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# 2.5V/3.3V CMOS XO

**JX701** 



7.0 x 5.0mm Ceramic SMD

#### **Product Features**

- Very low phase jitter 0.8ps RMS typical
- Thicker crystal for improved reliability
- Low supply current 45mA max.
- Industrial Temperature Range
- Pb-free & RoHS compliant
- Fast lead time

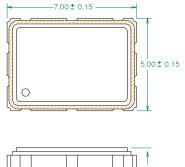
### **Product Description**

The JX701 XO series is a high performance CMOS 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.

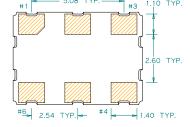
# **Applications**

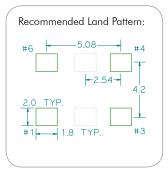
- Networking systems
- Servers and storage systems
- Profession video equipments
- Test and measurement
- FPGA/ASIC clock generation

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









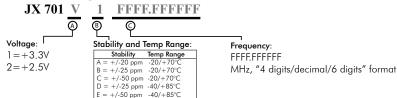
\*Note: pads 2 and 5 are optional (shown as dotted lines). XO's are designed to fit on industry standard, 4 pad layouts.

#### **Pin Functions:**

Pin	Function
1	OE Function
2	N/C
3	Ground
4	Output
5	N/C
6	$V_{\mathrm{DD}}$

<sup>\*</sup>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:**



JX701

SaRonix-eCera<sup>™</sup> is a Pericom® Semiconductor company • US: +1-408-435-0800 TW: +886-3-4518888





### Ultra Low Jitter PLL Crystal Oscillator 7.0 x 5.0mm

#### **Electrical Performance**

Parameter	Min.	Тур.	Max.	Units	Notes	
Output Frequency	10		212.5	MHz		
Complex Voltage	3.135	3.3	3.465	17	See ordering options	
Supply Voltage	2.375	2.5	2.625	V		
Supply Current, Output Enabled			45	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 <sub>OL</sub>			0.4	V		
Output Logic 1, V <sub>OH</sub>	V <sub>DD</sub> -0.4			V		
Output Load			15	pF		
Duty Cycle	45		55	%	Measured 50% V <sub>DD</sub>	
Rise and Fall Time		800	1600	ps	Measured 20/80% of waveform	
Jitter, Phase RMS (1-σ)		0.8		ps	12kHz to 20 MHz frequency band	
Jitter, pk-pk $V_{DD} = 3.3V$		20	40		100 000 1 1-	
Jitter, pk-pk $V_{DD} = 2.5V$		40	50	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. For specifications othere 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 <sub>DD</sub>			V	or open
Input Voltage (pin 1), Output Disable (low power standby)			0.3 V <sub>DD</sub>	V	Output is Hi-Z
Internal Pullup Resistance		51		$k\Omega$	
Output Disable Delay			200	ns	
Output Enable Delay			200	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: http://www.pericom.com/products/crystals-and-crystal-oscillators/hiflex-xo/?part=JX701

For test circuit go to: http://www.pericom.com/pdf/sre/tc 6pcmos.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: <a href="http://www.pericom.com/pdf/sre/tr\_7050\_xo.pdf">http://www.pericom.com/pdf/sre/tr\_7050\_xo.pdf</a>



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