

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 5.4" x 4.4" x 10.3" package, Wavestream's Spatial Power Advantage™ 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 and prime power connector locations 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

W A V E S T R E A M

Matchbox Block Upconverter

MBB-KUS016/025/040

MBB-KUE016/025/040

RF Specifications

	16W	25W	40W
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 <small>(Extended Band Option)</small>	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 <small>with two equal carriers at 3 dB total power backoff from rated power</small>	-25 dBc	-25 dBc	-25 dBc
Spectral Regrowth (Typical) <small>At 2 dB below rated output power at 1.0x symbol rate offset for OQPSK or QPSK</small>	-30 dBc	-30 dBc	-30 dBc
Noise Power, maximum <small>Receive Band</small>	-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 <small>Up to rated power</small>	2 deg/dB	2 deg/dB	2 deg/dB

DC Power (Typical)

	16W	25W	40W
DC Power (At rated output) <small>At 3dB back-off from rated output power</small>	145 W 130 W	205 W 185 W	275 W 240 W
Prime Power	28 V, 48 V	28 V, 48 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)	5.4" W x 4.4" H x 10.3" L	5.4" W x 4.4" H x 10.3" L	5.4" W x 4.4" H x 10.3" L
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, 90-265 VAC



Matchbox with optional AC/DC Converter

Wavestream manufactures high-power solid-state amplifiers that meet the needs of today's communications and sensing systems. Wavestream's Spatial Power Advantage™ enables higher output powers from smaller packages with greater efficiency at lower cost than previously possible. Wavestream is leading the industry to provide higher mobility amplifier solutions for satellite communications, bringing new capability to communicate around the world.

Represented by:
J A Taylor & Associates
Boyertown PA 610-754-6800 ext7 &
Framingham MA 508-333-0337
www.broadcastassociates.com



545 West Terrace Drive, San Dimas, CA 91773
Ph 909.599.9080 E sales@wavestream.com
www.wavestream.com