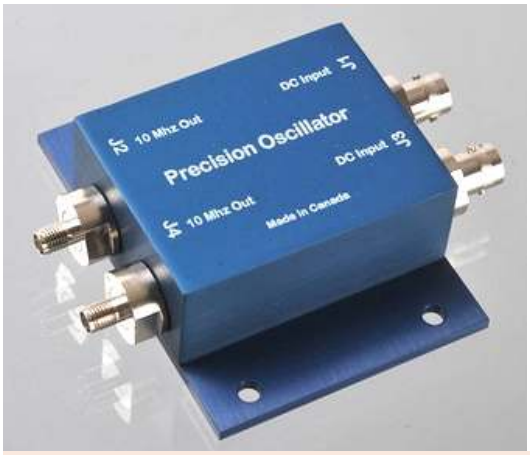

System Interface Products

POS – Precision 10 MHz Oscillator

Orbital Research.net

Precision OCXO (Ovenized) 10MHz Oscillator

How to order a
POS - Precision Oscillator

Module
POS - Precision Oscillator

10MHz Precision Oscillator Connectors
J1: DC in to power Oscillator
J2: 10MHz out (in-phase)
J3: DC out to power LNB/BUC (MuxTee)
J4: 10MHz out (in-phase)

POS –BSBS-AM

Optional
" _ " - (blank) Standard version
EP - Enhanced Phase Noise
AM - Optimized for Airborne

Connectors available:

J1, J3: DC Supply
B - BNC (preferred)
S - SMA
N - N
T - TNC
ft - feedthru

J2, J4: 10MHz
B - BNC (industry standard)
S - SMA (recommended for outdoor use)
N - N

BNC-to-pigtail adapters and BNC-to-binding post adapters for DC sold separately. See SIP price list for part number and price.

Quiet, Stable, Pure, and Enduring

The Orbital **POS - Precision Oscillator** can be used alone or combined with other Orbital products such as the MT25/40 - Mux/Tee or SP10 – 10MHz Splitter to provide the 10 MHz source to synchronize your entire system. See our **POP** and **PODM** brochures. You can lock the signals of your LNB, BDC, BUC, modem or VSAT to the same precise signal.

POS Features

Ovenized Oscillator (OCXO)

Orbital Research now has three OCXO Oscillators depending on your requirements:

1) Our standard offering for most applications
2) Our enhanced offering with better phase noise
3) Our Airborne offering with better immunity to vibration and a greater temperature range.

Functional

- Operates with LNBs, BDCs, VSATs, BUCs, and Modems
- Filters and conditions the DC power to eliminate extraneous signals coming in through the power supply.

Structural

- Machined from solid aluminum billet for strength & stability
- Blue Anodized finish for corrosion protection and excellent RF shielding/grounding
- Connectors are 'O' ring sealed for weather resistant operation
- RoHS & REACH compliant

As the POP is ovenized, it can draw as much as 350 mA during startup (about 15 minutes), as it heats to operating temperature.

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System Interface Product (SIP): POS (OCXO) - Specifications

ELECTRICAL SPECIFICATIONS

Parameter		Specification		
Oscillator Specs		**Standard**	**Enhanced**	**Airborne**
10 MHz Reference	Frequency	10 MHz		
	Output Level	2 dBm		
	Stability over Temperature	$\pm 5 \times 10^{-8}$	$\pm 5 \times 10^{-8}$	$\pm 1 \times 10^{-8}$
	10 year aging	$\pm 5 \times 10^{-7}$/year	$\pm 5 \times 10^{-7}$/year	$\pm 1 \times 10^{-7}$/year
	Temperature Range	0°C to +50°C	0°C to +50°C	-40°C to +80°C
	Phase Noise 10Hz 100Hz 1 kHz 10 kHz 100 kHz 1 MHz	-120 dBc/Hz -145 dBc/Hz -152 dBc/Hz -155 dBc/Hz -155 dBc/Hz -155 dBc/Hz	-120 dBc/Hz -145 dBc/Hz -158 dBc/Hz -160 dBc/Hz -160 dBc/Hz -160 dBc/Hz	-120 dBc/Hz -150 dBc/Hz -158 dBc/Hz -165 dBc/Hz -165 dBc/Hz -165 dBc/Hz
	Harmonics	<-45 dBc		
	Port-to-Port Isolation	30 dB		
	Power requirement	+12.5 to +18 VDC supplied through Oscillator DC input connector.		
	Current Drain	350 mA max during warm-up. 125 mA max after warm-up.		

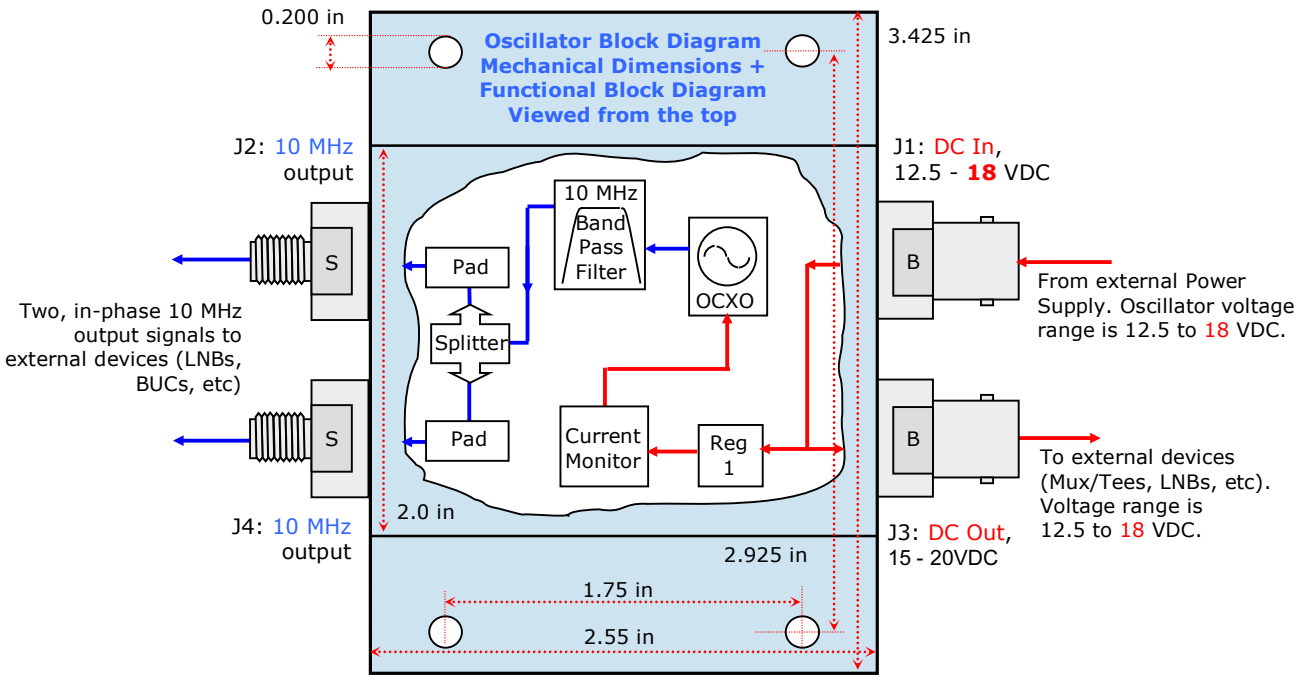
MECHANICAL SPECIFICATIONS

Size (case)	3.425(L) x 2.55(W) x 1.875(H) inches
Weight	15 oz
Paint / Color	Anodyzed Blue, MIL-STD-595

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	0°C to +50°C	0°C to +50°C	-40°C to +80°C
Relative Humidity	Up to 100% condensation and frost		
	RoHS & REACH		

System Interface Product: POS – Mechanical Diagram



PS-2 Switching Power Supply (not included with Oscillator)

See Orbital brochures for PS-1 & PS-2 Series power supplies.