

2.5/3.3V CMOS XO

WX701



7.0 x 5.0mm Ceramic SMD

Product Features

- Very low phase jitter - 1.0ps RMS
- Thicker crystal for improved reliability
- Industrial Temperature Range
- Pb-free & RoHS compliant

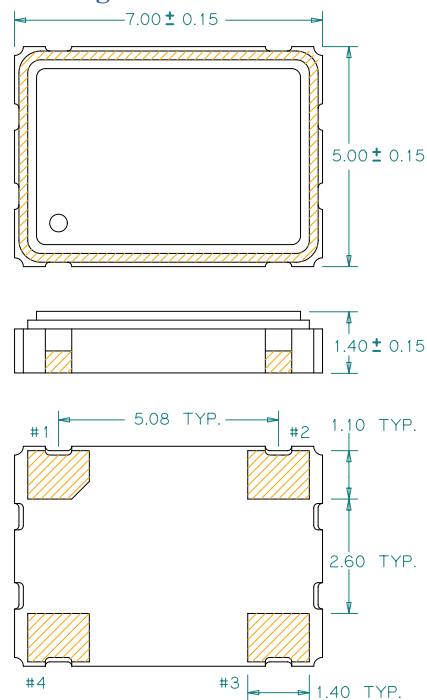
Product Description

The WX701 XO series is a high performance CMOS crystal oscillator family with very 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, and other high performance equipment.

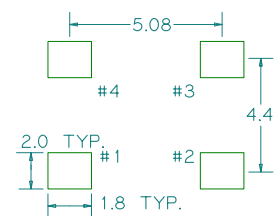
Applications

- 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 |
| 2 | GND |
| 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:

WX 701 V I FFFF.FFFFFFFF

| Voltage: | Stability | Temp Range |
|-----------|-----------|------------|
| | | |
| A = +3.3V | +/-20 ppm | -20/+70°C |
| B = +2.5V | +/-25 ppm | -20/+70°C |
| C = +3.3V | +/-50 ppm | -20/+70°C |
| D = +2.5V | +/-25 ppm | -40/+85°C |
| E = +3.3V | +/-50 ppm | -40/+85°C |

Frequency:
FFFFFFF
MHz, "4 digits/decimal/6 digits" format



Electrical Performance

| Parameter | Min. | Typ. | Max. | Units | Notes |
|----------------------------------|--------------|------|-------|-------|--------------------------------|
| Output Frequency | 50 | | 212.5 | MHz | |
| Supply Voltage | 3.135 | 3.3 | 3.465 | V | See ordering options |
| | 2.375 | 2.5 | 2.625 | | |
| Supply Current, Output Enabled | | | 70 | mA | |
| Supply Current, Output Disabled | | | 50 | mA | |
| Frequency Stability | | | ±50 | ppm | See ordering options |
| Operating Temperature Range | -40 | | +85 | °C | See ordering options |
| Output Logic 0, V_{OL} | | | 0.4 | V | |
| Output Logic 1, V_{OH} | $V_{DD}-0.4$ | | | V | |
| Output Load | | | 15 | pF | |
| Duty Cycle | 45 | | 55 | % | Measured 50% V_{DD} |
| Rise and Fall Time | | | 1.5 | ns | Measured 20/80% of waveform |
| Jitter, Phase RMS (1- σ) | | | 1 | ps | 12kHz to 20 MHz frequency band |
| Jitter, pk-pk | | | 30 | 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 |
| Internal Pullup Resistance | | 100 | | k Ω | |
| Output Disable Delay | | | 80 | ns | |
| Output Enable Delay | | | 80 | ns | |
| Setup 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_cmos.pdf

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

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