VPA-100

Shipboard UHF DAMA/DASA SATCOM High-Power Amplifier

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.

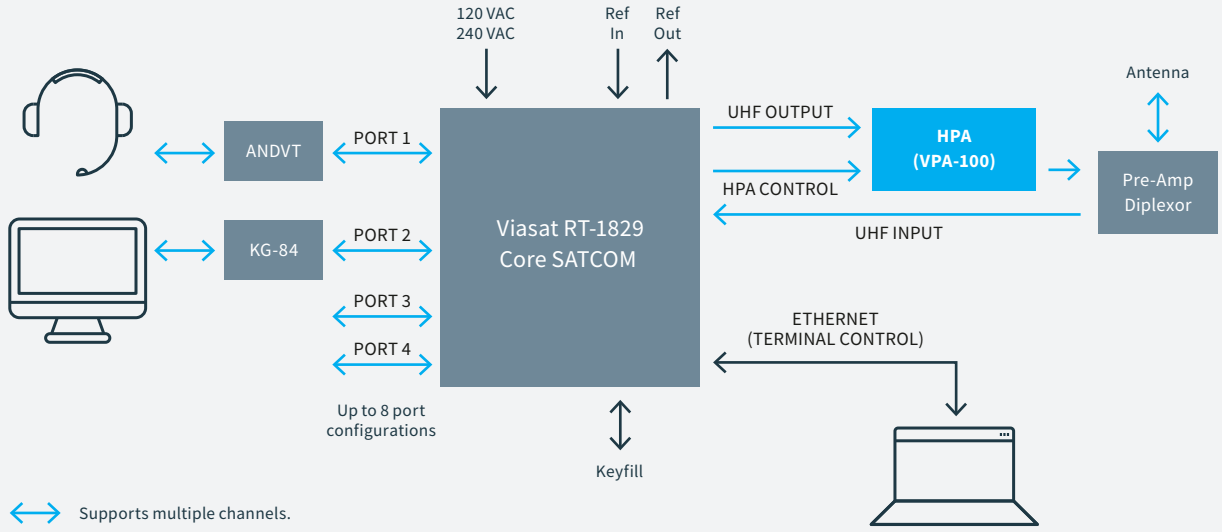
The VPA-100 comes in a standard 19" rack mountable configuration that is housed in a ruggedized chassis to withstand typical military shipboard environments. Protection against over-stress if used outside of maximum operating parameters is also built into the unit.

VIASAT VPA-100 AT-A-GLANCE

- Output Power: 250 watts CW Typical @ Saturation (SATCOM)
- Frequency Range: 225-400 MHz
- CE Certified
- UKCA Certified (Pending)
- Ruggedized for shipboard applications
- 3U rack mountable
- Thumbwheel gain control
- Keyline control

Ordering Information

- PN 1142672 HPA, VPA-100



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, 50/60 Hz nominal, 1 kW
» **Inrush Current**	75 A for 1 msec, 20 A for 25 msec maximum

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 0.1 dBm 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	-40°C to +55°C
Humidity	95% Non-condensing
Cooling system	Internal Forced Air
EMC	MIL-STD-461D/EN55032/EN55035
Vibration	MIL-STD-167-1A (Type 1)
Shock	MIL-S-901D Class I Grade B Shipboard Test
Salt Fog	MIL-STD-810G
ITE Safety	EN/IEC 62368-1

CERTIFICATIONS

» CE Compliant

» UKCA Compliant (Pending)

CONTACT

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