

Orbital Precision OCXO Oscillator

Description

The Orbital Research Precision OCXO Oscillator for frequency converters delivers comparable performance to a Rubidium Crystal Oscillator (RbXO) at a fraction of the price. This stable, highly accurate 10 MHz reference oscillator will not drift more than 1 Hz in a 90-day period, which meets MIL-STD-188-164C.

In addition to military applications – including fixed, SATCOM-on-the-Move (SOTM) and airborne systems – the Orbital Precision OCXO Oscillator can be used for any commercial application that requires accurate timing, such as in-flight connectivity or telecommunications networks.

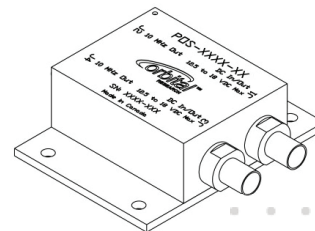
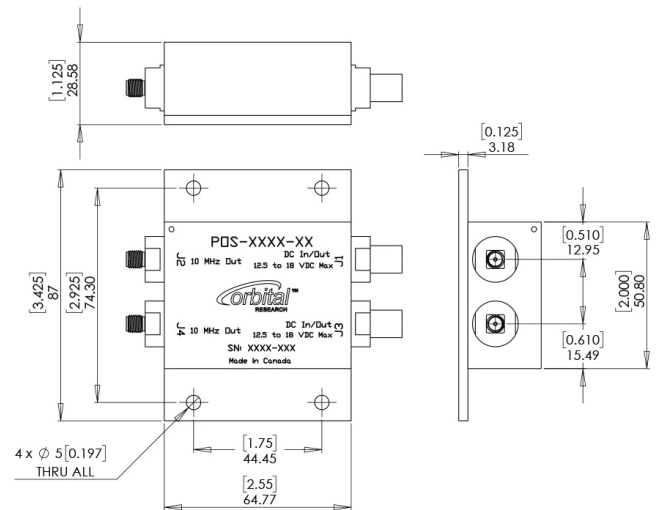
Key features:

- Very stable and accurate OCXO clock over time and temperature
- Low phase noise for even the most demanding application
- Small, stackable form factor with mounting plate
- Two 10 MHz ports to support both an LNB and a BUC
- Compliant with MIL-STD-188-164C, IP67, REACH and RoHS

The Orbital Precision OCXO Oscillator can be used with our bias tee product line, including one or two Mux-Tees (premium bias tee multiplexers). It can also be used with our power supplies and Orbital LNB Voltage Controller.



Mechanical Diagram

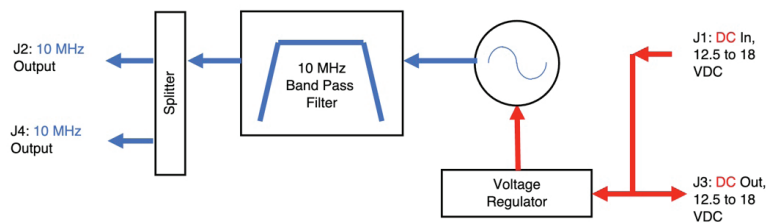


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Specifications

| FREQUENCY RANGE | | STANDARD | ENHANCED | AIRBORNE |
|----------------------------|---------|--|------------------|-------------------------------------|
| Frequency | | | 10 MHz | |
| Output Level | | | + 2 dBm | |
| Stability Over Temperature | | ± 0.05 ppm | ± 0.05 ppm | ± 0.01 ppm |
| Aging | | 0.5 ppb/day | 0.5 ppb/day | 0.35 ppb/day |
| Allan Deviation | | | | ± 1 x 10 ⁻¹¹ Tau = 1 sec |
| Standards | | | | MIL-STD-188-164C |
| Temperature Range | | 0°C to +40°C | -20°C to +40°C | -40°C to +80°C |
| Phase Noise | 10 Hz | -120 dBc/Hz | -120 dBc/Hz | -120 dBc/Hz |
| | 100 Hz | -145 dBc/Hz | -145 dBc/Hz | -150 dBc/Hz |
| | 1 kHz | -152 dBc/Hz | -158 dBc/Hz | -158 dBc/Hz |
| | 10 kHz | -155 dBc/Hz | -160 dBc/Hz | -165 dBc/Hz |
| | 100 kHz | -155 dBc/Hz | -160 dBc/Hz | -165 dBc/Hz |
| | 1 MHz | -155 dBc/Hz | -160 dBc/Hz | -165 dBc/Hz |
| Harmonics | | | < -45 dBc | |
| Port to Port Isolation | | | 30 dB | |
| Power | | | +12.5 to +18 VDC | |
| Current | | 350 mA max during warm up (5 minutes). 125 mA max steady state | | |
| Size | | 3.425(L) x 2.55(W) x 1.875(H) inches | | |
| Weight | | 15 oz | | |
| Paint | | FED-STD-595, anodized blue finish | | |
| Humidity | | Up to 100% condensation and frost | | |
| Standards | | RoHS & REACH | | |

Block Diagram



How to Order

J1 to J4 Version
POS – BSBS - AM

Oscillator Connectors

J1: DC In
J2: 10 MHz Out
J3: DC Out
J4: 10 MHz Out

Versions

“ ” – (blank) Standard Version
EP – Enhanced Phase Noise
AM – Optimized for Airborne or Mil-Std-188-164c requirements

Available Connectors: BNC, SMA, INC, E, Feedthru ft