



Features and Benefits

Frequency range: 25MHz
Supply voltage: 3.3V
Current: 10mA Max.
Frequency stability vs. temperature: ± 100 PPM
Aging: ± 3 PPM 1st year
Operating temperature: -10°C to $+70^{\circ}\text{C}$
Size: 2.5x2.0x0.9 mm

Typical Applications

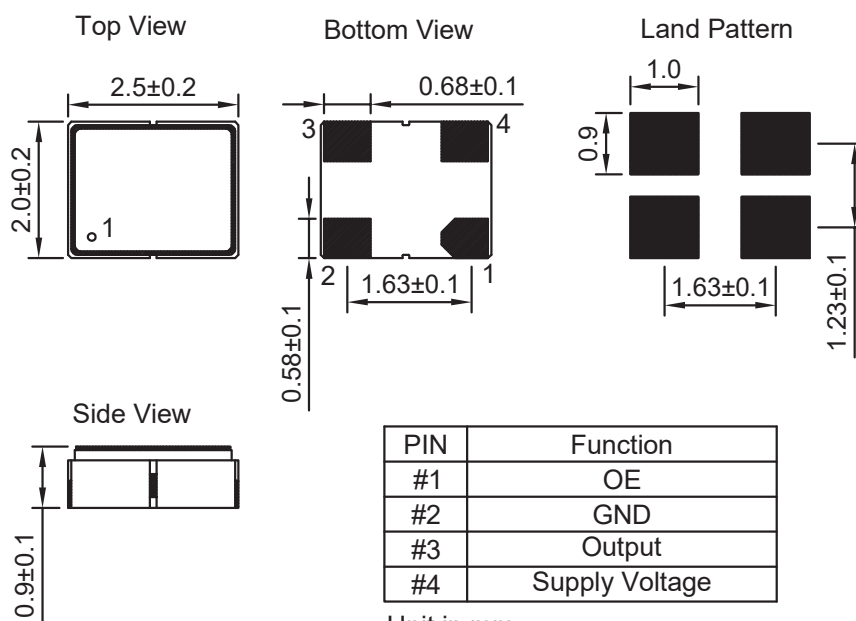
- Wearable device
- Sport Video Cams
- Ultra-small Notebook PC
- Mobile Phones
- Digital Circuit

Description

XO2520BL-ULJ_CMOS-25MHz-133 is the ultra-low jitter crystal oscillator.
The RMS phase jitter can be 48fs typical. It can be widely used in the digital circuit and communication applications.

Mechanical Drawing & Pin Connections

Drawing No: MD230031-1



Unit in mm
1mm = 0.0394 inches

**Specifications**

| Oscillator Specification | Sym | Condition | Value | | | Unit | Note |
|--|-----------------|-----------------------------|--------------------|------|--------------------|--------|------|
| | | | Min. | Typ. | Max. | | |
| Operational Frequency | f ₀ | | | 25 | | MHz | |
| RF Output | | | | | | | |
| Output Load | | | | 15 | | pF | |
| Output Level High | | | 2.97 | | | V | |
| Output Level Low | | | | | 0.33 | V | |
| Rise / Fall Time | | @10%-90% of V _{cc} | | 1.5 | 5 | ns | |
| Duty Cycle | | | 45 | | 55 | % | |
| Startup Time | | | | 0.8 | 5 | ms | |
| Output Enable/Disable Function on PIN1 | | Enable output | 70%V _{cc} | | | V | |
| | | Disable output | | | 30%V _{cc} | V | |
| Enable/Disable Time | | Enable | | | 1 | ms | |
| | | Disable | | | 200 | ns | |
| Power Supply | | | | | | | |
| Voltage | V _{cc} | ±10% | | 3.3 | | V | |
| Current | | | | 7 | 10 | mA | |
| Current With Output Disable | | | | 9 | 35 | uA | |
| Frequency Stability | | | | | | | |
| Supply Voltage Vs. Frequency Sensitivity | | @25°C | | | ±1.0 | ppm | |
| Vs. Temperature | | @-10°C to +70°C | | | ±100 | ppm | |
| Aging@+25°C | | 1 st year | | | ±3.0 | ppm | |
| SSB phase noise | | 10Hz | | -68 | | dBc/Hz | |
| | | 100Hz | | -102 | | | |
| | | 1KHz | | -139 | | | |
| | | 10KHz | | -157 | | | |
| | | 100KHz | | -170 | | | |
| | | 1MHz | | -166 | | | |
| | | 5MHz | | -168 | | | |
| RMS Jitter (12KHz-20MHz) | | | | 48 | 300 | fs | |
| Environmental Conditions | | | | | | | |
| Operating temperature range | | -10°C to +70°C | | | | | |
| Storage temperature range | | -55°C to +150 °C | | | | | |