

25/50 WATT UHF AND L-BAND RF AMPLIFIER



The **TCR-U/L-50** Power Amplifier (PA) evolved from the widely fielded TCR-MBA-50v2 to meet the demands for increased communication range of existing and emerging handheld and manpack radios utilizing UHF and L-Band wideband waveforms. It shares the same footprint as the TCR-MBA-50v2 to support vehicular, airborne, maritime, man-portable, or fixed-station applications with user-configurable antenna ports.

Tricom Research leads the industry in performance and flexibility. The **TCR-U/L-50** supports RS-485 and USB 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 #: 11000-00927, TCR-U/L-50

FEATURES

- Transmit amplification for the 225-450 MHz, 1.25-1.45 GHz (L1), and 1.75-1.85 GHz (L2) frequency ranges
- Three co-site filtered receive bands: 225-450 MHz, 1.25-1.45 GHz, and 1.75-1.85 GHz
- Low Noise High Dynamic Range Receive Pre-Amplifier (LNA) for all bands
- Two automatic switching antenna ports: UHF and L-Band
- Active and DC Off/Failsafe L-Band Bypass
- Carrier Detect Keying and Automatic Frequency Detection
- ANW2C and SRW Wideband Networking
- Tactical Waveforms mode for advanced waveforms
- RS-485 and USB 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

UHF	225-450 MHz
L1	1.25-1.45 GHz
L2	1.75-1.85 GHz

TRANSMIT BANDS

UHF	225-450 MHz
L1	1.25-1.45 GHz
L2	1.75-1.85 GHz

TRANSMIT HARMONIC SUPPRESSION

Designed to meet MIL-STD-461 CE-106

SUPPORTED WAVEFORMS

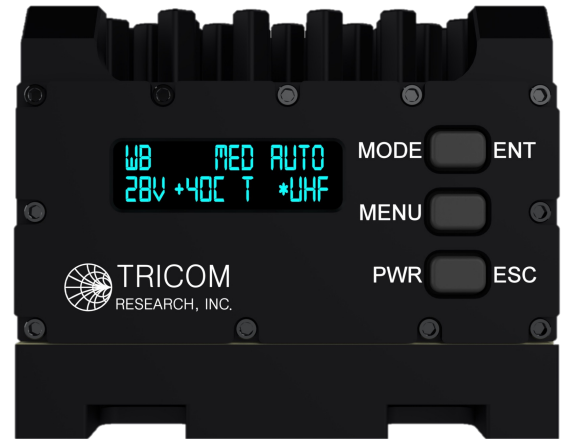
ANW2C, SRW, TACTICAL WAVEFORMS

BYPASS TO L-BAND ANTENNA

Typical Insertion Loss UHF 1.75 dB, 1.0-2.0 GHz 2.5 dB, 2.0-2.6 GHz 3.0 dB (typical)

ALL MODES

RF Power Input	1-5 Watts (10W without damage)
RF Power Output	LOW, MED, HI (UHF 25, 35, 50W; L-Band 10, 15, 25W)
Receive Gain	6 dB
Typical Noise Figure	UHF 3.5dB, L1 4.5 dB, L2, 5.5 dB



GENERAL SPECIFICATIONS

Immersion	1 meter
RADIO/UHF/L-BAND Connectors	TNC female (immersion rated without cap)
DC Connector	MS3112E10-6P
AUX Connector	9-pin Fischer, USB and RS-485 (future)
Operating Voltage	24-28 VDC recommended with reduced power output operation < 22 VDC
Protection	High temperature fold back, High VSWR High voltage, DC input Reverse polarity, DC input Near Strike Lightning
DC Off	Bypasses RADIO to L-BAND antenna port
Operating Temperature	-20°C to +60°C
Cooling	Natural convection
External Finish	Black anodize
Dimensions	2.85" H x 3.5" W x 8.15" D (including connectors)
Weight	4.0 lb

