The Viasat VPA-100 High Power Amplifier (HPA) provides up to 250 Watts of transmit output power amplification for the Viasat RT-1829(P)/S UHF SATCOM terminal for shipboard applications. The VPA-100 is an integral part of a SATCOM and Line-of-Sight (LOS) UHF DAMA/TDMA communications system that complies with the waveform requirements of MIL-STD-188-181, -182, and -183 for 5 and 25 kHz non-TDMA, 5 kHz DAMA, 25 kHz TDMA/DAMA, respectively. The VPA-100 operates from 225 MHz to 400 MHz as controlled by the host modem and is capable of amplifying both AM and FM modulated signals.

The VPA-100 comes in a standard 19” rack mountable configuration that is housed in a ruggedized chassis to withstand typical military shipboard environments. Protection against over-stress if used outside of maximum operating parameters is also built into the unit.

VIASAT VPA-100 AT-A-GLANCE
» Output Power: 250 watts CW
» Typical @ Saturation (SATCOM)
» Frequency Range: 225-400MHz
» CE Certified
» Ruggedized for shipboard applications
» 3U rack mountable
» Thumbwheel gain control
» Keyline control

Supports multiple channels.
Viasat VPA-100 High-Power Shipboard SATCOM Amplifier

SPECIFICATIONS

**INTERFACES**

| TX IN          | Transmit Signal Input |
| TX OUT         | Transmit Signal Output |
| Control        | Keyline Control Input  |
| RF Gain        | RF Gain Control thumbwheel |
| Battle Override| Battle Override Mode/Normal Operation Control switch |
| LED Indicators | Indicators for Power On, Module On, Transmit, BIT Fault, High VSWR, Over Temp, Battle Override |
| ETI            | Elapsed Time Indicator, Time in hours. |
| AC Power       | AC Power In, 115/220 VAC, 50/60Hz nominal, 1 kW |

**PERFORMANCE**

**Frequency Range**

- 225 – 400 MHz

**Transmit Input Power**

- -20 dBm to 0 dBm. Protected to +5 dBm

**Transmit Output Power**

- 250 watts CW Typical @ Saturation (SATCOM)
- 160 watts CW Minimum @ 1 dB Compression (SATCOM)
- 125 watts CW Typical @ Saturation (LOS)
- 100 watts CW Minimum @ 1 dB Compression (LOS)

**Gain Control**

- Thumbwheel control to 0.1dBm resolution

**Small Signal Gain Flatness**

- ± 1.0 dB over 291 – 318 MHz (SATCOM)
- ± 1.5 dB over 225 – 291 MHz (LOS)
- ± 1.5 dB over 318 – 400 MHz (LOS)

**VSWR**

- 1.5:1 maximum (input)
- 2.0:1 maximum (output)
- Protected above 2.0:1

**Total Harmonic Distortion**

- <5% @ 30 W (AM)
- <5% @ 100 W (FM)

**PHYSICAL CHARACTERISTICS**

| 3 Rack Units | Standard 19-in. rack |
| Depth        | 25.9 in. |
| Weight       | <65 lb. |

**ADDITIONAL SPECIFICATIONS**

**Operation Temperature Range**

- -40ºC to +55ºC

**Humidity**

- 95% Non-condensing

**Cooling system**

- Internal Forced Air

**Vibration**

- MIL-STD-167-1A (Type 1)

**Shock**

- MIL-S-901D Class I Grade B

**Shipboard Test**

- MIL-STD-810G

**ITE Safety**

- UL/EN 60950-1

**CERTIFICATIONS**

- CE Compliant

CONTACT

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