

Product Brochure

Mini Matchbox 60W Ku-band BUC

WBUE-060G03

Field-Proven Performance

Gilat'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 Gilat'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

Gilat Advantages

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 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



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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 0.25 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
- 36 MHz Variation over temp: 1 dB max

Peak Envelope Power:

47.8 dBm (nominal)

Linear Output Power: 45 dBm**Linear Output Power, defined as:**

- Intermodulation (Third order intermodulation product relative to combined power of two carriers):
<–25 dBc
- Spectral Regrowth (For QPSK at 1.5x and OQPSK at 1.0x rate offset): <–30 dBc
- AM/PM Conversion:
<2 deg/dB

Phase Noise: Meets IESS–308**Noise Power Density Transmit:**

–69 dBW/4 kHz (maximum)

Noise Power Density Receive: –150

dBW/4 kHz (maximum)

Output Spurious: <–60 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:**

12–Pin MIL Circular

M&C:

Ethernet (TCP/IP, WebGUI, SNMP), Serial RS–485 /RS–232 (SA–bus), Forward Power Monitor, Step Attenuator, Input power detector, RF soft start

Power

DC Power: 22V to 32V

DC Power Draw:

(typical) (at Linear Power): 245W

Physical

Size:

12.7" L x 5.6" W x 3.23" H (32.3 x

14.3 x 8.2 cm)

Weight: 6.6 lbs (3 kg)**Operating Temperature****(Ambient Air):**

–40°F to +140°F

(–40°C to +60°C)

Relative Humidity:

100% Condensing

Shock & Vibration:

MIL–STD–810GCNI & Method

514.7 & Method 516.7

Altitude:

10,000 ft above sea level

(operating)

Electromagnetic compatibility:

MIL–STD–461

Options

M&C:

Serial (RS–232, RS–485)

Colors:

White (RAL9003)

Sand (FS33303)

Tan (FS33446)

Base Product

WBUE–060G03

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.

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