



Product Brochure

Aerostream™ 60W Ka-Band KRFU

WBAR-060A10

Field-Proven Performance

Wavestream's Aerostream™ Ka-band Radio Frequency Unit (KRFU) offers unmatched efficiency and performance for the challenging airborne environment. Aerostream™ products meet the requirements of RTCA/DO-160G, and ARINC specifications for commercial aircraft as well as MIL-STD requirements for military aircraft.

Aerostream™ incorporates Wavestream's next generation Spatial Power Advantage™ technology to provide high power output with greater efficiency and reliability for airborne satellite communications system applications.

Features

- Airborne Qualified Commercial Ka-Band
- Designed for a Pressurized Environment
- Fan and Fanless Cooling Options Available

Wavestream Advantages

What sets Wavestream products apart from traditional amplifier solutions is the innovative Spatial advantEdge™ technology. This unique patented technology allows for generation of higher output power in more efficient, and more compact product packages that 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



Aerostream™ 60W Ka-Band KRFU

Technical Specifications

RF Specifications

Transmit Frequency:

27.5 GHz – 30.0 GHz

IF Frequency:

950 – 1950 MHz

IF Input VSWR: 1.5:1**RF Output VSWR:** 1.5:1**Small Signal Gain:**

66 dB (nominal)

Gain Adjustment:

20 dB

Gain Variation:

–Over frequency at fixed temp:

3.4 dB p–p over full band

–Over temp at fixed frequency:

5 dB p–p over operating range

Peak Envelope Power (PEP):

+47.8 dBm (60W) nominal

Linear Output Power: +45.7

dBm (37W)

Linear Output Power, defined

as:

–Output power for which spectral

regrowth is –25dBc at one symbol

rate offset from center frequency

for OQPSK, $\alpha = 0.2$

Phase Noise:

• 100 Hz: –47 dBc/Hz

• 1 kHz: –73 dBc/Hz

• 10 kHz: –81 dBc/Hz

• 100 kHz: –95 dBc/Hz

• 1 MHz: –105 dBc/Hz

• 10 MHz: –112 dBc/Hz

Noise Power Density Transmit:

–60 dBm/Hz

Noise Power Density Receive:

–140 dBm/Hz (maximum)

Output Spurious (per ETSI

303.978): –18.0 dBm

Physical

Size: 18.0" L x 9.06" W x 3.25" H

(45.7 x 23.1 x 8.3 cm)

Weight: 22.0 lbs (10 kg)**Operating Temperature****(Ambient Air):**

Normal Operating: 5° F to +158°F

(–15° C to +55° C)

Relative Humidity:

100% Condensing

Shock & Vibration:

DO–160G, MIL–STD–810

Altitude:

15,000 ft above sea level

(operating)

Interfaces

Input Power: 4–pin MIL Circular**M&C:** 22–pin MIL Circular,

Ethernet, Discrete Keyline

TX IF: TNC**Reference:** 50MHz, TNC**RF Output:** WR–28 with

2.92mm–Female

Power

AC Power: 115 AC; 360–800 Hz**AC Power (at Linear Output**

Power): 400W (max)

Base Model

WBAR–060A10

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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