



25W KA-BAND MATCHBOX BUC

AMB25G00A



FIELD-PROVEN PERFORMANCE

Wavestream's Ka-band Matchbox Block Upconverter (BUC) leads the industry in linear power for a feedmount-ready package, to ensure maximum available power at the feed flange. The 25W Ka-band Matchbox BUC is compatible with Wavestream's Ku band and X-band BUCs, providing a truly modular approach for multi-band capable mobile, fly away and VSAT terminals.

FEATURES

- 25W Ka-band Output in a Rugged 14-lb package
- Industry-leading Efficiency with DC Prime Power
- Lightweight Package Mounts on Feed Arm for Simple Integration

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 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

- **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:

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:

60 dB (nominal)

Gain Adjustment:

30 dB in 0.25 dB steps
(nominal)

Gain Variation:

- Over frequency at fixed temp:
3.5 dB p-p over 1000 MHz
2.5 dB p-p over 120 MHz
0.7 dB p-p over 10 MHz

Saturated Output Power:

44 dBm (nominal)

**Linear Output Power, defined
by MIL-STD-188-164
(for -40°C to +45°C):**

- Spectral Regrowth (For QPSK
at 1.5x and OQPSK at 1.0x
rate offset at -30dB down):
41 dBm (derates to 40 dBm at
+60°C)

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:**

-65 dBm/Hz (maximum)

Noise Power Density Receive:

-156 dBm/4 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

DC Connector and M&C**Connector:**

12-Pin MIL Circular

M&C Protocol:

Serial RS-485 (SA-bus)

POWER

DC Power: 28V or 48V

DC Power Draw:

360W (typical at Linear Output
Power)

PHYSICAL

Size: 12.7" L x 5.5" W x 4.9" H
(31.8 x 14.0 x 12.4 cm)

Weight: 14 lbs (6.4 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)

OPTIONS

External Power Supply

M&C Protocol: Serial RS-232,

Ethernet (SNMP, TCP/IP, Web

GUI)

BASE MODEL

AMB25G00A