100W Ku-Band PowerStream™ BUC

WAVESTREAM POB-KUS100 / POB-KUE100

Field-Proven Performance

The PowerStream® 100W Ku-band Block Upconverter (BUC) 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 BUC 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 BUC includes a choice of frequency band, L-band to Ku-band upconversion, 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

- 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

WAVESTREAM

Technical Specifications

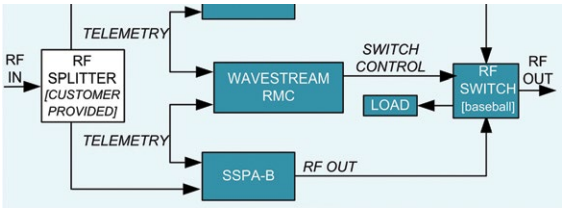
RF Specifications

- **Transmit Frequency:**
  Standard: 14.0 - 14.5 GHz
  Extended Band Option: 13.75 - 14.5 GHz
- **IF Frequency:**
  Standard: 950 - 1450 MHz
  Extended Band Option: 950 - 1700 MHz
- **Frequency Reference** (10 MHz on IF): 0 dBm ± 5 dB
- **Small Signal Gain:** 70 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:** >49 dBm
- **P1dB Output Power*:** 50 dBm
- **Rated Output Power*:** 49 dBm
- **Intermodulation*** (Third order intermodulation product relative to combined power of two carriers at 3 dB total power back-off from Rated Output Power): -25 dBc
- **Spectral Regrowth** (For QPSK at 1.5x and for OQPSK at 1.0x symbol rate offset ar 2 dB back-off from Rated Output Power): -30dBc
- **Phase Noise:** Meets IESS-308z
- **AM/PM Conversion** (up to 2 dB below Rated 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 Rated Output Power):** 625W
- **AC Power Draw**
  (at 3dB Back-off from Rated Output Power): 550W

**Guaranteed over temperature and frequency*



Interfaces

- **IF Input Connector:** Type N Female
- **IF Input Impedance:** 50 Ohms
- **IF Input VSWR:** 2:1 maximum
- **RF Output Connector:** Type N Female
- **RF Output VSWR:** 1.25:1 maximum
- **RF Sample Port Connector:** WR-75
- **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 (SA-bus), Forward Power Monitor, Step Attenuator, Ethernet with SNMP Support
- **LED Indicator**
  Summary Fault, Loss of Lock, Inhibit

Physical

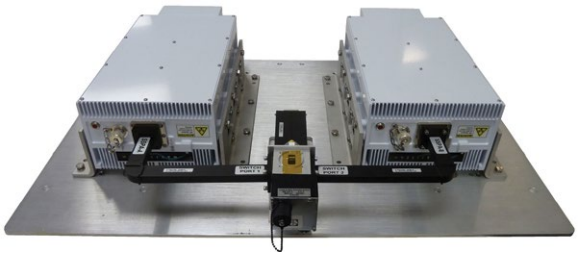
- **Size:** 15" L x 8" W x 5" H (38.1 x 20.3 x 12.7 cm)
- **Weight:** 22 lbs (9.97 kg)
- **Operating Temperature (Ambient Air):** -40°F to +140°F (-40°C to +60°C)
- **Relative Humidity:** 100% Condensing
- **Shock & Vibration:** Designed to withstand 20G at 11 ms ½ sine wave non-operating conditions, and MIL-STD-810E, method 514-4 transportation vibration
- **Altitude:** 10,000 ft above sea level (operating)

Options

- **28 VDC Power Option**
- **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

- **POB-KUS100**
- **POB-KUE100**



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