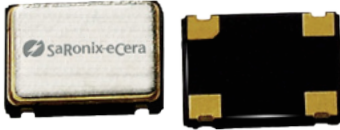


2.5/3.3V CMOS XO

UX71/UX701



7.0 x 5.0mm Ceramic SMD

**Product Features**

- Ultra low phase jitter for 40G/100G systems
  - 0.1ps RMS max. (12kHz to 20MHz), Category 1
  - 0.2ps RMS max. (12kHz to 20MHz), Category 1
  - 0.3ps RMS max. (12kHz to 20MHz), Category 2
- Industrial Temperature Range
- Pb-free & RoHS compliant

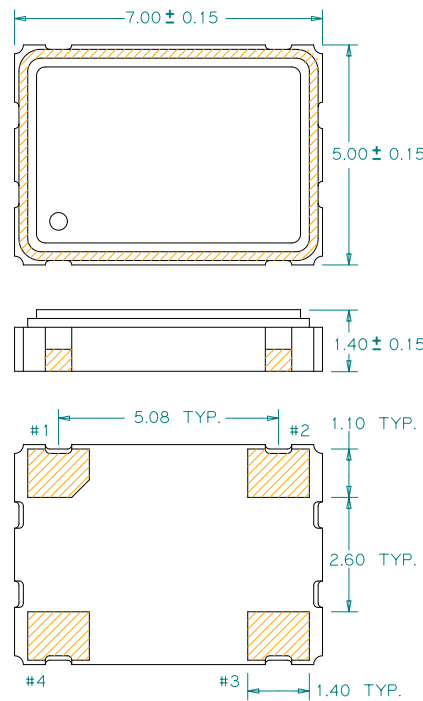
**Product Description**

The UX71/UX701 XO series is a high performance CMOS crystal oscillator family with ultra low jitter performance. It supports various options including wider frequency range, 2.5/3.3 voltage, various stabilities, and different package sizes. It is designed to meet the clock source specifications for communication systems with 40G or 100G interfaces, and other high performance equipment.

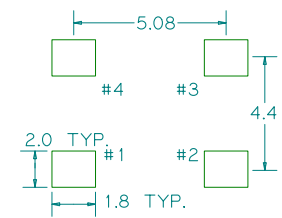
**Applications**

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

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



**Recommended Land Pattern:**

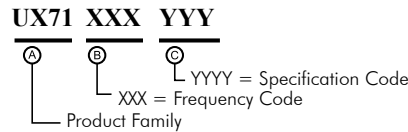


\*Extended high frequency power decoupling is recommended (see test circuit for minimum recommendation). To ensure optimal performance, do not route RF traces beneath the package.

**Pin Functions:**

Pin	Function
1	OE
2	GND
3	Output
4	V <sub>DD</sub>

**Part Ordering Information Category 1:**



\*Not for all frequencies in the frequency range. Please contact sales for details.

**Part Ordering Information Category 2:**



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

**Electrical Performance**

Parameter		Min.	Typ.	Max.	Units	Notes
Output Frequency		40		156.25	MHz	
Supply Voltage		3.135	3.3	3.465	V	See ordering options
		2.375	2.5	2.625		
Supply Current, Output Enabled	Frequency 40~100MHz			25	mA	
	Frequency >100MHz			35		
Supply Current, Output Disabled				10	mA	
Frequency Stability				±50	ppm	See ordering options
Operating Temperature Range		-40		+85	°C	See ordering options
Output Logic 0, V <sub>OL</sub>				10%V <sub>DD</sub>	V	
Output Logic 1, V <sub>OH</sub>		90%V <sub>DD</sub>			V	
Output Load				15	pF	
Duty Cycle		45		55	%	Measured 50% V <sub>DD</sub>
Rise and Fall Time				5	ns	Measured 20/80% of waveform
Jitter, Phase RMS (1-σ), Category 1				0.1	ps	12kHz to 20 MHz frequency band, See ordering information category 1
				0.2	ps	
Jitter, Phase RMS (1-σ), Category 2				0.3	ps	12kHz to 20 MHz frequency band, See ordering information category 2
Jitter, Accumulated RMS (1-σ)				7	ps	20,000 Consecutive Periods
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.
- 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 <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	30			kΩ	
Output Disable Delay			200	ns	
Output Enable Delay			2	ms	
Start up Time			3	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/xo/?part=UX71%2FUX701>

**For test circuit go to:** [http://www.pericom.com/pdf/sre/tc\\_cmos.pdf](http://www.pericom.com/pdf/sre/tc_cmos.pdf)

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

**For tape and reel information go to:** [http://www.pericom.com/assets/sre/tr\\_7050\\_xo.pdf](http://www.pericom.com/assets/sre/tr_7050_xo.pdf)

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