



DRT4095- Broadband Amplifier

Transmit Power for Software Defined Radio

DESCRIPTION

The DRT4095 is a portable and rugged high power amplifier designed to complement DRT's line of transmit modules. The amplifier system is operated from an external 20 to 36 VDC power source and controlled through an RS-232 link from a computer or a DRT4041 transmit exciter module control interface. The DRT4095 amplifier system contains amplifiers that provide operation from 25 MHz to 3000 MHz with maximum output capabilities ranging from 20W to 100W. There are three RF inputs, one for each frequency range, and a common RF input that can be switched to any one of the three input band ranges. Three outputs are provided that correspond to the three bands. Only one amplifier can be enabled at a time and fast on/off switching is provided by three gate pins on the control connector. The system uses the latest in power amplifier technology to provide the following capabilities:

- Frequency coverage of 25 to 3000 MHz.
- RF output levels:
 - 100 W maximum from 25-400 MHz
 - 50 W maximum from 400-1000 MHz
 - 20 W maximum from 1000-3000 MHz
- Temperature, voltage and forward and reverse power monitoring.
- Operation from a DC power source or an AC source with an external adapter.
- Control from a Windows PC or a DRT4041 module control interface.

The One
Measure for
Wireless
Performance

SPECIFICATIONS

Parameter	Specification	Comment
Frequency Range (3 bands)	1. 25 – 400 MHz 2. 400- 1000 MHz 3. 1000-3000 MHz	
RF Output Power	100W= +50 dBm (25-400 MHz) 50W= +47 dBm (400-1000 MHz) 20W= +43 dBm (1000-3000 MHz)	
Gain	45 dB typical (25-400 MHz) 45 dB typical (400-1000 MHz) 50 dB typical (1000-3000 MHz)	
Gain Flatness	+/-0.5 dB max	Over any 30 MHz band
Load Toleration	No damage for any load, including short and open	
Input/Output Impedance	50 ohms	
Input VSWR	2:1 max	
Output VSWR	2:1 max	
Voltage Supply	20 - 36VDC	
DC Power Consumption when RF P _{out} = 100W	400W max	
Operating Temperature	0 to +50°C min (+32 to +120°F)	
Intermodulation	-15 dBc max	Two tone levels backed off 3dB each from rated output power
Harmonics	-15 dBc max	Single output tone at rated output power
Size	15" x 13" x 3" (38.1cm x 33cm x 7.6 cm)	
RF Input/Output connectors	N	
Power/Control connectors	Power: 4-pin Lemo Control: 9-pin D-sub	
Monitoring	Forward/ reverse power Temperature DC voltages	Dual directional couplers provided to monitor each amplifier power.
Weight	17 lbs	
Control	Separate gate on/off for each amplifier RS-232	RS-232 provides control and access to unit model number, serial number, temperature sensor data, DC voltage readings and forward/ reverse power measurements

Standard system ships with:

- DRT4095 amplifier unit
- User-friendly software
- Control cable
- Hard PVC case with sturdy impact foam cutouts
- AC/DC power adapter
- Power cables

Options:

- Fully configured Laptop PC (Office or Ruggedized Model)
- Batteries
- Transmit Antenna

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