuit go to: [http://www.pericom.com/pdf/sre/tc\\_pecl.pdf](http://www.pericom.com/pdf/sre/tc_pecl.pdf)

For soldering reflow profile and reliability test ratings go to: <http://www.pericom.com/pdf/sre/reflow2.pdf>

For tape and reel information go to: [http://www.pericom.com/pdf/sre/tr\\_5032\\_xo.pdf](http://www.pericom.com/pdf/sre/tr_5032_xo.pdf)