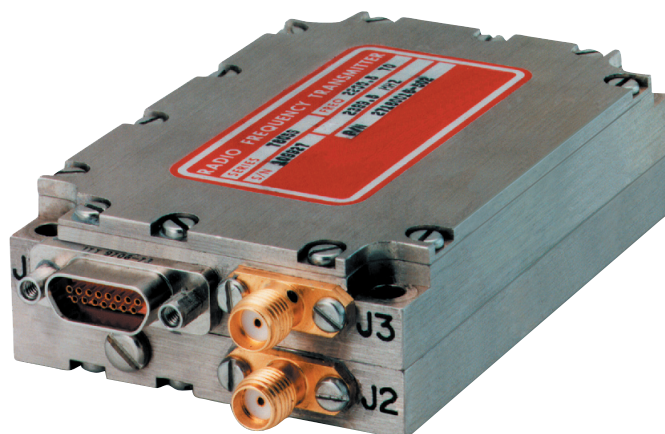


Product Bulletin

ST-800 S/L Series Wideband Telemetry Microwave Transmitters Airborne Telemetry Products



FEATURES

- Minimum Size and Weight
- Available in 2, 5, and 10 Watts
Minimum Power Output
- 2200 to 2400 MHz and 1435 to 1534 MHz
Frequency Range
- Wide Modulation Bandwidth Capabilities
- Meets latest IRIG-106 Standards
- Crystal Controlled Center Frequency

DESCRIPTION

The L-3 Communications Telemetry-East ST-800 S/L Series Microwave transmitters are designed for operation in aerospace environments where size and weight efficiency are critical. The ST-800 S/L Series are solid-state, crystal stabilized, true FM telemetry transmitters designed for transmitting wideband digital multiplex signals, video, TTL, differential TTL, and fully isolated (Opto-Coupled). These transmitters are designed for extremely reliable operation when subjected to the severe environmental flight conditions of missiles, space vehicles and aircraft.

The internal modules (modulator, series regulator, power amplifier, and filters) are housed in separate machined enclosures to maximize RF isolation. All units undergo rigorous environmental testing to insure reliable operation while meeting the specification requirements under worse case conditions.



communications

ELECTRICAL SPECIFICATIONS

Frequency Range:	E/S-Band 2200 to 2300 MHz E/S-Band 2300 to 2400 MHz D/L-Band 1435 to 1534 MHz
Frequency Selection:	The output frequency is selectable in 1 MHz steps over the desired frequency, with optional frequency selection available in 0.5 MHz and 0.25 MHz steps. Frequency is selected by input of binary code via a remote line.
Frequency Stability:	±0.002%
Power Output:	ST-802 S/L 2 Watts minimum ST-805 S/L 5 Watts minimum ST-810 S/L 10 Watts minimum

Antenna Compatibility

Output Impedance:	50 ohms
VSWR (load):	up to infinite to one
Open/Short Protection:	Yes, Internal Isolation

Modulation

Type:	True FM
Sense:	Positive
Input Impedance:	75 ohm nominal, with 30 pF shunt capacitance max. (10K ohm min, with 30 pF shunt capacitance available)
Frequency Response:	10 Hz to 6 MHz ± 1.5 dB (Response in excess of 10 MHz available). Video PreEmphasis (CCIR 405) optional
Deviation:	6 MHz peak
Deviation Sensitivity:	6 MHz/V rms (± 10% STD for 100 MHz BW)
Deviation Linearity:	2.0% at ±6 MHz deviation
Input Power	
Voltage:	28 ±4 Vdc
Current:	ST-802 S/L 0.8 A max ST-805 S/L 1.5 A max (w/ALC) ST-805 S/L 1.8 A max ST-810 S/L 3.3 A max

Reverse Polarity Protection:	Yes
Power Return:	Power return common to case
Over Voltage Protection:	Yes

ENVIRONMENTAL SPECIFICATIONS

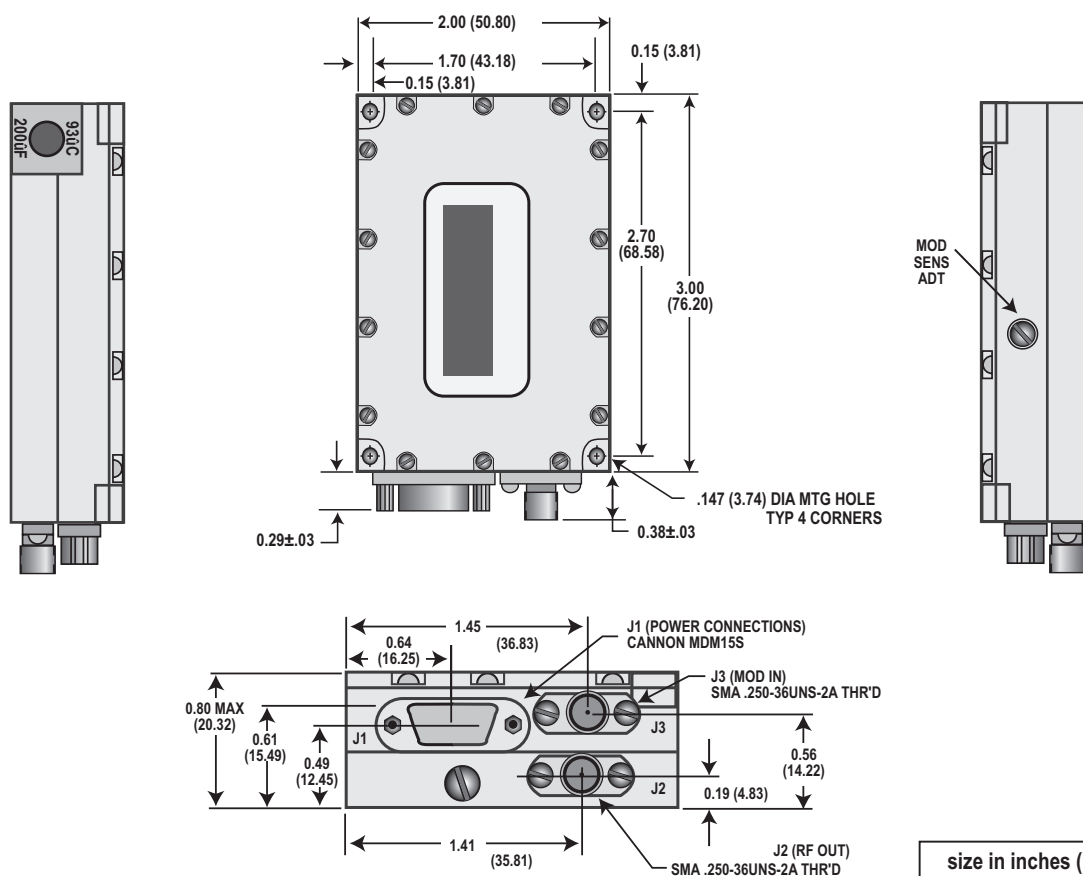
All performance specifications will be met under the following conditions.

Temperature:	-20°C to +70°C (-40°C to +85°C available)
Vibration: Sine	20g from 20 to 2000 Hz, 3 axis
Shock:	100g, 1/2 sine, 11 msec
Acceleration:	100g
Altitude:	Unlimited

MECHANICAL SPECIFICATIONS

Dimensions:	2" x 3" x 0.80" excluding connections*
Weight:	7 ounces max
Volume:	4.8 Cu. Inches
Mounting:	6-32 screws, 4 corners
Connectors:	
J-1 Power Pin Connections	MDM-15S 1 through 8 Freq. Selection 9-PWR RTN 10- SPARE 11- SPARE 12- SPARE 13- +28V 14- PWR RTN 15- PWR RTN
J-2 RF Output	SMA Female
J-3 Modulation Input	SMA Female

ST-800 S/L Series Outline Drawing



OPTIONS*

- Input Impedance
- Field Adjustable Deviation Sensitivity
- Deviation Sensitivity
- Extended Temperature Range
- Modulation Input on Power connector
- Other DC and RF Connectors Available
- Data rates to beyond 20 Mbits/sec with wider deviations and extended bandwidth
- Pre-emphasis for Video Transmission
- Remote Power On/Off Control
- 200 MHz Bandwidth at S Band

**NOTE: Options may include additional costs*

QUALITY CONTROL AND PRODUCT ASSURANCE

The L-3 Communications Telemetry-East ST-800 S/L Series transmitters are manufactured under strict Control procedures in accordance with the requirements of ISO 9001 and MIL-Q 9858. Each assembled unit is fully tested to a comprehensive acceptance test procedure which includes full performance testing at thermal extremes.

ORDERING INFORMATION

When ordering, specify model number and exact operating frequency in megahertz. For special applications or additional information, contact the L-3 Communications Telemetry-East Sales Department in Bristol, PA or your L-3 Communications Telemetry-East sales representative.

