

Product Brochure

# 50W Ka-Band Deck BUC

JNB-KAM050

## Field-Proven Performance

Gilat's 50W Ka-band Deck Block Upconverter (BUC) is the most widely deployed solid state amplifier built at this power level. Wavestream enables a full 25 Watts of linear power into the feed with a rugged unit that can be mounted directly onto the feed arm of medium aperture antennas.

The 50W Ka-band Deck BUC is designed to operate in the most extreme environments, and offers field-proven reliability to support the most demanding satellite communications applications. The 50W Ka-band Deck BUC includes L-band to Ka-band upconversion, serial / Ethernet monitor and control, adjustable attenuation and forward and reverse output power monitoring.

## Features

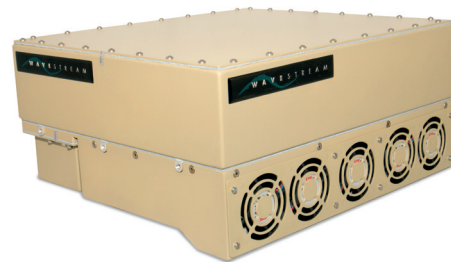
- 25W Linear Power for Higher Data Rate Capability
- Rugged, Package Mounts on Feed Arm for Simple Integration
- High Reliability

## Gilat Advantages

What sets Gilat 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. Gilat 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 maintenance costs.

## Benefits

- Field proven reliability and efficiency
- Higher output power with less energy usage
- Reduced life cycle maintenance costs



50W Ka-Band Deck BUC

## Technical Specifications

### RF Specifications

**Transmit Frequency:**

30.0 GHz – 31.0 GHz

**IF Frequency:**

1000 MHz – 2000 MHz

**Frequency Reference**

(10 MHz on IF): 0 dBm ± 5 dB

**Small Signal Gain:**

62.5 dB ± 2.5 dB (nominal)

**Gain Adjustment:**

30 dB in 0.25 dB steps (nominal)

**Gain Variation:**

- Over frequency at fixed temp:  
3 dB p-p (max) over 1000 MHz
- Over temp at fixed frequency:  
3 dB p-p (max) over operating range

**Saturated Output Power:**

47 dBm (nominal)

**Linear Output Power, defined by****MIL-STD-188-164:**

- Multi-carrier (Intermodulation):  
44 dBm
- Single-carrier (Spectral  
Regrowth): 44 dBm

**Phase Noise:**

- 10 Hz: –32 dBc/Hz
- 100 Hz: –62 dBc/Hz
- 1 kHz: –72 dBc/Hz
- 10 kHz: –82 dBc/Hz
- 100 kHz: –92 dBc/Hz
- 1 MHz: –102 dBc/Hz
- 10 MHz: –112 dBc/Hz

**Noise Power Density Transmit:**

–75 dBm/Hz (maximum)

**Noise Power Density Receive:**

–156 dBm/Hz (maximum)

**Output Spurious:** –60 dBc

### Interfaces

**IF Input Connector:**

Type N Female

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

2:1 maximum

**RF Output Connector:**

WR-28

**RF Output VSWR:**

1.25:1 maximum

**AC Connector:**

Amphenol #C016

20C003 100 12

**M&C Connector:**

Amphenol #360011

**M&C Protocol:**

Serial RS-485 (SA-bus)

or Ethernet (SNMP)

### Power

**AC Power:**

90 – 264 VAC, 50–60 Hz

**AC Power Draw:**

400W maximum (at Linear

Output Power)

### Physical

**Size:**

12.5" L x 14.0" W x 6.5" H

(31.8 x 35.6 x 16.5 cm)

**Weight:** 32 lbs (14.5 kg)**Operating Temperature****(Ambient Air):**

–40°F to +140°F

(–40°C to +60°C)

**Relative Humidity:**

100% Condensing

**Shock & Vibration:**

MIL-STD-810E, method 514-4

**Altitude:**

10,000 ft above sea level

(operating)

### Base Model

JNB-KAM050-xxxx

## About Gilat Wavestream

Gilat 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.

## Contact Us

545 West Terrace Drive  
San Dimas, California 91773 USA

T. +1 909 599 9080

F. +1 909 599 9082

[www.wavestream.com](http://www.wavestream.com)

[sales@wavestream.com](mailto:sales@wavestream.com)