

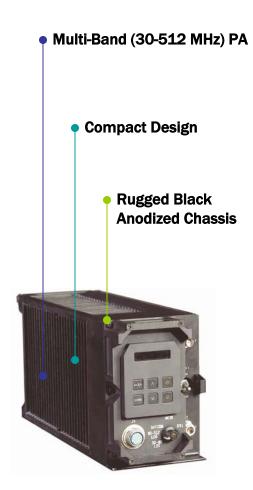
The **Talla-Com TC-150M Multi-Band PA** supports voice and data communications on V/UHF/SATCOM/DAMA and ECCM waveforms. All in a lightweight, hermetically sealed, rugged package, supporting 100% duty cycle, convection cooled, Multi-Band 30 - 512 MHz, 50W LOS and 150W SATCOM/DAMA.

### Unique

The TC-150M unique RF interface allows Multi-Band radios to operate seamlessly under all stressing waveforms without the requirement of a data interface for frequency tuning information from the radio. This simplifies integration and the concern of supporting operation with different types of radios.

#### Features

- 30-512 MHz frequency coverage
- Selectable output power
- Supports multiple ECCM wave forms
- · Full function remote control interface
- Internal Bias T capability
- DC supplied over coax capable
- AM-7175/URC form fit
- DAMA compliance
- Internal RX preamp (operator selectable)







# TC-150M

### Technical Description

The Talla-Com TC-150M Multi-Band Power Amplifier (MBPA) is a 150-Watt Maximum Power Amplifier in the SATCOM uplink band and a 50-Watt Power Amplifier in the LOS mode over the entire 30 to 512 MHz frequency range.

The TC-150M Multi-Band PA is designed for continuous operation in a tactical environment; it is housed in a rugged, waterproof case and is capable of operation in vehicles, shelters, transit cases, racks or on the ground at the antenna base.

The TC-150M Multi-Band PA requires only an RF connection, to standard Multi-Band and SATCOM R/Ts with a nominal 10 watt RF output. ALC maintains the output to the selected level.

The power amplifier is compliant with MIL-STD-188-181A, MIL-STD-188-182A and MIL-STD-188-183A.

DC Power may be selected to provide an output to operate a remote Rx Preamp taking the place of a legacy standalone Bias T.

#### **Physical Description**

 Height
 7.0 in.

 Width
 5.0 in.

 Depth
 15.0 in.

**Weight** <15 lb. (3.6 kg.)

Finish Black anodize

Chassis Material Aluminum 6061 T-6

# **Environment Specifications**

Operating Temperature -40°C to +45°C

Non-operating Temperature -46°C to +71°C

Altitude

Vibration

 Operating
 20,000 ft.

 Non-operating
 40,000 ft.

Humidity 100% Condensing

Leakage 1 meter for 30 minutes

Random Vibration 10 Hz to 2000Hz,

3 axis

Operating Shock 40G half sine in 11ms in 3 axis

MIL-STD-810, MIL-STD-461, MIL-STD-704, MIL-STD-1275

\* Specifications subject to change without notice 4.14.05

## Front Panel Indicators/Control

**Full Function Key Panel Control** 

Remote Control Interface RS-232

Power Level and Fault Level Indications for the Following (Overtemp, Power Supply, RF Input,

Alphanumeric LED Display DC Input, Bias T and Out of Band)

#### **Electrical Specifications**

**General Characteristics** 

 Frequency Range
 30 - 512 MHz

 Duty Cycle
 Continuous

 Input Impedance
 50 Ω Nominal

**Transmit Mode Characteristics** 

**RF Input Power LOS** 10 W-1/3 dB (8W-20W) for full range power

RF Input Power SATCOM 20 W-2/5 dB (13W-22W) for full rated power

**RF Output Power** 

 LOS
 50 watts

 SATCOM
 100 watts

 SATCOM Special
 150 watts

 Output into VSWR
 4:1 Max

 Out of Band Spurious
 -70 dBc

TX Noise Floor -160 dBc/Hz@+5% from carrier

Noise Spectral Density 130 dBm/Hz Max

RF Input Sense; TX Mode=1W-25W;

PTT RX Mode:<200mW

**Receive Mode Characteristics** 

SATCOM Frequency Range 240-270 MHz

Pre-Amp Gain 20 dB Min

Noise Figure 2.5 dB Typical

PA Bypass Insertion Loss 0.6 dB Typical

PA Bypass Impedance 50 Ω Nominal, 2:1 VSWR MAX

**Primary Power** 

Voltage 24-30VDC, 28-30VDC SATCOM

 Current
 15 A Max

 RX
 30 watts Max

 TX
 420 watts Max

