2099-2448 10MHz, 24V, and 48 V Source/Inserter, Redundant Power

The 2099-2448 10 MHz Source/Inserter is a 10 MHz, ± 0.01 ppm oven controlled crystal oscillator (OCXO) with circuitry to insert the 10MHz signal and DC voltage on L-band lines for an LNB and SSPB. Multi-function switches select LNB and SSPB DC Power, internal or External (Option -E) 10 MHz, and insertion of 10 MHz on the L-band lines. LEDs indicate DC power (green), Reference insertion (green), alarm (red), remote operation (yellow), and OCXO oven warm-up (yellow). The External Reference option (E) provides an external reference input which can be used to lock the internal 10 MHz source to a high stability external frequency reference or it may be inserted directly into the L-Band lines. For SSPB power, the user can switch between +24VDC @ 2.5A or +48VDC @ 4.2A DC insertion. Remote control allows remote configuration of front panel commands and monitoring LNB and SSPB voltage and current. Parameter selection and LNB and SSPB voltage and current appear on the LCD display. Connectors are BNC female for RF and 10 MHz insertion. Remote control allows remote configuration of front panel commands and monitoring LNB and SSPB voltage and current.

**EQUIPMENT SPECIFICATIONS**

--- 10 MHz Reference ---

**Output Characteristics (on L-band RF)**

- Frequency: 950 - 2150 MHz and 10 MHz
- Impedance: 50Ω/75Ω, 14 dB
- Stability: ± 0.01 ppm max over temp
- Aging: ± 0.001 ppm
- Aging: ± 0.1 ppm
- Warm Up: ± 0.1 ppm
- Warm Up: ± 0.01 ppm
- Tuning Adjust: ± 0.5 ppm

**Phase Noise @ Freq**

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>10 Hz</th>
<th>100 Hz</th>
<th>1kHz</th>
<th>10kHz</th>
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--- L-band Insertion ---

**RF Input/Output Characteristics**

- Frequency: 950 - 2150 MHz and 10 MHz
- Impedance: 50Ω
- Return Loss: >12 dB, -1.5 dB typ
- Insertion Loss: < 1 dB, -1.5 dB typ
- Frequency Response: ± 0.5 dB, 950 - 2150 MHz; ± 0.5 dB, 36 MHz BW

**SPPB1, SPPB2 DC Power Characteristics**

- Voltage/Current: SSPB +24 ± 2 VDC, 2.5 A, max. OR +48 ± 4 VDC, 4.2 A, max.
- Voltage/Current: LNB +24 ± 2 VDC, 0.5 A, max.
- Load Regulation: ± 5%

--- Chassis / Other ---

**Controls, Indicators**

- INT/EXT 10 MHz Select: FP Switch or M&C select; Ext. Yellow LED
- 10 MHz Insert Select: FP Switch or M&C select; Green LED
- SSPB, LNB Insert: FP Switch or M&C select; Green, rear Yellow LED
- SSPB, LNB Volts & Amps: Front panel display and M&C
- Power, Alarm, Ref.: Green LED; Red LED; Green LED
- Oven, Ext Ref, Remote: Yellow LED; Yellow LED; Yellow LED

**Other**

- RF Connectors: BNC, 50Ω (female)
- 10 MHz Connectors: BNC, 50Ω (female) (WORKS FOR 50Ω OR 75Ω)
- Alarm/Remote Connector: DB9 (female) - NO or NC closure on Alarm
- Size: 19 inch, 1RU chassis 1.75”H X 12”D
- Power, Redundant Std.: 100-240 ± 10% VAC, 47-63 Hz, 300 watts max

10°C to 40°C; Specifications subject to change without notice.

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