

Orbital Master Oscillator System

Description

The Orbital Research Master Oscillator System (MOS) can be used alone or combined with other Orbital products such as the MT25/40 - Mux Tee, RPT - Redundant Power Tee or SP10 – 10MHz Splitter to provide the 10 MHz source to synchronize your entire system. See our MOM 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 MODM brochure.

J1 is a feedthrough from the DC in J3 so that you can send power to any components attached or adjacent to the MOS such as the components mentioned above.

J2 and J4 have an output level of +7 dBm for insertion into splitters to feed the rest of the system or, with an attenuator, input into a BUC, BDC or LNB.

Temperature Compensated Crystal Oscillator (TCXO)

- Great phase noise: -147 dBc/Hz @ 1kHz
- Excellent thermal stability: +/-1.5 ppm, 0 to +40°C
- Sine wave purity, low harmonic content
- Good aging: +/- 1 x 10⁻⁶ per day after 30 days

Functional

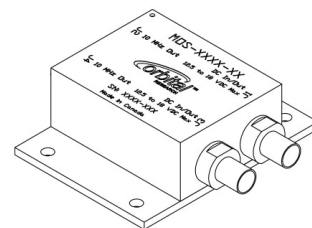
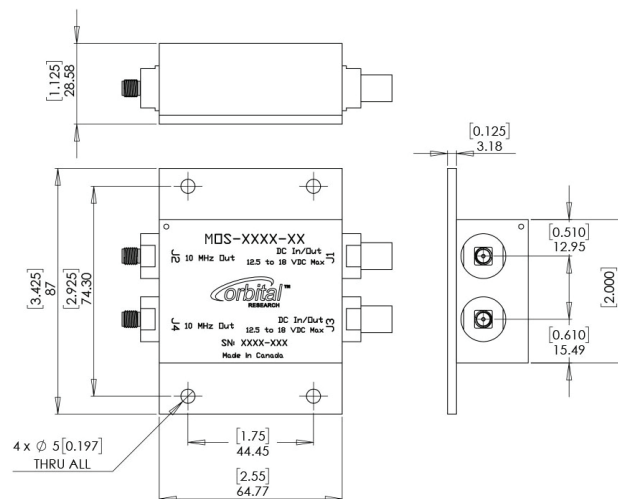
- Operate with LNBs, BDCs, VSATs, BUCs, and Modems
- Filters and conditions the DC power to eliminate extraneous signals coming in through the power supply.

Structural

- Machined from solid aluminum billet for strength and stability
- Anodized 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)
- Connectors are 'O' ring sealed for weather resistant operation
- RoHs & REACH Compliant



Mechanical Diagram



Orbital Master Oscillator System

Specifications

10 MHZ OSCILLATOR

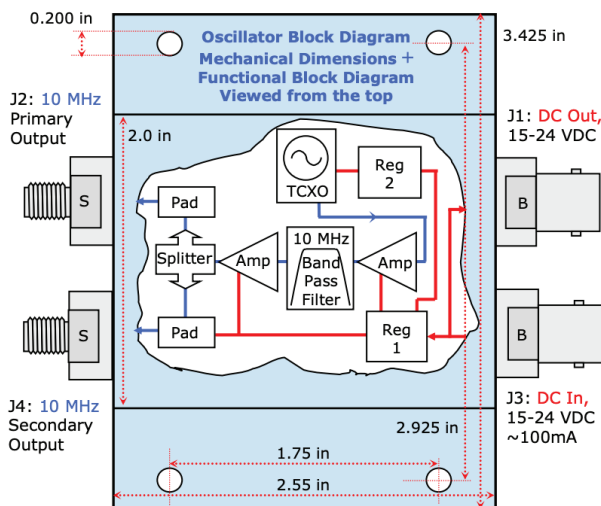
Frequency	10 MHz
Output Level	J2: +2 dBm (standard) J4: +2 dBm (standard) (can be set to min of 0.5dBm and max of 3.5dBm)
Stability	+/- 1.5 ppm, 0 to +40°C
Aging	+/-1 x 10 ⁻⁶ per day after 30 days +/-5 x 10 ⁻⁶ per year after 180 days
Phase Noise	100Hz -130 dBc/Hz 1kHz -147 dBc/Hz 10kHz -148 dBc/Hz 100kHz -148 dBc/Hz
2nd Harmonic	< -30 dBc

MECHANICAL SPECIFICATIONS

Measurements	Tolerance ±.005 in.
Voltage Interface	F, N, BNC
10MHz Interface	BNC, SMA or N
Size (case)	3.425l x 2.55w x 0.88h in.
Size (with conn)	3.425l x 3.8w x 0.88h in.
Weight	5 oz
Paint / Colour	Blue Anodized finish
Mounting holes	3/8" (5mm) Accepts standard rackmounting screws:10/32 or 10/34

RoHS & REACH Compliant

Block Diagram



Specifications are subject to change without notice.

ENVIRONMENTAL

Operating Temperature (deg C)	0 to +40
Humidity (%)	Up to 100% condensation and frost

POWER SPECIFICATIONS

Input DC Voltage	+15 to +24 V supplied via
Current Drain	approximately 100 mA

SWITCHING POWER SUPPLY (not included with Oscillator)

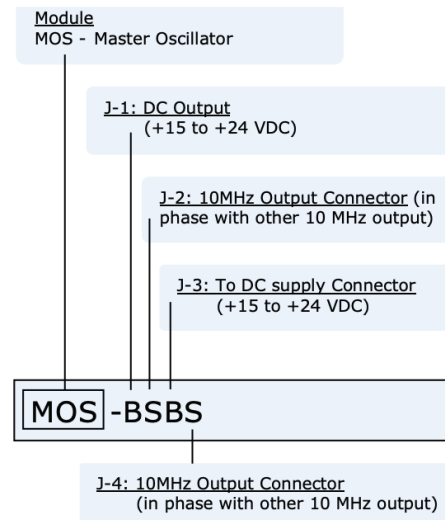
See:	PS1 brochure for N. America PS2 brochure for Global
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CONNECTORS AVAILABLE

J2, J4: 10 MHz	B - BNC (industry standard) S - SMA (recommended for outdoor use) N - N
J1, J3: DC Supply	B - BNC (preferred) S - SMA N - N T - TNC ft - feedthru

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

How to Order



v.230907