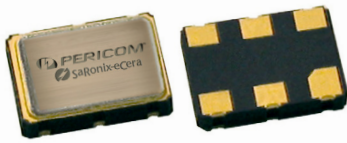


2.5V/3.3V LVPECL XO

NX702



7.0 x 5.0mm Ceramic SMD

**Product Features**

- Very low phase jitter - < 1.0ps RMS max.
- Wide frequency range - 5 ~ 1000MHz
- Thicker crystal for improved reliability
- Low supply current - 80mA max.
- Industrial Temperature Range
- Pb-free & RoHS compliant
- Fast lead time

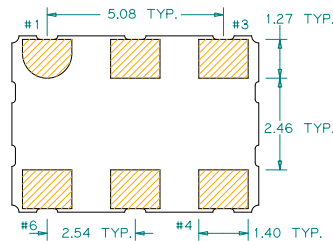
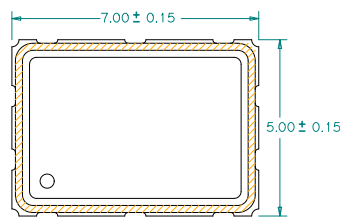
**Product Description**

The NX702 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.

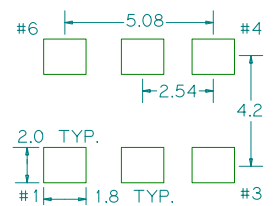
**Applications**

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

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



Recommended Land Pattern:



**Pin Functions:**

| Pin | Function    |
|-----|-------------|
| 1   | OE Function |
| 2   | N/C         |
| 3   | Ground      |
| 4   | Q           |
| 5   | Q̄          |
| 6   | Vcc         |

\*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:**

NX 702 V 1 FFFF.FFFFFFFF

| <p>Voltage:</p> <p>1 = +3.3V</p> <p>2 = +2.5V</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</p> <p>MHz, "4 digits/decimal/6 digits" format</p> |
|---|---|-----------|------------|---------------|-----------|---------------|-----------|---------------|-----------|---------------|-----------|---------------|-----------|---|
| 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   |           |            |               |           |               |           |               |           |               |           |               |           |   |

### Electrical Performance

| Parameter                            | Min.  | Typ. | Max.                  | Units | Notes                          |
|--------------------------------------|---|------|-----------------------|-------|--------------------------------|
| Output Frequency                     | 5   |      | 1000                  | MHz   |                                |
| Supply Voltage                       | 3.135   | 3.3  | 3.465                 | V     | See ordering options           |
|                                      | 2.375   | 2.5  | 2.625                 |       |                                |
| Supply Current, Output Enabled       |   |      | 80                    | mA    |                                |
| Supply Current, Output Disabled only |   |      | 40                    | mA    |                                |
| Frequency Stability                  |   |      | ±50                   | ppm   | See ordering options           |
| Operating Temperature Range          | -40   |      | +85                   | °C    | See ordering options           |
| Output Logic 0, V <sub>OL</sub>      |   |      | V <sub>CC</sub> -1.55 | V     |                                |
| Output Logic 1, V <sub>OH</sub>      | V <sub>CC</sub> -1.2                          |      |                       | V     |                                |
| Output Load                          | 50Ω to V <sub>CC</sub> -2V output termination |      |                       |       |                                |
| Duty Cycle                           | 45  |      | 55                    | %     | Measured 50% V <sub>CC</sub>   |
| Rise and Fall Time                   |   |      | 400                   | ps    | Measured 20/80% of waveform    |
| Jitter, Accumulated, RMS (1-σ)       |   |      | 6                     | ps    | 20.000 adjacent periods        |
| Jitter, Phase, RMS                   | < 40MHz                                       | 0.4  | 1                     | ps    | 12kHz to 5 MHz frequency band  |
|                                      | 40 to 1000MHz                                 | 0.4  | 1                     | ps    | 12kHz to 20 MHz frequency band |
|                                      | 125MHz, 156.25MHz                             | 0.4  | 0.6                   | ps    | 12kHz to 20 MHz frequency band |
| 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.
- Phase jitter typical value is depending on output frequencies.
- 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>CC</sub> |      |                     | V     | or open        |
| Input Voltage (pin 1), Output Disable (low power standby) |                     |      | 0.3 V <sub>CC</sub> | V     | Output is Hi-Z |
| Output Disable Delay                                      |                     |      | 100                 | ns    |                |
| Output Enable Delay                                       |                     |      | 100                 | 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/crystals-and-crystal-oscillators/hiflex-xo/?part=NX702>

For test circuit go to: [http://www.pericom.com/pdf/sre/tc\\_pecl.pdf](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>

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

单击下面可查看定价，库存，交付和生命周期等信息

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