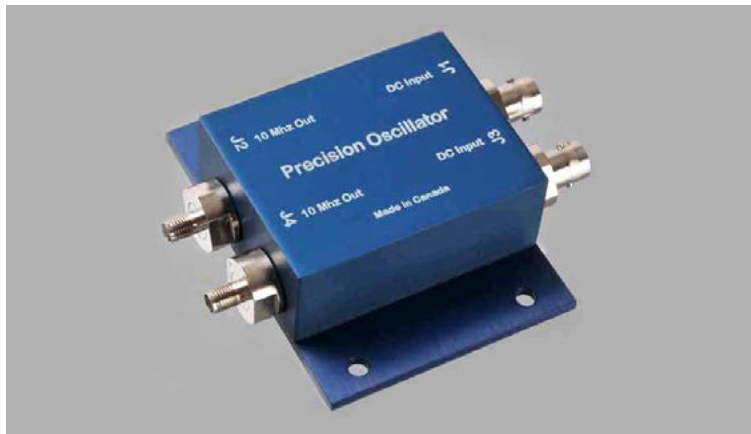




Orbital Precision OCXO Oscillator



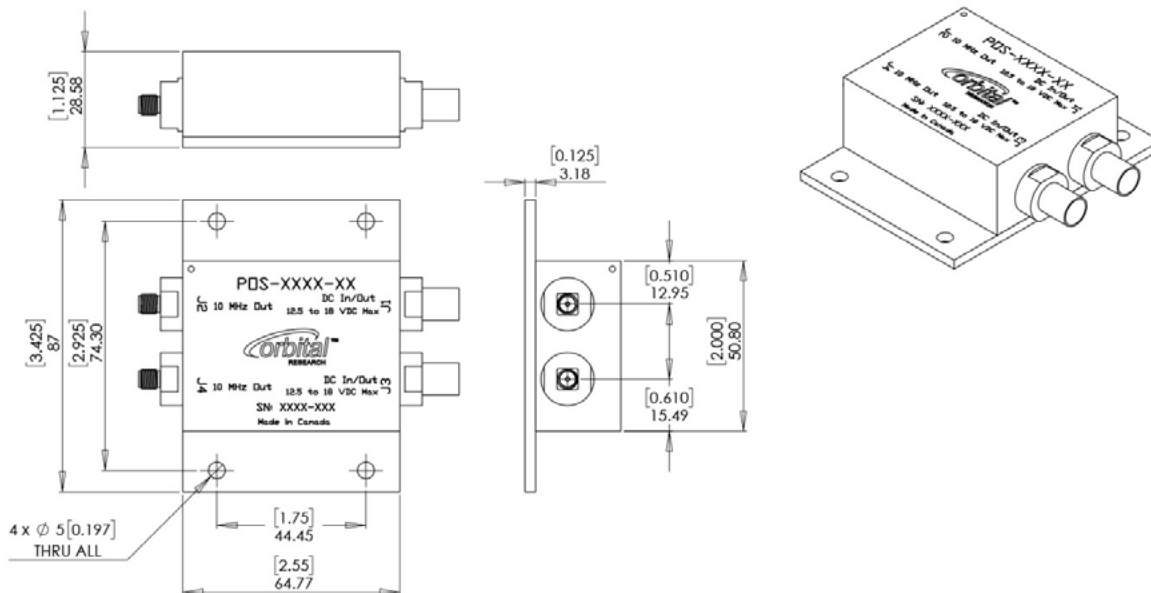
The Orbital Research Precision OCXO Oscillator for frequency converters delivers comparable performance to a Rubidium Crystal Oscillator (RbXO) at a fraction of the price. This stable, highly accurate 10 MHz reference oscillator will not drift more than 1 kHz in a 90-day period, which meets MIL-STD-188-164C.

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:

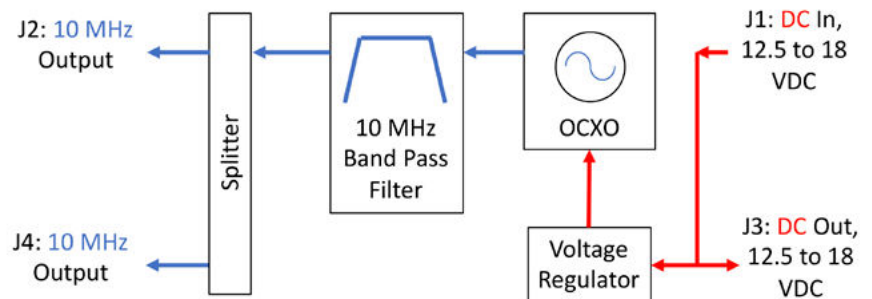
- Very stable and accurate OCXO clock over time and temperature
- Low phase noise for even the most demanding application
- Small, stackable form factor with mounting plate
- Two 10 MHz ports to support both an LNB and a BUC
- Compliant with MIL-STD-188-164C, IP67, REACH and RoHS

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](#).



FREQUENCY RANGE		STANDARD	ENHANCED	AIRBORNE
Frequency		10 MHz		
Output level		+ 2 dBm		
Stability over temperature		$\pm 5 \times 10^{-8}$	$\pm 5 \times 10^{-8}$	$\pm 1 \times 10^{-8}$
Aging		$\pm 5 \times 10^{-7}/\text{year}$	$\pm 5 \times 10^{-7}/\text{year}$	$\pm 1 \times 10^{-7}/\text{year}$ $\pm 5 \times 10^{-10}/\text{day}$
Allan deviation		$\pm 1 \times 10^{-11}$ Tau = 1 sec		
Standards		MIL-STD-188-164C		
Temperature Range		0°C to +50°C	0°C to +50°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		

Functional Block Diagram



Connectors Available:
J1, J3: DC
 B – BNC T – TNC
 S – SMA N – N
 ft – feedthru
J2, J4: 10 MHz
 B – BNC
 S – SMA
 N – N

Specifications subject to change
 Please contact Orbital Research
 for ordering information:
sales@orbitalresearch.net

