

FEATURES

- 25W of Saturated Output Power for High Data Rate Capability
- Industry's Highest Efficiency drawing only 80W at Linear Output Power
- Ultra-Compact 2.5 lb Package
- High Reliability for long life under the harshest conditions
- Small enough to be mounted directly to the feed of most antennas



The 25W **CUBE** Block Upconverter is the industry's smallest & lightest weight 25W solid state power amplifier. Mission Microwave's proprietary power combining technology and thorough system optimization have produced a rugged 2.5 lb amplifier that can mount directly to the feed port of most satellite antennas, eliminating additional loss to the feed.

The revolutionary design features a compact form factor which provides improved cooling over more conventional package designs. Improved cooling equates to higher reliability, even in the most demanding of applications and extreme environments (-40°C to +60°C). The BUC's stellar performance offers the highest useable output power for the lowest power consumption of any amplifier in its class.

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Ku-Band CUBE Block Upconverter

25W

Frequency (selectable)

Standard Band	14.00 to 14.50 GHz
Extended Band	13.75 to 14.50 GHz

L-Band Input

Standard Band	950 to 1450 MHz
Extended Band	950 to 1700 MHz

Output Power

P_{RATED}	44 dBm / 25 W
P_{LIN1C}	42 dBm / 16 W
P_{LIN2C}	41 dBm / 12.6 W

Gain (min)

55 dB

Gain Variation

Over temp, fixed freq	3.5 dB p-p
Over freq fixed temp full band	3.5 dB p-p
36 MHz	1.0 dB p-p

Variable Attenuator

31 dB 0.25 dB step

Intermodulation

2 carriers @ P_{LIN2C}	-25 dBc
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Spectral Regrowth

QPSK @ 1.5x SR @ P_{LIN1C}	<-26 dBc
OQPSK @ 1x SR @ P_{LIN1C}	<-26 dBc

Input VSWR Output VSWR

2:1 typ
1.35:1 max

Phase Noise

@ 10 Hz	-33 dBc/Hz
@ 100 Hz	-63 dBc/Hz
@ 1 KHz	-73 dBc/Hz
@ 10 KHz	-83 dBc/Hz
@ 100KHz	-93 dBc/Hz
@ 1 MHz	-103 dBc/Hz

AM/PM Conversion

@ P_{LIN1C}	2.0° / dB
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Noise Power Density

Receive Band	-145 dBm / Hz
Transmit Band	-75 dBm / Hz

Spurious Output

In-band	-55 dBc
Out-of-band	-55 dBc

Prime Power

+22 to +54 VDC

Power Consumption

P_{RATED}	110 W
P_{LIN2C}	80 W
Low Power (36 dBm)	46W

Operating Temperature

-40°C to +60°C

Relative Humidity

100% condensing, IP67

Shock

20g peak, 11 ms,
1/2 sine

Vibration

MIL-810F, 514.5C-2
transportation

M&C

4-wire Interface (selectable)	RS-485, RS-232
Optional	Ethernet SNMPv3

Optional

Bias over IFL

Dimensions

L x W x H (in)	7.6" x 4.7" x 2.9"
L x W x H (mm)	193 x 120 x 74

Weight

lbs	2.5
kg	1.1