



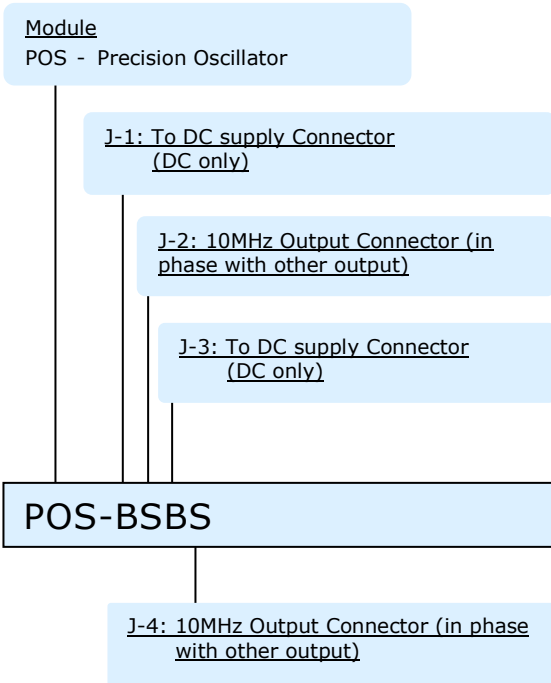
System Interface Products

POS - Precision Oscillator



10MHz Precision Oscillator

How to order a POS - Precision Oscillator



Connectors available:

J1, J3: DC Supply

B - BNC (preferred)
F - F
N - N

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** brochure. You can lock the signals of your LNB, BDC, BUC, modem or VSAT to the same precise signal. You can even combine it with a pair of Mux / Tees to lock both the horizontal and vertical polarity feeds to the same timebase. See our **PODM** brochure.

PO Features

Ovenized Oscillator (OCXO)

- Exceptionally low phase noise -160 dBc/Hz @ 1 kHz
- Exceptionally low drift, 0.05ppm, 0 to 50°C
- Exceptionally stable, $\pm 1 \times 10^{-9}$ per day after 30 days
- High output level for service as master system oscillator
- Sine wave purity, low harmonic content

Functional

- Will operate with LNBs, BDCs, VSATs, BUCs, and Modems
- Will filter and condition the DC power to eliminate extraneous signals coming in through the power supply.

Structural

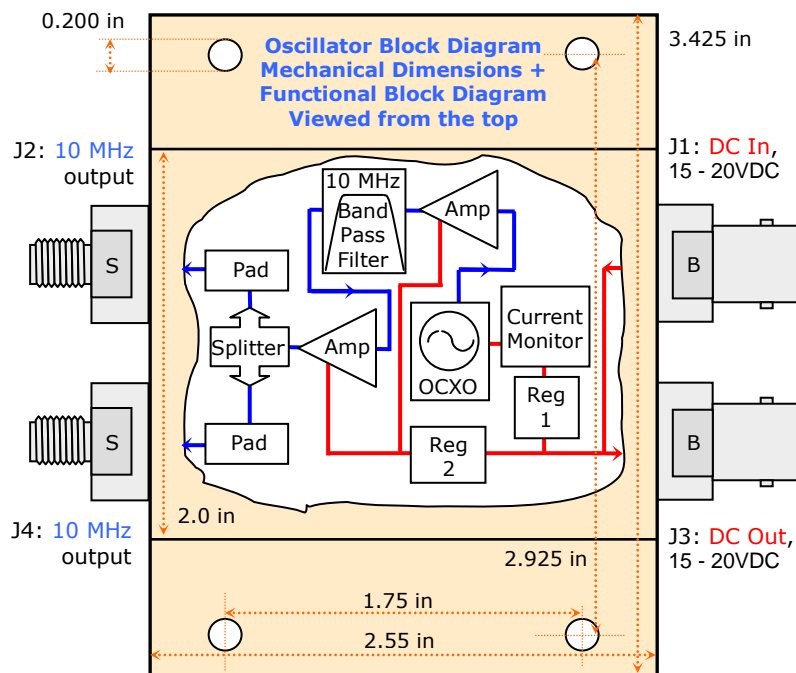
- Machined from solid aluminum billet for strength and stability
- Allodyne finish for corrosion protection and excellent RF shielding/grounding
- 'Back O Rack' mounting for ease of installation and lead dress (Reduces the mess of cables at the back of the rack and provides stability for cables)
- Connectors are 'O' ring sealed for weather resistant operation

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Blaine, WA
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System Interface Product (SIP): POS (OCXO) - Specifications



Electrical Specifications

10 MHz

Passband: 1-100 MHz (3 dB down)
Thru Loss: 0.2 dB 10 MHz to LNB port
Isolation: >90 dB 10 MHz to Rx port

DC

Filtering: Hash filter, low pass filter

10 MHz Oscillator

Frequency: 10 MHz
Output Level: J2: +9 dBm
J4: +9 dBm
Stability: $\pm 5 \times 10^{-8}$, 0 to +50°C
Aging: $\pm 1 \times 10^{-9}$ per day after 30 days
 $\pm 5 \times 10^{-7}$ per year after 180 days
Phase Noise: 10Hz -120 dBc/Hz
100Hz -145 dBc/Hz
1kHz -160 dBc/Hz
10kHz -165 dBc/Hz
100kHz -165 dBc/Hz

Power Specifications

Input DC Voltage: +15 to +20 V supplied via
DC input connector
Current Drain: 350 mA max (warm-up)
100 mA nominal
(after warm-up)

Mechanical Specifications

Measurements: Tolerance $\pm .005$ in.
Size (case): 3.425l x 2.55w x 1.125h in.
Size (with conn): 3.425l x 3.8w x 1.125h in.
Weight: 10 oz
Paint / Colour: Gold Allodyne finish
Mounting holes: 3/8" (5mm)
Accepts standard
rackmounting screws:
10/32 or 10/34

Environmental Specifications

Operating Temp: 0 to +50° Celsius
Relative Humidity: Up to 100% condensation
and frost

Power Supply (not included with POS)

See: PS1 brochure for North America
PS2 brochure for Global



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

Featuring an ovenized oscillator (OCXO), the Precision Oscillator has been designed specifically for the satellite industry. Its sturdy case, allodyned finish, small size and back-o-rack mounting system make it both enduring and easy to use. The Murray-style connectors guarantee the best possible connections for the life of the product.

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