

CSS-905A

S-BAND TELEMETRY TRANSMITTER



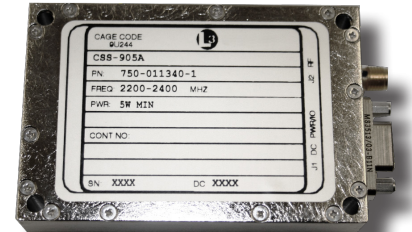
The next-generation software defined CSS-905A miniature S-Band multi-waveform telemetry transmitter features small size, light weight, and excellent thermal design for today's critical airborne and low cost spaceborne applications.



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L3 Telemetry & RF Products

(L3 T&RF) CSS-905A delivers a minimum output power of 2 , 5 or 10 W with data rate capability to 27 Mbps. The RF output is also fully protected from high VWSR loads as well as short and open conditions.



This unit also provides new breakthroughs in price and performance with simplified internal construction and multi-waveform & encoding capability. Fully synthesized channel selection is offered via factory fixed or external user control. Standard off-the-shelf waveforms are available or may be customized to user needs. Improved capabilities are provided while still meeting or exceeding the most stringent operational requirements.

The transmitter may be provided with the common analog and digital modulation waveforms as well as user defined custom implementations. Digital interfaces are provided as well as an IRIG 106-11 serial control and status interface.

This transmitter provides MIL-SPEC quality and environmental capability, while maintaining compliance with IRIG 106-11 and tailored for MIL-STD-461F EMI requirements.

FEATURES

- Multimode - supports ARTM Tier 0, I and II (PCM/FM, SOQPSK, Multi-hCPM)
- Filtered RF output to avoid GPS and FTR desensitizing/jamming
- All components derated for high-reliability
- Operation to 27 Mbps for Tier I and II and to 13.5 Mbps for PCM/FM
- Frequency agile over full S-Band
- 2 W, 5 W or 10 W RF output options
- Serial control and status to IRIG 106-11 over RS-232
- Current and heritage transmitter (CSS-905) on multiple munitions test programs
- Ideally suited to test flights with difficult environmental requirements
- IRIG 106-11 interface compliant
- High efficiency power supply and PA to minimize power dissipation

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SPECIFICATIONS

FUNCTIONAL

Frequency Set	2200 to 2400, 0.5 MHz step
Frequency Selection	Serial, J1
Carrier Stability	±0.002%
RF Output Power	2 W, 5 W or 10 W
Output Load VSWR	50 Ω nominal, no damage into open/short
Type	Multimode support (PCM/FM, SOQPSK, Multi-hCPM)
Coupling	DC
Input Impedance	100 Ω differential

POWER REQUIREMENTS

Supply Voltage	21-36 V
Supply Current	700 mA Typ 5 W 1.2 A Typ 10 W
Grounding	Power and modulation returns common to chassis
Reverse Polarity Protection	No damage from application of reversed input bias to -40 V, indefinite period

ENVIRONMENTAL

Operating Temperature	-40 °C to +85 °C
Storage Temperature	-54 °C to +95 °C
Random Vibration	28 g rms
Shock	100 g peak ½ sine, 0.5 msec
Acceleration	100 g
Humidity	MIL-STD-810 Method 507
Altitude	Unlimited
EMI	IRIG 106-11 and tailored MIL-STD-461F at 28 VDC

MECHANICAL

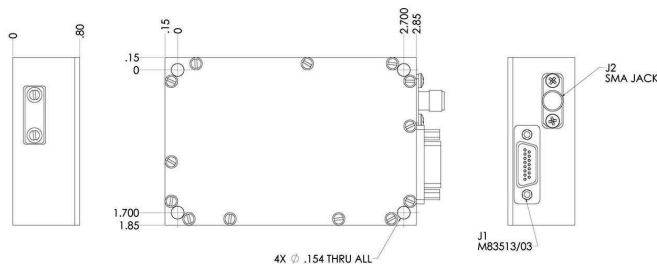
Volume	4.0 cu. in. nominal
Size	3.0" L x 2.0" W x 0.8" H in. (see outline drawing below)
Weight	5.8 oz. maximum

OPTIONS

Switchable power levels

Unit Pin Functions

PIN	Signal Name	Description
J1-1	+ 28 Vdc	Power
J1-2	DC RTN	Power Return (Chassis)
J1-3	N/C	No Connection
J1-4	MOD DataCLK (-) RS-422	RS 422 MOD Data Clock (-)
J1-5	MOD Data (-) RS-422	RS 422 MOD Data (-)
J1-6	N/C	No Connection
J1-7	RS-232 Serial Control	Tx Configuration
J1-8	RS-232 Serial Status	Tx Status
J1-9	+ 28 Vdc	Power
J1-10	DC RTN	Power Return (Chassis)
J1-11	N/C	No Connection
J1-12	RF On/Off	RF Output Control
J1-13	MOD Data (+) RS-422	RS 422 MOD Data (+)
J1-14	Serial Ground	Serial Ground (RS-232)
J1-15	MOD Data CLK (+) RS-422	RS MOD Data Clock (+)



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