

# 40W KU-BAND BUC

UEB40G00A



## FIELD-PROVEN PERFORMANCE

Wavestream's Ku-band GaN Block Upconverter (BUC) offers unmatched efficiency and performance suitable for mobile SATCOM, flyaway and VSAT systems.

The Ku-band BUC incorporates Wavestream's next generation Spatial advantEdge™ technology to provide higher output power in smaller, lighter weight packages that are more reliable and use less energy. Every unit is thoroughly tested to guarantee performance over the full frequency band and over the full temperature range.

## FEATURES

- Small, Lightweight Package
- State Of the Art GaN Technology
- Low Power Draw, High MTBF
- Flexible, Modular Feed-Mount Design
- Holds Specs Over Temperature and Frequency
- 1:1 Redundancy Kits Available

## WAVESTREAM ADVANTAGES

Wavestream products are biased for Class AB operation, drawing less power when backed off to help save valuable energy resources. They generate less heat, ensuring a higher Mean Time Between Failures (MTBF) for greater reliability and lower lifecycle costs.

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.

## BENEFITS

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



## TECHNICAL SPECIFICATIONS

### RF SPECIFICATIONS

**Transmit Frequency:**

13.75 GHz - 14.5 GHz

**IF Frequency:**

950 MHz - 1700 MHz

**Frequency Reference**

(10 MHz on IF): 0 dBm ± 5 dB

**Small Signal Gain:**

70 dB (nominal)

**Gain Adjustment:**

30 dB in 0.5 dB steps (nominal)

**Gain Variation:**

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

**Saturated Output Power:**

47 dBm (nominal)

**Linear Output Power:** 45 dBm

**Linear Output Power, defined as:**

- Intermodulation (Third order intermodulation product relative to combined power of two carriers at 3 dB total power back-off from Saturated Output Power): -25 dBc
  - Spectral Regrowth (For QPSK at 1.5x and OQPSK at 1.0x rate offset at 2 dB back-off from Saturated Output Power): -30 dBc
  - AM/PM Conversion (up to 2 dB below Saturated Output Power): 2 deg/dB
- Phase Noise:** Meets IESS-308
- Noise Power Density Transmit:** -70 dBW/4 kHz (maximum)
- Noise Power Density Receive:** -150 dBW/4 kHz (maximum)
- Output Spurious:** -55 dBc

### INTERFACES

**IF Input Connector:**

Type N Female

**IF Input Impedance:** 50 Ohms

**IF Input VSWR:**

1.5:1 maximum

**RF Output Connector:** WR-75

**RF Output VSWR:**

1.5:1 maximum

**DC Connector and M&C****Connector:**

32-Pin or 12-pin MIL Circular

**M&C:**

Serial RS-485 /RS-232 (SA-bus), Forward Power Monitor, Step Attenuator, Ethernet option, Input power detector, RF soft start

### POWER

**DC Power:** 22V to 50V

**DC Power Draw:**

(typical) (at Linear Power): 255W

### PHYSICAL

**Size:**

10.3" L x 5.4" W x 4.4" H (26.2 x 13.7 x 11.2 cm)

**Weight:** 7.2 lbs (3.27 kg)

**Operating Temperature****(Ambient Air):**

-40°F to +140°F  
(-40°C to +60°C)

**Relative Humidity:**

100% Condensing

**Shock & Vibration:**

MIL-STD-810G & Method 514.6 & Method 516.6

**Altitude:**

10,000 ft above sea level (operating)

**Electromagnetic compatibility:**

MIL-STD-461, CE MARK

### OPTIONS

**External Power Supply:**

- AC-DC Converter, 90-264 VAC
- DC Power, IFL Option (48V only at 40W)

**M&C:**

Ethernet (TCP/IP, WebGUI, SNMP), RS-232, RS-485

### BASE MODEL

UEB40G00A

## 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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