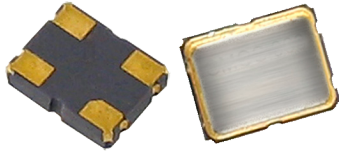


0.9V~1.5V CMOS XO

LX201



2.0 x 1.6mm 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

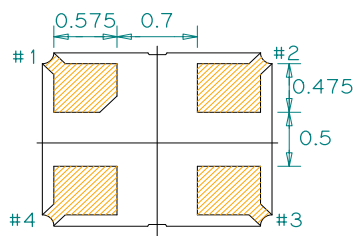
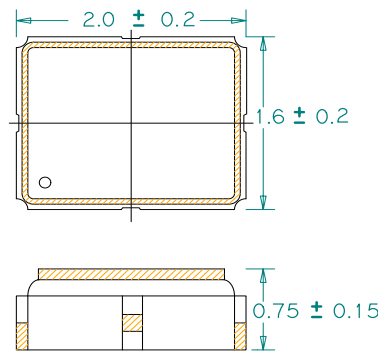
The LX201 XO series is a high performance CMOS crystal oscillator family with very low jitter performance.

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.

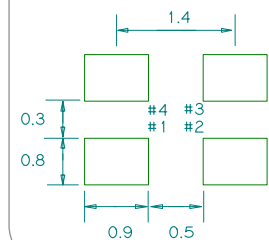
Applications

- 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)



Recommended Land Pattern:



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 201 V I FFFF.FFFFFFFF

| <p>Voltage:</p> <p>4 = +1.5V 5 = +1.2V 6 = +1.0V 7 = +0.9V</p> | <p>Stability and Temp Range:</p> <table border="1"> <thead> <tr> <th>Stability</th> <th>Temp Range</th> </tr> </thead> <tbody> <tr> <td>A = +/-20 ppm</td> <td>-20/+70°C</td> </tr> <tr> <td>B = +/-25 ppm</td> <td>-20/+70°C</td> </tr> <tr> <td>C = +/-50 ppm</td> <td>-20/+70°C</td> </tr> <tr> <td>D = +/-25 ppm</td> <td>-40/+85°C</td> </tr> <tr> <td>E = +/-50 ppm</td> <td>-40/+85°C</td> </tr> </tbody> </table> | 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 | <p>Frequency:</p> <p>FFFF.FFFFFFFF MHz, "4 digits/decimal/6 digits" format</p> |
|---|--|-----------|------------|---------------|-----------|---------------|-----------|---------------|-----------|---------------|-----------|---------------|-----------|---|
| Stability | Temp Range | | | | | | | | | | | | | |
| A = +/-20 ppm | -20/+70°C | | | | | | | | | | | | | |
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| C = +/-50 ppm | -20/+70°C | | | | | | | | | | | | | |
| D = +/-25 ppm | -40/+85°C | | | | | | | | | | | | | |
| E = +/-50 ppm | -40/+85°C | | | | | | | | | | | | | |

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:

- 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 _{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=LX201>

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_2016_xo.pdf