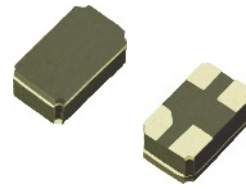


FEATURES

- Ultra-low current consumption
- Helium impermeable ceramic package and lid
- Non-magnetic
- Typical Start-up time of 200ms
- Optional output enable/disable with Tri-State
- Full military testing available



OUTLINE & DIMENSIONS

DESCRIPTION

CXOU is an ultra-miniature (2.0 x 1.2mm), ultra-low current quartz crystal oscillator developed for high reliability applications. Hermetically sealed in a highly reliable ceramic housing, this oscillator is available at start-up voltages in the range of 0.9V - 5.0V

APPLICATIONS

- **Medical:** Implantable pacemakers
Implantable defibrillators
Implantable neuro devices
Other implantable and external medical devices
- **Military**
- **Industrial**

SPECIFICATION

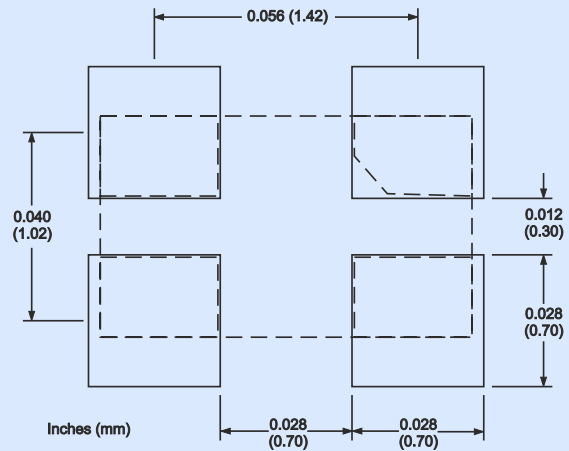
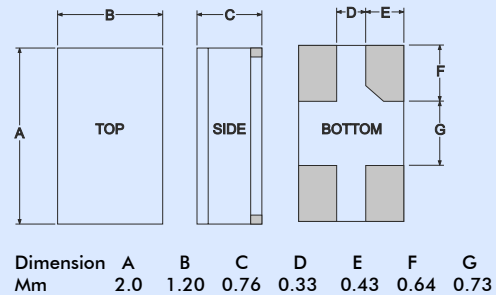
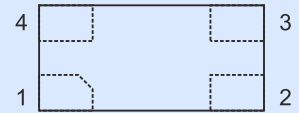
Specifications are typical at 25°C 1.7V unless otherwise indicated. Tighter specifications are available, contact Euroquartz technical sales.

| | |
|--------------------------------------|---|
| Frequency Range: | 32.768kHz to 100.0MHz |
| Supply Voltage ¹ : | +1.2V, +2.5V, +3.3V+5.0V ±10% |
| Calibration Tolerance ² : | ±20ppm, ±50ppm or ±100ppm |
| Supply Current: | See table |
| Output Load (CMOS) ⁴ : | 10pF |
| Start-up Time: | 200ms maximum |
| Rise/Fall Time (10%-90% wave): | 50ns maximum |
| Output Voltage Hi: | V _{DD} -0.4 min (typ V _{DD}) |
| Low: | 0.4V (typ 0V) |
| Duty Cycle: | 45% min., 55% max. 50% typ |
| Ageing First Year: | ±2ppm |
| Shock | |
| Shock Survival ⁵ : | 5000g peak, 0.3ms, ½ sine |
| Vibration Survival ⁶ : | 20g, 10~2000Hz swept sine |
| Operating Temperature Ranges | |
| Commercial: | -10° to +60°C |
| Industrial: | -40° to +85°C |
| Military: | -55° to +125°C |
| Voltage Coefficient: | ±1ppm/V |
| Storage Temperature: | -55°C to +155°C |
| Process temperature: | +260°C for 2mins max. |

1. Voltages available, contact factory
2. Tighter tolerances available.
3. Doesn't include calibration tolerance. Tighter tol. may be available.
4. Higher CMOS and TTL loads available. Contact factory.
5. Higher shock version available. Contact factory.
6. Per MIL-STD-202G Method 204D, Condition D. Random vibration testing also available.

Pin Connections

1. Output
2. Ground
3. Tristate
4. V_{DD}



SUPPLY CURRENT

| Frequency | Supply Current V _{DD} = 1.7V |
|----------------------|--|
| 32.768 kHz (OE High) | 1.75µA |
| 32.768 kHz (OE Low) | 0.4µA |
| 100.0 kHz (OE High) | 3.9µA |
| 100.0 kHz (OE Low) | 0.5µA |