HPA-200

VHF-UHF High Power Amplifier

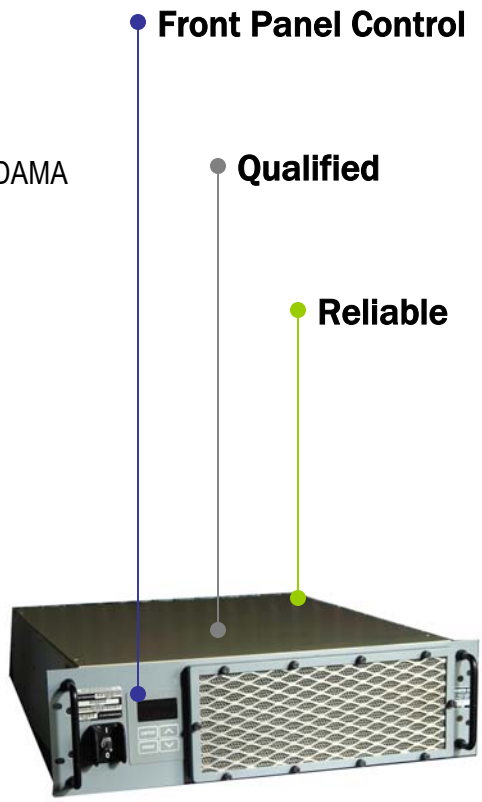
The **Talla-Com HPA-200 VHF-UHF High Power Amplifier** provides 200 watts PEP and average power output over the entire 30 to 400 MHz frequency range. The amplifier provides highly reliable, continuous duty cycle communications for existing and future shipboard, fixed, and transportable systems.

Compatible

The HPA-200 also supports voice and data communications and is fully compatible with the requirements of MIL-STD-188-181, -182, and -183 DAMA and 203-3 Link 4A operating requirements.

Features

- 30 MHz to 400 MHz frequency coverage, 200 watt PEP and average
- Remotely adjustable power output for DAMA compliance
- Supports SINCGARS, HQI, HQII, and SATURN ECCM waveforms
- Built-in agile, high power, low pass filtering
- Supports AM, FM, FSK, PSK, and DAMA waveforms
- Front panel/local control and monitor
- Remote control via high speed serial asynchronous interface
- Built-In-Test (BIT) to the SRU level
- Removable front panel dust cover and EMI shield
- First line maintenance with no special tools.
- MTTR < 0.5 hour



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TALLA-COM

HPA-200

Product Details

Technical Description

The HPA-200 is a 200 watt PEP and average output power amplifier. The unit is enclosed in an EMI and RFI shielded, 5.25 inch high, 19 inch wide rack mount chassis. HPA-200 units can be stacked vertically without additional separation.

The HPA-200 is designed for continuous transmit and uses forced air cooling by internal fans. The overall inlet to outlet air temperature rise is less than 14ºC.

The HPA-200 is powered from its internal power supply operating from a common 115 AC power source. The maximum AC current consumption is less than 1000VA. The HPA-200 provides the user with a “sleep” mode, so that if the unit sits idle, it will reduce its total power consumption to less than 80VA until the next time it is keyed.

The HPA-200 uses a real-time microcontroller to handle all system operation, protection, and management functions. The unit may be manually or remotely controlled using a four key, front panel keypad and display, or a rear panel serial remote communication port.

The HPA-200 is designed around our standard 30 MHz to 400 MHz, 200 watt, 30db gain, class AB amplifier module. Applied input power can be adjusted to accept from –20 dBm to +20 dBm, for use with a wide range of exciter products and installations. The overall gain of the power amplifier can also be adjusted in 0.5db steps through the front panel or remote interfaces.

Excellent harmonic performance is achieved by the use of a fast switching filter bank designed to operate in Frequency Hopping modes.

The HPA-200 has Built-In-Test functions for easy trouble-shooting. The unit is provided with VSWR protection, over-temperature protection, and amplifier system monitoring, to ensure reliable, long-term performance. The unit’s modular design provides a MTTR of less than 30 minutes.

* Specifications subject to change without notice 4.14.05

Electrical Specifications

Frequency Range	30 to 400 MHz
Spurious	<-70 dBc
Harmonics	3rd < -45 dBc, all others<-50 dBc
Duty Cycle	Continuous Transmit
Load Impedance	50 Ω
RF Input Power	-20 dBm to +20 dBm
Primary Power	115 VAC, 1 Phase, 47 to 63 Hz, MIL-STD 1399 Compatible
Remote Control Interface	Serial Asynchronous
RF Output Power	200 watts (Variable in 0.5 db Steps)
VSWR	Operates into 4:1 max. Forward Power Reduced at Max VSWR

Environment Specifications

Temperature Operating	0° to 50°C
Non-Operating Altitude	-40° to +70°C
Non-Operating	15,000 ft.
Humidity	95%, Non-Condensing
Vibration	MIL-STD-167-1, Type 1
Finish	MIL-S-901D, Grade A Class 1

Physical Description

Height	5.25 in.
Width	19 in.
Depth	20 in.
Weight	52 lb.
Finish	Corrosion resistant

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