

2.5V/3.3V LVDS XO

NX703



7.0 x 5.0mm Ceramic SMD

Product Features

- Very low phase jitter < 1.0ps RMS max.
- Wide frequency range $5 \sim 1000 \text{MHz}$
- Thicker crystal for improved reliability
- Low supply current 70mA max.
- Industrial Temperature Range
- Pb-free & RoHS compliant
- Fast lead time

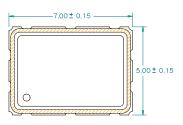
Product Description

The NX703 XO series is a high performance LVDS crystal oscillator family with very low jitter performance. It supports various options including wider frequency range, 2.5V/3.3V voltage, and various stabilities. It is designed to meet the clock source specifications for communication systems, and other high performance equipment.

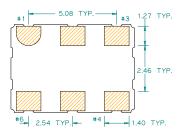
Applications

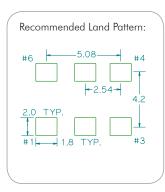
- Networking systems
- Servers and storage systems
- Profession video equipments
- Test and measurement
- FPGA/ASIC clock generation

Package: (Scale: none, Dimensions are in mm)







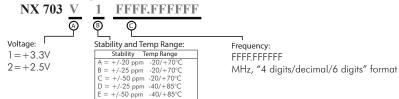


Pin Functions:

Pin	Function					
1	OE Function					
2	N/C					
3	Ground					
4	Q					
5	\overline{Q}					
6	V _{CC}					

^{*}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:



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Ultra Low Jitter PLL Crystal Oscillator 7.0 x 5.0mm

Electrical Performance

Parameter		Min.	Тур.	Max.	Units	Notes	
Output Frequency		5		1000	MHz		
Supply Voltage		3.135	3.3	3.465	3.7	0 1	
		2.375	2.5	2.625	V	See ordering options	
Supply Current, Output Enabled				70	mA		
Supply Current, Output Disabled only				40	mA		
Frequency Stability				±50	ppm	See ordering options	
Operating Temperat	Operating Temperature Range			+85	°C	See ordering options	
Output Logic 0, VO	L	0.9	1.1		V		
Output Logic 1, VO	Output Logic 1, V _{OH}		1.43	1.6	V		
Output Load		100Ω connected between outputs				Output requires termination	
Differential Output	Differential Output Voltage. V _{OD}			0.454	V		
Duty Cycle		45		55	%	Measured 50% V _{CC}	
Rise and Fall Time	Rise and Fall Time			400	ps	Measured 20/80% of waveform	
Jitter, Accumulated, RMS (1-σ)				6	ps	20.000 adjacent periods	
Jitter, Phase, RMS	< 40MHz		0.4	1	ps	12kHz to 5 MHz frequency band	
	40 to 1000MHz		0.4	1	ps	12kHz to 20 MHz frequency band	
	125MHz, 156.25MHz		0.4	0.6	ps	12kHz to 20 MHz frequency band	
Jitter, pk-pk	Jitter, pk-pk			40	ps	100,000 random periods	

Notes:

- 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. Phase jitter typical value is depending on output frequencies.
- 3. For specifications other than those listed, please contact sales.

Output Enable / Disable Function

Parameter	Min.	Тур.	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
Output Disable Delay			100	ns	
Output Enable Delay			100	ns	
Start up Time			10	ms	

Absolute Maximum Ratings

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

 $\textbf{For the latest product information visit:} \ \underline{\text{http://www.pericom.com/products/crystals-and-crystal-oscillators/hi}} \\ \text{flex-xo/?part=NX703}$

For test circuit go to: 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

For tape and reel information go to: http://www.pericom.com/pdf/sre/tr_7050_xo.pdf

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