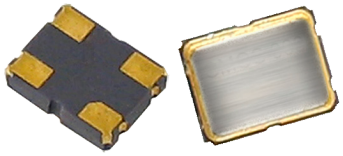
0.9V~1.5V CMOS XO

LX321



3.2 x 2.5mm Ceramic SMD

Product Features

- Industrial temperature range
- Low phase jitter: < 1ps RMS max.
- Supports frequency range: 1.25~50MHz
- Supports voltage range: 0.9~1.5V
- Low power consumption
- Pb-free & RoHS compliant

Product Description

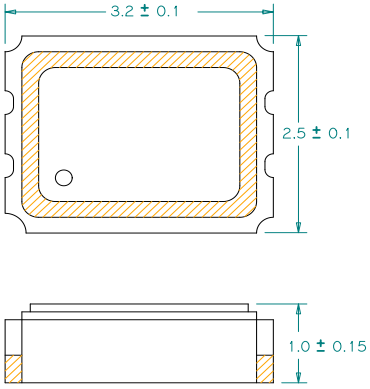
The LX321 XO series is a high performance CMOS crystal oscillator family with very low jitter performance.

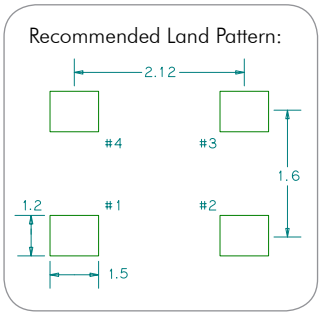
It supports 0.9V/1.0V/1.2V/1.5V voltages and consumes very low operating current. It is designed to meet the clock source specifications for communication systems, industrial applications and other high performance equipment.

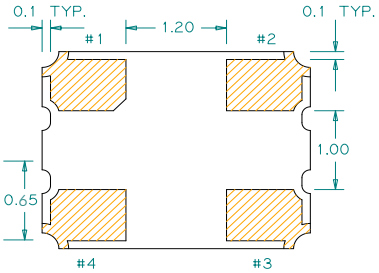
Applications

- Networking and communication systems
- Industrial and outdoor systems
- Storage and server systems
- Hand-held devices
- Professional video equipments
- Test and measurement equipments

Package: (Scale: none; dimensions are in mm)







Pin Functions:

Pin	Function
1	OE
2	Ground
3	Output
4	V_{DD}

*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:

LX 321 V I FFFF.FFFFFF

(A) (B) (C)

Voltage:
4=+1.5V
5=+1.2V
6=+1.0V
7=+0.9V

Stability and Temp Range:

Stability	Temp Range
A = +/-20 ppm	-20/+70°C
B = +/-25 ppm	-20/+70°C
C = +/-50 ppm	-20/+70°C
D = +/-25 ppm	-40/+85°C
E = +/-50 ppm	-40/+85°C

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

Electrical Performance

Parameter		Min.	Typ.	Max.	Units	Notes
Output Frequency		1.25		50	MHz	
Supply Voltage		1.425	1.5	1.575	V	See ordering options
		1.14	1.2	1.26		
		0.95	1.0	1.05		
		0.855	0.9	0.945		
Supply Current, Output Enabled				4	mA	
Supply Current, Output Disabled only				100	uA	
Frequency Stability				±50	ppm	See ordering options
Operating Temperature Range		-40		+85	°C	See ordering options
Output Logic 0, V_{OL}				0.2 V_{DD}	V	
Output Logic 1, V_{OH}		0.8 V_{DD}			V	
Output Load				15	pF	
Duty Cycle		45		55	%	Measured 50% V_{DD}
Rise and Fall Time				4	ns	Measured 20/80% of waveform
Jitter, Accumulated, RMS (1-σ)				6	ps	20.000 adjacent periods
Jitter, Phase, RMS	< 40MHz			1	ps	12kHz to 5 MHz frequency band
	>=40MHz			1		12kHz to 20 MHz frequency band
Jitter, pk-pk				50	ps	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 (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_{DD}			V	or open
Input Voltage (pin 1), Output Disable (low power standby)			0.3 V_{DD}	V	Output is Hi-Z
Output Disable Delay			50	us	
Output Enable Delay			2	ms	
Start up 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/crystals-and-crystal-oscillators/cxo/?part=LX321

For test circuit go to: http://www.pericom.com/pdf/sre/tc_cmos2.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_3225_xo.pdf