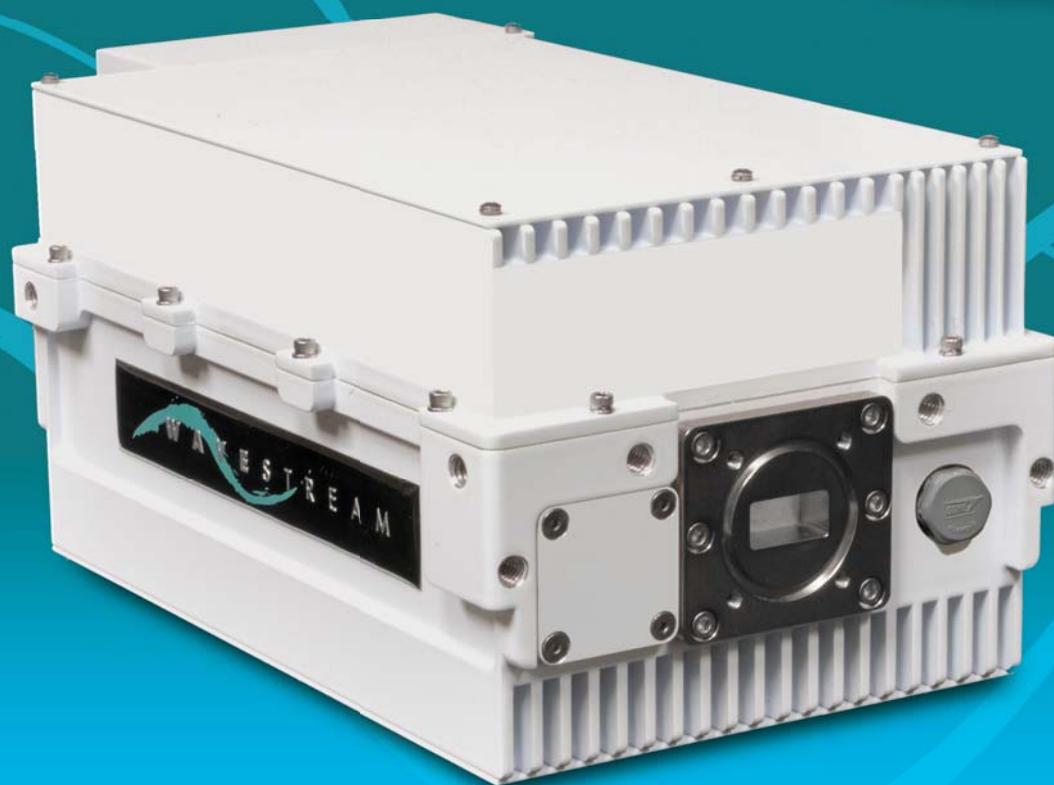


16 W / 25 W / 40 W Ku-band Matchbox Block Upconverter



Matchbox Block Upconverter

MBB-KUS016/025/040

MBB-KUE016/025/040

The Matchbox family of outdoor Ku-band BUCs provides unmatched efficiency and performance in the smallest and lightest package in the SATCOM industry. Within a 10.3" x 5.4" x 4.4" package, Wavestream has enabled any mobile, flyaway or VSAT system to apply 40W P1dB directly at the feed.

In addition to three power levels (16 /25 /40 W), two frequency bands (14.0 - 14.5 GHz or 13.75 - 14.5 GHz), and two prime DC power levels to choose from, the Matchbox family also offers forward power monitoring, 20 dB of step attenuation, serial RS-485 or optional Ethernet control interface and a choice of IF for broad system configuration flexibility.

KEY FEATURES & BENEFITS

- ▶ 40 W P1dB output in rugged 9 lb package
- ▶ Industry-leading efficiency with <275 W draw for 40 W output
- ▶ Flexible package for ease of mounting, range of options
- ▶ Standard and extended L-band inputs available



Matchbox Block Upconverter

MBB-KUS016/025/040

MBB-KUE016/025/040

RF Specifications

Transmit Frequency

14.0-14.5 GHz or
13.75-14.5 GHz

14.0-14.5 GHz or
13.75-14.5 GHz

14.0-14.5 GHz or
13.75-14.5 GHz

IF Frequency

(Extended Band Option)

950-1450 MHz
950-1700 MHz

950-1450 MHz
950-1700 MHz

950-1450 MHz
950-1700 MHz

Frequency Reference

(10MHz on IF)

0 dBm+/-5dB

0 dBm+/-5dB

0 dBm+/-5dB

P1dB Output Power

>42 dBm

>44 dBm

>46 dBm

Rated Power

42 dBm

44 dBm

46 dBm

Small Signal Gain

70 dB nominal

70 dB nominal

70 dB nominal

Intermodulation

with two equal carriers at 3 dB total
power backoff from rated power

-25 dBc

-25 dBc

-25 dBc

Spectral Regrowth (typical)

At 2 dB below rated output power at
1.0x symbol rate offset for OQPSK or
QPSK

-30 dBc

-30 dBc

-30 dBc

Noise Power, maximum

Receive Band

-150 dBW/4 kHz

-150 dBW/4 kHz

-150 dBW/4 kHz

Phase Noise

Meets IESS-308

Meets IESS-308

Meets IESS-308

Output Spurious

-55 dBc

-55 dBc

-55 dBc

AM/PM Conversion

Up to rated power

2 deg/dB

2 deg/dB

2 deg/dB

DC Power (typical)

130 W

205 W

275 W

At 3dB back-off from rated output pwr

115 W

185 W

240 W

Prime Power

28 V, 48 V

28 V, 48 V

28 V, 48 V

Interfaces

IF Port Connector

Type N Female

Type N Female

Type N Female

IF Input Impedance

50 ohms

50 ohms

50 ohms

IF Input VSWR

2:1 max

2:1 max

2:1 max

RF Port Connector

WR-75

WR-75

WR-75

RF Output VSWR

1.25:1 max

1.25:1 max

1.25:1 max

DC & M&C Connector

32 Pin Military Circular

32 Pin Military Circular

32 Pin Military Circular

Monitor and Control

Serial RS-485 (SA-bus),
Forward Power Monitor,
Step Attenuator, Ethernet
Option

Serial RS-485 (SA-bus),
Forward Power Monitor,
Step Attenuator, Ethernet
Option

Serial RS-485 (SA-bus),
Forward Power Monitor,
Step Attenuator, Ethernet
Option

LED Indicators

Summary Fault (RED)
Loss of Lock (YEL)

Summary Fault (RED)
Loss of Lock (YEL)

Summary Fault (RED)
Loss of Lock (YEL)

Physical

Size (includes Connectors)

10.3" L x 5.4" W x 4.4" H

10.3" L x 5.4" W x 4.4" H

10.3" L x 5.4" W x 4.4" H

Operating Temp. (Ambient Air)

-40° C to +60° C

-40° C to +60° C

-40° C to +60° C

Weight

9 lbs

9 lbs

9.2 lbs

Options

AC/DC Converter, 90-264 VAC



Matchbox with optional AC/DC Converter

Wavestream develops and manufactures high-power solid-state amplifiers which meet the evolving needs of modern mobile and fixed communications systems. Wavestream's proprietary spatial power combining technologies enable higher amplifier output powers in smaller packages with greater efficiency and lower cost than competing solutions. Wavestream offers Ka-band, Ku-band, C-band and X-band SSPAs or BUCs for satellite uplink and tropospheric communications. Using Wavestream technology solid-state amplifiers are now a preferred choice to tubes in the low to moderate power segment of tube usage. With the introduction of its products Wavestream has become the industry-leading provider of a new generation of highly reliable solid-state amplifier solutions for commercial, defense and homeland security systems.

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Specifications subject to change without notice.