

Ultra Low Jitter PLL Crystal Oscillator 7.0 x 5.0mm

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 1000MHz
- 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

7.00 ± 0.15

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





Recommended Land Pattern:							
#6 + 5.08 + #4 +2.54 + 42							
2.0 TYP. #1 + 1.8 TYP. #3							

Pin Functions:

Pin	Function				
1	OE Function				
2	N/C				
3	Ground				
4	Q				
5	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.



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All specifications are subject to change without notice. NX703

Rev B

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Electrical Performance

Parameter		Min.	Тур.	Max.	Units	Notes
Output Frequency		5		1000	MHz	
Quart Maltan	3.135	3.3	3.465			
Supply Voltage	2.375	2.5	2.625	V	See ordering options	
Supply Current, Output Enabled				70	mA	
Supply Current, Ou			40	mA		
Frequency Stability				±50	ppm	See ordering options
Operating Temperature Range		-40		+85	°C	See ordering options
Output Logic 0, V _{OL}		0.9	1.1		V	
Output Logic 1, V _{OH}			1.43	1.6	V	
Output Load		100Ω connected between outputs				Output requires termination
Differential Output Voltage. VOD		0.247		0.454	V	
Duty Cycle		45		55	%	Measured 50% V _{CC}
Rise and Fall Time				400	ps	Measured 20/80% of waveform
Jitter, Accumulated , RMS (1-o)				6	ps	20.000 adjacent periods
	<40MHz		0.4	1	ps	12kHz to 5 MHz frequency band
Jitter, Phase, RMS	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			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), 1. aging (1 year at 25°C average effective ambient temperature), shock and vibration.

Phase jitter typical value is depending on output frequencies. 2.

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	

For the latest product information visit: <u>http://www.pericom.com/products/crystals-and-crystal-oscillators/hiflex-xo/?part=NX703</u>

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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