

## Ka-Band **STINGER** Block Upconverter

**25W**

### FEATURES

- 25W of Saturated Output Power for High Data Rate Capability
- Industry's Highest Efficiency drawing only 125W at Linear Output Power
- Ultra-Compact 3.25 lb Package
- High Reliability for long life under the harshest conditions
- Small enough to be mounted directly to the feed of most antennas
- Multiple M&C interfaces: RS-485, RS-232, optional Ethernet
- Meets requirements for MIL-STD-188-164 terminals



The 25W **STINGER** Ka-Band Block Upconverter is the industry's smallest & lightest weight 25W solid state power amplifier at Ka-Band. Mission Microwave's proprietary power combining technology and thorough system optimization have produced a rugged 3.25 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.

# Ka-Band STINGER Block Upconverter

25W

## Frequency (selectable)

Band 1	29.0 to 30.0 GHz
Band 2	30.0 to 31.0 GHz

## L-Band Input

Band 1	950 to 1950 MHz
Band 2	1000 to 2000 MHz

## Reference

10 MHz / 50 MHz	-5 to +5 dBm
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## Output Power

P <sub>Rated</sub> (typ)	44 dBm / 25.1 W
P <sub>LIN1C</sub>	42 dBm / 15.8 W
P <sub>LIN2C</sub>	41 dBm / 12.6 W

## Gain (nom)

60 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 <sub>LIN2C</sub>	-25 dBc
Per MIL-STD-188-164	

## Spectral Regrowth

QPSK @ 1.5x SR @ P <sub>LIN1C</sub>	<-30 dBc
OQPSK @ 1x SR @ P <sub>LIN1C</sub>	<-30 dBc

## Input VSWR

2:1 typ

## Output VSWR

1.35:1 max

## Phase Noise

@ 10 Hz	-32 dBc/Hz
@ 100 Hz	-62 dBc/Hz
@ 1 KHz	-72 dBc/Hz
@ 10 KHz	-82 dBc/Hz
@ 100KHz	-92 dBc/Hz
@ 1 MHz	-102 dBc/Hz

## AM/PM Conversion

@ P <sub>LIN1C</sub>	2.0° / dB
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## Noise Power Density

Receive Band	-150 dBm / Hz
Transmit Band	-75 dBm / Hz

## Spurious Output

In-band	-60 dBc
Out-of-band	-60 dBc
LO leakage	-15dBm max

## Prime Power

+22 to +54 VDC

## Power Consumption

P <sub>Rated</sub> (typ)	165 W
P <sub>LIN2C</sub>	125 W

## Operating Temperature

-40°C to +60°C

## Relative Humidity

100% condensing, IP67

## Shock

20 g peak, 11 msec,  
1/2 sine

## Vibration

MIL-810F,  
514.5C-2 transport

## Maximum Input Power

+10 dBm

## M&C

4-Wire interface (selectable)	RS-485, RS-232 Optional: Ethernet SNMPv3
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## Dimensions

L x W x H (in)	9" x 3.5" x 3.5"
L x W x H (mm)	229 x 89 x 89

## Weight

lbs	3.25
kg	1.5