

## 2.5/3.3V LVDS XO

## WX503



5.0 x 3.2mm Ceramic SMD

### Product Features

- Very low phase jitter - 1.0ps RMS
- Thicker crystal for improved reliability
- Industrial Temperature Range
- Pb-free & RoHS compliant

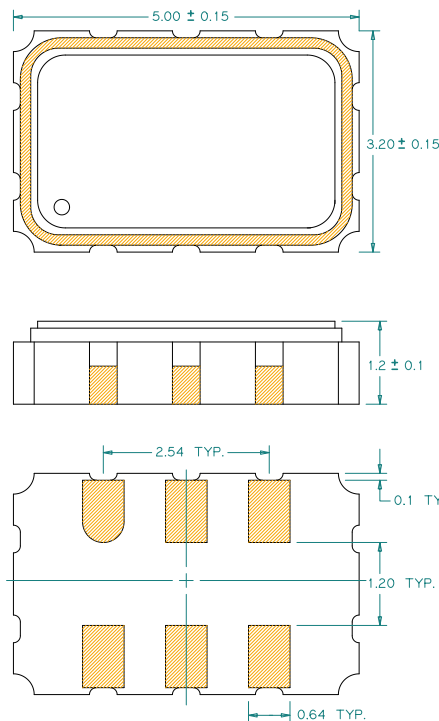
### Product Description

The WX503 XO series is a high performance LVDS crystal oscillator family with very low jitter performance. It supports various options including wider frequency range, 2.5/3.3 voltage, various stabilities, and different package sizes. It is designed to meet the clock source specifications for communication systems, and other high performance equipment.

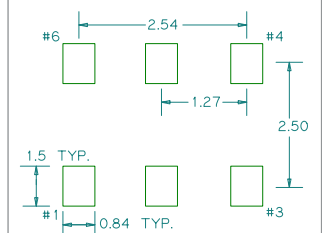
### Applications

- Networking systems
- Servers and storage systems
- Profession video equipments
- Test and measurement
- FPGA/ASIC clock generation

### Package:



### Recommended Land Pattern:



### Pin Functions:

Pin	Function
1	OE Function
2	N/C
3	Ground
4	Q
5	$\bar{Q}$
6	V <sub>CC</sub>

\*Extended high frequency power decoupling is recommended (see test circuit for minimum recommendation). To ensure optimal performance, do not route RF traces beneath the package.

### Part Ordering Information:

**WX 503 V I FFFF.FFFFFFFF**

Voltage:	Stability and Temp Range:	Frequency:
1 = +3.3V	A = $\pm 20$ ppm -20/+70°C	FFFF.FFFFFFFF
2 = +2.5V	B = $\pm 25$ ppm -20/+70°C	MHz, "4 digits/decimal/6 digits" format
	C = $\pm 50$ ppm -20/+70°C	
	D = $\pm 25$ ppm -40/+85°C	
	E = $\pm 50$ ppm -40/+85°C	

Frequency:  
FFFF.FFFFFFFF  
MHz, "4 digits/decimal/6 digits" format



### Electrical Performance

Parameter	Min.	Typ.	Max.	Units	Notes
Output Frequency	50		212.5	MHz	
Supply Voltage	3.135	3.3	3.465	V	See ordering options
	2.375	2.5	2.625		
Supply Current, Output Enabled			90	mA	
Supply Current, Output Disabled			70	mA	
Frequency Stability			±50	ppm	See ordering options
Operating Temperature Range	-40		+85	°C	See ordering options
Differential Output Voltage, $V_{OD}$	0.247	0.350	0.454	V	
Output Common Mode Voltage, $V_{OS}$	1.125	1.25	1.375	V	
Output Load	100Ω connected between outputs				Output requires termination
Duty Cycle	45		55	%	Measured 50% $V_{CC}$
Rise and Fall Time			500	ps	Measured 20/80% of waveform
Jitter, Phase RMS (1-σ)			1	ps	12kHz to 20 MHz frequency band
Jitter, pk-pk			30	ps	100,000 random periods

#### Notes:1

1. Stability includes all combinations of operating temperature, load changes, rated input (supply) voltage changes, initial calibration tolerance (25°C), aging (1 year at 25°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 1), Output Enable	0.7 $V_{CC}$			V	or open
Input Voltage (pin 1), Output Disable (low power standby)			0.3 $V_{CC}$	V	Output is Hi-Z
Internal Pullup Resistance		100		kΩ	
Output Disable Delay			80	ns	
Output Enable Delay			80	ns	
Setup Time			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/>

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

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

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