ST-800 SL SERIES

SERIAL-LOADED/ WIDEBAND TELEMETRY MICROWAVE TRANSMITTER

The ST-800 Serial-Loaded (SL)/Wideband Microwave Transmitters are designed for operation in aerospace environments where size and weight efficiency are critical.

L-3 Telemetry & RF Products (L-3 T&RF) ST-800 SL and Wideband series are solid-state, crystal stabilized, true FM telemetry transmitters designed for transmitting wideband digital multiplex signals, video, TTL and differential TTL. These transmitters are designed with a standard serial communication port for programming and built-in test capabilities or 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 ensure reliable operation while meeting the specification requirements under worst-case conditions.

FEATURES

- Minimum size and weight
- Available in 2, 5 and 10 Watts minimum power output
- 2200 MHz to 2400 MHz
- Wide modulation bandwidth capabilities
- Meets IRIG-106 standards
- Crystal-controlled center frequency
- Center frequency programmable via serial communication port (RS-422 or RS-232)
- Frequency setting stored independently in a solid-state memory during power off conditions

OPTIONS (Options may incur additional costs)

- Input impedance
- Field-adjustable, deviation sensitivity
- Extended temperature range
- Modulation input on power connector
- Other DC and RF connectors available
- Data rates up to 20 Mbps
- Remote power on/off control
- 200 MHz bandwidth at S-Band
- Built-in test capability: Temperature, Forward power monitor, RF inhibitor

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SPECIFICATIONS

RF

RF Frequency Rang	E/S-Band: 2200 MHz – 2300 MHz E/S-Band: 2300 MHz – 2400 MHz
Frequency Selection	SL =500 kHz steps Wideband= Selectable in 1 MHz steps (0.5 MHz and 0.25 MHz steps available)
Carrier Stability	± 0.002%
Spurious & Harmonics	IRIG-106-compliant
RF Power Out	2, 5 or 10 W
RF Output Impedance	50 Ω nominal, open short circuit protection

MODULATION

Type	True FM
Sense	Positive
Input Impedance	75 Ω nominal, with 30 pF shunt capacitance max (10K Ω min, with 30 pF shunt capacitance available)
Frequency Response	100 Hz to 6 MHz ± 1.5 dB (Response in excess of 10 MHz available) Video pre-emphasis (CCIR 405 optional
Deviation	6 MHz peak
Deviation Sensitivity	6 MHz / Vrms (root-mean-square) ± 10% STD (unless specified)
Deviation Linearity	2.0% max

POWER

Power supply	28 ± 4 VDC
Current Consumption (total) Over Operating Voltage and Temperature Range	3.3 A max @ 10 W 1.8 A max @ 5 W 1.5 A max @ 5 W (with Automatic Level Control) 0.8 A max @ 2 W
Transient Suppression	Survives 10 µsec pulse at ±200 V per MIL-STD-461
Reverse Polarity Protection	No damage from application of reversed input bias to -40 V, indefinite period

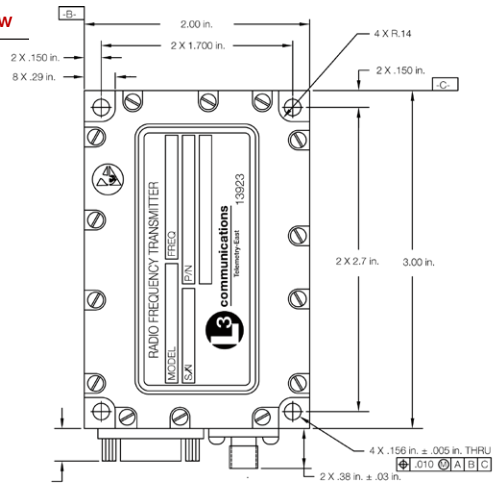
MECHANICAL

Size (excluding connectors)	2.0 in. L x 3.0 in. W x 0.8 in. H
Weight	6 oz. ± 1.0 oz.

ENVIRONMENTAL

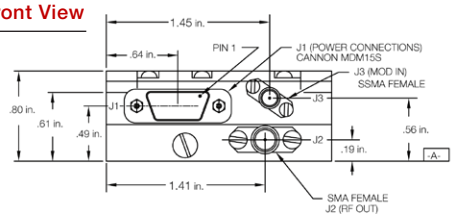
Operating Temperature	-20 °C to +70 °C (-40 °C to +85 °C optional)
Sinusoidal Vibration	20 g, 20 to 2000 Hz, 3 axes
Shock	100 g peak, ½ sine, 11 ms
Acceleration	100 g, 3 axes
Altitude	Unlimited
EMI	IRIG-106 and MIL-STD-461

Top View



Side View

Front View



L-3 Telemetry & RF Products

9020 Balboa Avenue
San Diego, CA 92123

Tel: 858.694.7500
800.351.8483

1515 Grundy's Lane
Bristol, PA 19007

Tel: 267.545.7000

Email: Sales.TRF@L-3com.com
L-3com.com/TRF

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