

# 11-54

## VHF Power Amplifier

Aimed at increasing the range and distance of both paging and telemetry networks, the 11-54 VHF power amplifier offer up to 25W output from an input of only 3W.

The 11-54 power amplifier operates over the frequency range 138-162MHz and with 4-5 watts input it will deliver 25 Watts. It has a switching bandwidth of  $\pm 5$ MHz with 20 Watts minimum output. Field tuning to specific frequencies is possible using a tuning tool through access holes in the case.

The power sense operates with a minimum of 3 watts input and switches both the power and aerial relays to reduce standby current. The 11-54 will operate satisfactorily with down to 400mW drive with the PTT connection grounded to constantly enable transmit mode.

A 2dB, 50 $\Omega$  input matching pad allows for connection to a wide range of driving devices without the risk of instability caused by mismatching. In the receive mode it will pass a receive signal with less than 1dB attenuation. The 3-stage filter attenuates spurious emissions to less than -30dBm.

The 11-54 is protected against accidental power connection reversal.



# Technical Specification

## 11-54-0000 – 25-Watt VHF Power Amplifier



|   |  |
|---|--|
| Frequency Range   | 138-162MHz   |
| Frequency Selection   | Externally field tuneable  |
| Power Supply  | +13.8V typical (11 to 15 VDC range)  |
| Power Consumption   | Standby: 4mA<br>Normal Operation: 4A<br>Maximum: 5A @ 25W output   |
| Transmit Power  | 25 Watts @ 5W input  |
| Transmit Duty Cycle   | 50% at 25 Watts  |
| Power Input   | PA Receiver Switching = 3W min<br>PA Only = 0.4W min for 10W output typical  |
| Switching Bandwidth   | PA Receiver Switching = $\pm 5$ MHz, 20W min with 4W input<br>PA Only = $\pm 5$ MHz, 20W min with 4W input             |
| Transmit Enable   | PA Receiver Switching = Power sense circuit operates relay<br>PA Only = Ground PTT, 3mA source                         |
| Connectors  | PTT: 2-way pluggable terminal block (supplied)   |
| Power Connector   | 2-way pluggable terminal block (supplied)  |
| RF Connector  | 50 $\Omega$ BNC (both Input and Output)  |
| Environmental Protection  | Not suitable for outdoor use and should be protected from adverse environmental conditions                             |
| Operating Temperature   | -10°C to +60°C (+14°F to +140°F)   |
| Indicators  | Power LED (Green)<br>- Solid On = Normal Operation<br>Status LED (Red)<br>- Off = Receive mode<br>- On = Transmit mode |
| Weight  | 400g   |
| Enclosure Dimensions  | 100mm x 130mm x 30mm (W x D x H)   |
| Enclosure Material  | Extruded aluminium   |
| Colour  | Matt Black   |
| Type Approvals  | AS 4295: 1995 (RF)   |
| NB: All specifications and applications are indicative only and subject to change without prior notification. |  |