POWER SERIES 1
250W 450-470MHZ RF POWER AMPLIFIER
USER MANUAL

1. GENERAL DESCRIPTION

The Power Series 1 250W, 450-470MHz Power Amplifier is a high power amplifier (PA) that incorporates LDMOS technology to provide high efficiency and rugged operation. It is developed for paging or trunking application. The PA features various alarms and protection circuitry, Automatic Level Control (ALC) and cooling fans.

2. INSTALLATION

Make sure the PA's output port is appropriately terminated before applying any RF input signal.

Connect the RF input signal to the PA's input port labeled RF IN. Connect the PA's output port labeled RF OUT to the optional RF Bypass Relay Module or an antenna. Connect a DC power supply source to the connector labeled + -. Apply the required DC voltage (26-28V, 810W). After going through an initialization state, the PA's DC POWER LED (green) and RF INPUT LED (red) should be on. Apply the RF input signal (25-50W, 450-470MHZ). RF INPUT LED should turn off. TX ON LED (green) should turn on. The PA is now transmitting. Monitor the RF output. Adjust the RF output level, via the Power Out Adj pot from the front panel for 250W.

3. SPECIFICATIONS

Electrical

Frequency Range:	450-470 MHz
Output Power:	250 Watts (max)
RF Output Power Dynamic Range:	3dB (min) (125 Watts)
ALC Settling Time:	100ms max to within ± 1dB of final value
Input Power:	25 Watts (min) 35 Watts (nominal) 50 Watts (max)
Input Return Loss:	-14.0 dB (max)
Harmonics & Spurious:	-70dBc (max)
Stability:	Under 3:1 VSWR
DC Supply Voltage:	26-28 V
Input DC Power:	810 Watts (maximum)

RF Load VSWR:	Full power at better than 2:1 VSWR

Environmental

Operating Temp:	-30 to 45°C
Humidity:	0-95% relative humidity, no condensing
Operating Altitude:	0-12,000 feet

Mechanical

Cooling Fan:	Internal fan, front to rear