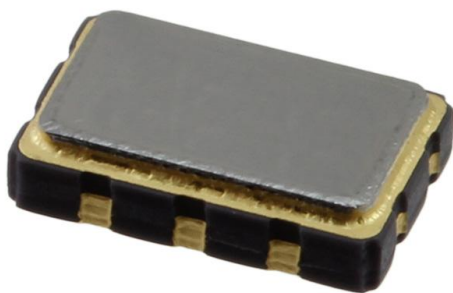


# LDC500003 Datasheet

[www.digi-electronics.com](http://www.digi-electronics.com)



<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	LDC500003-DG
Manufacturer	<a href="#">Diodes Incorporated</a>
Manufacturer Product Number	LDC500003
Description	XTAL OSC XO 125.0000MHZ LVDS SMD
Detailed Description	125 MHz XO (Standard) LVDS Oscillator 3.3V Enable /Disable 6-SMD, No Lead



Tel: +00 852-30501935

RFQ Email: [Info@DiGi-Electronics.com](mailto:Info@DiGi-Electronics.com)

DiGi is a global authorized distributor of electronic components.

## Purchase and inquiry

Manufacturer Product Number:

LDC500003

Series:

SaRonix-eCera™ LD

Base Resonator:

Crystal

Frequency:

125 MHz

Output:

LVDS

Frequency Stability:

±25ppm

Operating Temperature:

-20°C ~ 70°C

Ratings:

-

Package / Case:

6-SMD, No Lead

Height - Seated (Max):

0.051" (1.30mm)

Manufacturer:

Diodes Incorporated

Product Status:

Active

Type:

XO (Standard)

Function:

Enable/Disable

Voltage - Supply:

3.3V

Absolute Pull Range (APR):

-

Current - Supply (Max):

47mA

Mounting Type:

Surface Mount

Size / Dimension:

0.197" L x 0.126" W (5.00mm x 3.20mm)

Current - Supply (Disable) (Max):

30µA

## Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8542.39.0001

Moisture Sensitivity Level (MSL):

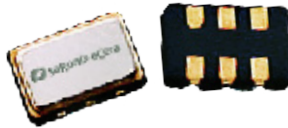
1 (Unlimited)

ECCN:

EAR99



## 3.3V LVDS Low Jitter XO

**LD**

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

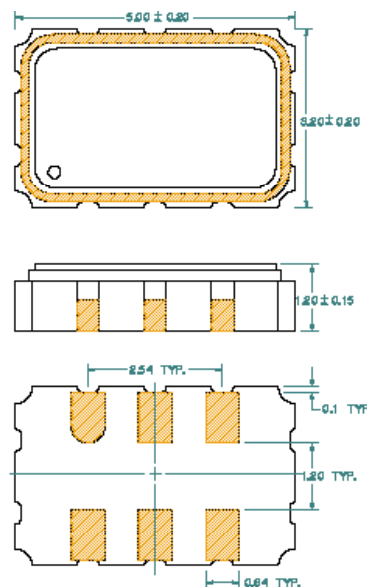
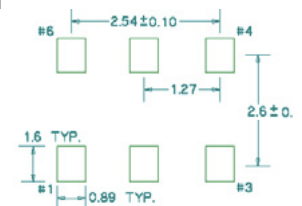
**Product Description**

The LD Series 3.3V 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 LVDS logic levels. The device, available on tape and reel, is contained in a 5.0 x 3.2mm surface-mount ceramic package.

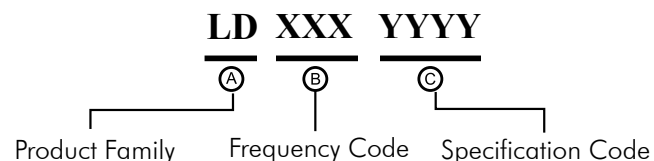
**Applications**

The LD 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.

**3.3V LVDS Low Jitter XO LD****LD Series Crystal Clock Oscillator (XO)  
5.0 x 3.2mm****Electrical Performance**

Parameter	Min.	Typ.	Max.	Units	Notes
Output Frequency	38.88		162	MHz	As specified
Supply Voltage	3.0	3.3	3.6	V	
Supply Current, Enabled		35	47	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>	0.9	1.1		V	
Output Logic 1, V <sub>OH</sub>		1.43	1.6	V	
Output Load	100Ω connected between both outputs				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	Output 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/crystals-and-crystal-oscillators/standard-xo/?part=LD+3.3V>

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

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

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



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