WAVESTREAM

160W KA-WIDEBAND BLOCK UPCONVERTER

ANB160G03A

FIELD-PROVEN PERFORMANCE

Wavestream's 160W Ka Wideband Block Upconverter leads the industry in linear power for a feedmount-ready package, ensuring the maximum available power at the feed flange for multiple carrier inputs.

This Wideband BUC has the ability to instantaneously cover multiple frequency bands, and a tuneable upconverter in an industry-leading small, rugged, outdoor package. The Ka Wideband Block Upconverter offers forward power monitoring, 30 dB of hitless step attenuation, serial RS-232, RS-485, or Ethernet control interface, and AC input power.

FEATURES

- Ka-band BUC providing > 65W multicarrier linear power
- Ruggedized package weighing less than 42 lbs (19 kg)
- Covers All Commercial Ka Frequency Bands

WAVESTREAM ADVANTAGES

What sets Wavestream products apart from traditional amplifier solutions is the innovative Spatial advantEdgeTM 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 products are optimized for Linear operation, drawing less power when backed off to help save valuable energy resources. They generate less heat, and have superior heat sinking ensuring a higher Mean Time Between Failures (MTBF) for greater reliability and lower lifecycle maintenance costs.

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:
27.5 GHz - 30.0 GHz
IF Frequency Bands:
950 - 3100 MHz
(Specific frequency plan to meet customer's needs)
Reference Frequency:
10 MHz muxed on IF, or separate connector
Small Signal Gain:
60 dB (Nominal)
Gain Adjustment:
25 dB in 0.1 dB linear steps (nominal)
Gain Variation:

- Over full band at fixed temp: <4.5 dB
- Over temp and fixed frequency: 4 dB p-p over operating range

Peak Envelope Power:
52 dBm (160W)
Linear Output Power
48.2 dBm (65W) @19 dB NPR (nominal)

- Linear Output Power defined by NPR Measurement Room Temperature

AM/PM Conversion:
<1.75 deg/dB @ Linear Output Power
Phase Noise:

- 10 Hz: -35 dBc/Hz
- 100 Hz: -65 dBc/Hz
- 1 kHz: -75 dBc/Hz
- 10 kHz: -85 dBc/Hz
- 100 kHz: -97 dBc/Hz
- 1 MHz: -115 dBc/Hz
- 10 MHz: -120 dBc/Hz

Noise Power Density In Tx Band:
-80 dBm/Hz
(at Linear Output Power)
All Output Spurious and Products: < 60 dBc

PHYSICAL

Envelope Size:
16.4" L x 10.4" W x 8.2" H
(42 L x 27 W x 21 H cm)
Weight: <45 lbs (20.4 kg)
Operating Temperature
(Ambient Air):
-40°C to + 55°C
(-40°F to + 131°F)
Relative Humidity:
Up to 100%
Shock & Vibration:
IEC 60068-2
Altitude:
10,000 ft above sea level (operating)

INTERFACES

Input Connector:
Type N Female
IF Input Impedance: 50 Ohms
IF Input VSWR: 1.3:1
RF Output Connector:
WR-34 (WR-28 Option)
RF Output VSWR:
1.3:1 maximum
DC Connector and M&C Connector:
MIL Circular
M&C Protocol: Serial RS-485 (SA-bus) or Ethernet (Software field upgradeable w/Ethernet)
M&C Protocol Ethernet:
Optional: For RS-232, RS-485

POWER

AC Power: 90 to 265 VAC
AC Power Draw:

- <700W (typical) (at Linear Output Power)
- Power Factor: > 96%

BASE MODEL

ANB160G03A

DCP0000205_A

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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