

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.

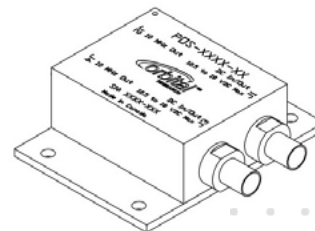
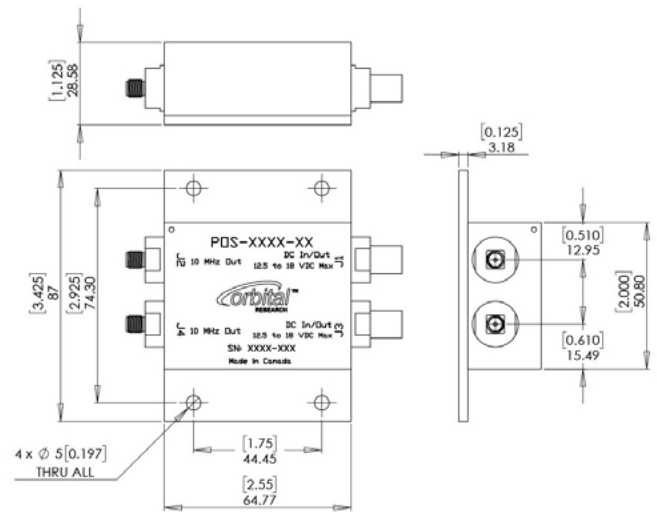
Key features:

- 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

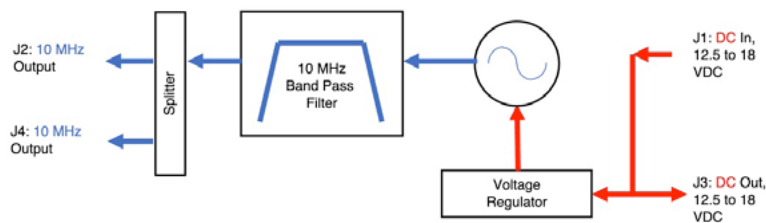


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Specifications

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				$\pm 1 \times 10^{-11}$ 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