

2.5V/3.3V LVPECL XO

JX502



5.0 x 3.2mm Ceramic SMD

Product Features

- Very low phase jitter - 0.8ps RMS typical
- Thicker crystal for improved reliability
- Low supply current - 60mA max.
- Industrial Temperature Range
- Pb-free & RoHS compliant
- Fast lead time

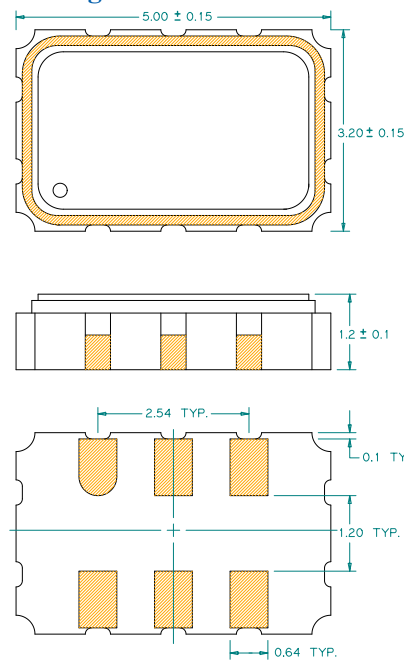
Product Description

The JX502 XO series is a high performance LVPECL 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.

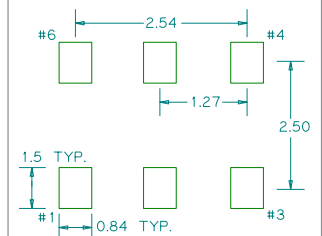
Applications

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

Package:



Recommended Land Pattern:



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:

JX 502 V 1 FFFF.FFFFFF

Voltage:
1 = +3.3V
2 = +2.5V

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	10		360	MHz	
Supply Voltage	3.135	3.3	3.465	V	See ordering options
	2.375	2.5	2.625		
Supply Current, Output Enabled			60	mA	
Supply Current, Output Disabled only			20	mA	
Frequency Stability			±50	ppm	See ordering options
Operating Temperature Range	-40		+85	°C	See ordering options
Output Logic 0, V _{OL}			V _{CC} -1.55	V	
Output Logic 1, V _{OH}	V _{CC} -1.2			V	
Output Load	50Ω to V _{CC} -2V output termination				
Duty Cycle	45		55	%	Measured 50% V _{CC}
Rise and Fall Time			350	ps	Measured 20/80% of waveform
Jitter, Phase RMS (1-σ)		0.8		ps	12kHz to 20 MHz frequency band
Jitter, pk-pk		20	40	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 _{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		51		kΩ	
Output Disable Delay			200	ns	
Output Enable Delay			200	ns	
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/timing/oscillators/>

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

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

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