

TC-100L

SATCOM 100 watts maximum with LNA (Lightweight)

**Reliable,
Compact
Power
Amplifier**



The **Talla-Com TC-100L SATCOM PA** provides up to 100 watts PEP and average RF output power in 8 selectable steps the 292 to 318 MHz frequency range for UHF SATCOM and DAMA applications. The TC-100L HPA will operate with the AN/PSC-5, AN/PRC-117F and LST-5 Transceivers with only an RF interface.

Low Noise Preamp

The TC-100L HPA provides a low noise preamp for the 243 to 270 MHz SATCOM receive frequency range.

Compact, Reliable

This very compact, reliable amplifier is designed to operate remotely at the antenna using a DC Power Inserter (Bias T).

Features

- 292-318 MHz transmit mode
- 243-270 MHz receive mode
- Selectable, 8 steps; 10 to 100 watt output power
- 25 dB gain preamp with <3 dB noise figure
- DC supplied over coax capable
- DAMA compliance
- Multiple mounting configurations
- Size: 5.5"W x 3"H x 12"D
- Weight: <7 lbs.

**Lightweight
Compact Design**

RS-232/BCD Control

**Rugged Black
Anodized Chassis**



Technical Description

The Talla-Com TC-100L SATCOM PA is a 100 watt power amplifier for the SATCOM uplink band. The TC-100L also provides a low noise, high dynamic range 25 dB gain preamp (adjustable) in the SATCOM downlink band.

The TC-100L HPA is designed for continuous operation in a tactical environment. It is housed in a rugged, weatherproof chassis and is capable of operation in vehicles, shelters, aircraft, transit cases and racks or on the ground at the base of the antenna mast.

The TC-100L HPA is compatible with only an RF connection to standard SATCOM radios having a 2 to 20 Watt RF output. ALC maintains the output to the selected level.

DC power may be supplied through the RF cable using a Bias T or through an external connector.

Physical Description

Height	3.0 in.
Width	5.5 in.
Depth	12.0 in.
Weight	<7 lb.
Finish	Black anodize

Environment & EMI Specifications

MIL-STD-810
ADS-37A-PRF
MIL-STD-704
MIL-STD-461
MIL-STD-464

* Specifications subject to change without notice 4.14.05

Electrical Specifications

Frequency Range

TX	292 to 318 MHz
RX	243 to 270 MHz

Duty Cycle Continuous

RF Input Power 2 to 20 watts

RF Output Power 10 to 100 watts

Transmit Noise Floor -140 dBc/Hz
@ 10 MHz offset with an in out noise floor equal to 153 dBc/Hz

Out of Band Spurious -70 dBc

Input Impedance 50 Ω , VSWR < 2.0:1

Output Load Impedance 50 Ω

Output into VSWR 4:1 Max with 1 dB degradation

RX Preamp Gain 25 dB gain (adjustable)

RX Preamp Noise Figure <3.0 dB

Bypass Insertion Loss 0.5 dB typical 30-512 MHz

Primary Power 22-32 VDC

Power Consumption 350 watts max. – TX mode
10 watts max. –RX mode
0 watts Bypass mode

