



100W KU-BAND POWERSTREAM™ AMPLIFIER

UEA100G00A



FIELD-PROVEN PERFORMANCE

The PowerStream® 100W Ku-band GaN Amplifier (AMP) offers high linear power in a compact, lightweight “pack and go” package suitable for clamshell mobile antennas, high definition Satellite News Gathering (SNG) vehicles and small broadcast service hubs. The 100W Ku-band AMP can be mounted directly onto the feed arm of medium aperture antennas, maximizing the power into the feed and enhancing system-level efficiency. With an Instant On feature, there is no warm up time, ensuring communications are up and running immediately.

Designed for reliability and high output power in extreme environments, the 100W Ku-band AMP includes a choice of serial or Ethernet monitor and control, adjustable attenuation, and output power monitoring.

Optional 1:1 Redundancy Kits are available to provide an integrated solution for uninterrupted, reliable satellite transmissions. The 1:1 Redundancy Kit integrates the waveguide, switch and mounting hardware, and offers ease of installation and subsequent maintenance to accommodate outdoor mounts.

FEATURES

- State of the Art GaN Technology
- Compact, Lightweight Package
- Industry-leading Efficiency
- Flexible Power Source
- Instant On, No Warm Up Time
- 1:1 Redundancy Kits Available

WAVESTREAM ADVANTAGES

What sets Wavestream products apart from traditional amplifier solutions is the innovative Spatial advantEdge™ technology. This unique patented technology allows generation of higher output power in lighter, more compact product packages that use less energy and are more reliable. Wavestream’s powerful solutions are designed to replace aging, less efficient amplifiers, helping system integrators get the performance they need — while reducing energy and maintenance costs over the lifecycle of the system.

BENEFITS

- Higher output power with less energy usage
- Compact product footprint to meet critical space and weight limitations
- Proven reliability and efficiency
- Reduced lifecycle maintenance costs



TECHNICAL SPECIFICATIONS

RF SPECIFICATIONS

Transmit Frequency:

13.75 - 14.5 GHz

IF Frequency:

13.75 - 14.5 GHz

Small Signal Gain:

60 dB (nominal)

Gain Adjustment:

20 dB, 2 dB steps nominal

Gain Variation:

- Over frequency at fixed temp:
 - 0.5 dB over 36 MHz
 - 3 dB over 500 MHz
- Over temp at fixed frequency:
 - 3 dB p-p over operating range

Saturated Output Power:

>50 dBm

P1dB Output Power*: 49 dBm**Linear Output Power*:** 46 dBm

Intermodulation* (Third order intermodulation product relative to combined power of two carriers at 4 dB total power back-off from Saturated Output Power):
-25 dBc

Spectral Regrowth (For QPSK at 1.5x and for OQPSK at 1.0x symbol rate offset at 3 dB back-off from Saturated Output Power): -30dBc

AM/PM Conversion (up to Linear Output Power):

2 deg/dB

Noise Power Density -**Transmit:**

-70 dBW/4 kHz (maximum)

Noise Power Density -**Receive:**

-150 dBW/4 kHz (maximum)

Output Spurious: -55 dBc

POWER

AC Power:

90-264 VAC, 50-60 Hz

AC Power Draw (at Saturated

Output Power): 650W

AC Power Draw (at Linear

Output Power): 550W

INTERFACES

IF Input Connector:

Type N Female

IF Input Impedance: 50 Ohms**IF Input VSWR:**

2:1 maximum

RF Output Connector:

WR-75

RF Output VSWR:

1.25:1 maximum

RF Sample Port Connector:

Type N Female

RF Sample Port:

-46 dBc (typical)

AC Connector:

4-Pin Connector, Male

Amphenol C016

20C003 100 12

Monitor & Control Connector:

19-Pin Military Circular, Male

MS3112E14-19P

Monitor & Control:

Serial RS-485/RS-232 (SA-bus), Forward Power Monitor, Step Attenuator, Ethernet with WebGUI and SNMP Support

LED Indicator:

Summary Fault, Loss of Lock, Inhibit

PHYSICAL

Size:

16.8" L x 8" W x 5.2" H

(42.7 x 20.3 x 13.2 cm)

Weight: 20.5 lbs (9.3 kg)**Operating Temperature**

(Ambient Air):

-40°F to +140°F

(-40°C to +60°C)

Relative Humidity:

100% Condensing

Shock & Vibration:

Designed to withstand 20G at 11 ms

½ sine wave non-operating conditions, and MIL-STD-810E, method 514-4 transportation vibration

Altitude:

10,000 ft above sea level

(operating) Electromagnetic

compatibility: MIL-STD-461

OPTIONS

1:1 Redundancy Kit:

to include waveguide, switch, cable connectors, and mounting hardware

Rack Mount Controller:

1U rack mount chassis to control any Wavestream amplifier in a 1:1 configuration with LCD display and key status LEDs

Indoor to outdoor cable assemblies:

available in 25', 50' or 100' lengths

BASE MODEL

UEA100G00A

ABOUT WAVESTREAM

Wavestream sets the standard in the design and manufacture of next generation high power solid state amplifiers. Wavestream's Family of Ka, Ku and X-band Solid State Power Amplifiers (SSPAs), Block Upconverters (BUCs) and transceivers provide systems integrators with field-proven, high performance solutions designed for ground mobile and fixed, gateway and airborne satellite communication systems worldwide.

These items are subject to the Export Administration Regulations (EAR), 15 C.F.R. Parts 730-774, and may not be exported or transferred to any non-U.S. person, except as authorized by the U. S. Department of Commerce

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