

### 50/75 WATT MULTIBAND RF AMPLIFIER



The **TCR-MBA-50v2** is a Next Generation RF Power Amplifier (PA) designed to enhance communications range for existing and emerging handheld and manpack radios. The PA is designed for use with wideband and traditional narrowband waveforms. Multiple installation scenarios are supported including vehicular, airborne, maritime, man-portable, or fixed-station applications with user-configurable antenna ports. The PA can be powered from a single BA-5590 battery as well as 12/24 VDC vehicle power and commercial power supplies.

**Tricom Research** leads the industry in performance and flexibility. The **TCR-MBA-50v2** utilizes two multi-pin connectors to support RS-485, USB, and Ethernet communications with end-user devices and optional Tricom accessories such as the Bias-Tee and Remote Face Plate. The intuitive menu driven user interface provides full local control and status via an NVG compatible display.

**Part #: 11000-00882, TCR-MBA-50v2**

### FEATURES

- Transmit amplification for the 30-512 MHz frequency range
- Five co-site filtered receive bands: 30-512 MHz, 30-118 MHz, 118-174 MHz, 174-512 MHz, and 240-270 MHz
- Low Noise High Dynamic Range Receive Pre-Amplifier (LNA) for all bands
- Three user-configurable antenna ports: Line of Sight (LOS), SATCOM (SAT), Wideband (WB)
- 30 MHz - 2.7 GHz bypass path to all antenna ports
- Carrier Detect Keying and Automatic Frequency Detection
- UHF SATCOM, DAMA/IW
- SINCGARS, HAVEQUICK II, and SATURN
- ANW2C and SRW Wideband Networking
- Tactical Waveforms mode for advanced waveforms
- Advanced Special Communications Mode (ASCM)
- RS-485, USB, and Ethernet connectivity for end-user devices and optional Remote Face Plate and Bias-Tee
- Simple, three button menu-based user interface with Night Vision Goggle (NVG) compatible display
- MIL-STD-810G, MIL-STD-461, MIL-STD-464 (Near Strike Lightning)
- Excessive temperature, voltage, and current protection

## RF SPECIFICATIONS

### RECEIVE BANDS WITH CO-SITE FILTERING

VHF LOW	30-118 MHz
VHF HIGH	118-174 MHz
UHF	174-512 MHz
VHF/UHF	30-512 MHz
SATCOM	240-270 MHz

### TRANSMIT HARMONIC SUPPRESSION

ALL BANDS	30-512 MHz
SATCOM	290-320 MHz

### SUPPORTED WAVEFORMS

VHF LOW	AM, FM, SINCGARS
VHF HIGH	AM, FM
UHF	AM, FM, WIDEBAND (ANW2C, SRW), TACTICAL WAVEFORMS, HAVEQUICK, SATURN
VHF/UHF	AM, FM
SATCOM	DAMA, IW, ASCM

### BYPASS (LOS, WB, SAT)

Typical Insertion Loss	30 MHz - 1 GHz, 1 dB
	1-2 GHz, 1.5 dB
	2-2.7 GHz, 4.5 dB

### ALL MODES

RF Power Input	1-5 Watts (10W without damage)
RF Power Output	Battery Config. (reduced current): 10, 15, 20W
	Standard Config.:
	12-22 VDC: 10, 15, 20W
	22-28 VDC: 10, 15, 20, 35, 50W and 75W (SATCOM Burst Mode)
Receive Gain	15 dB, 3.5 dB Noise Figure



## GENERAL SPECIFICATIONS

Immersion	1 meter
RADIO/LOS/SAT/WB Connectors	TNC female (immersion rated without cap)
DC Connector	MS3112E10-6P
AUX 1 Connector	5 pin Fischer (RS-485)
AUX 2 Connector	9 pin Fischer (RS-485, USB, Ethernet)
Protection	High temperature fold back, High VSWR
	High voltage, DC input
	Reverse polarity, DC input
	Near Strike Lightning
DC Off	Bypasses RF to LOS antenna port
Operating Temperature	-20°C to +60°C
Cooling	Natural convection
External Finish	Black anodize
Dimensions	2.5" H x 3.5" W x 8.15" D (including connectors)
Weight	3.7 lb

