

Ku-Band JAVELIN Block Upconverter

100W

FEATURES

- 100W of Saturated Output Power for High Data Rate Capability
- Industry's Highest Efficiency drawing only 280W at Linear Output Power
- Ultra-Compact 11 lb Package
- High Reliability for long life under the harshest conditions
- Small enough to integrate directly onto boom arm
- Multiple M&C interfaces: RS-485, RS-232, optional Ethernet
- Built-in Redundancy Controller
- Optional: DC Power



The 100W **JAVELIN** Block Upconverter is the industry's most compact & lightweight 100W solid state power amplifier. Mission Microwave's proprietary power combining technology and thorough system optimization have produced a rugged 11 lb amplifier that mounts directly on an antenna boom, eliminating excess losses 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.

Ku-Band JAVELIN Block Upconverter

100W

Frequency (optional)

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

Reference

10 MHz	-5 to +5 dBm
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Output Power

P _{RATED} (typ)	50 dBm / 100 W
P _{LIN1C}	48 dBm / 63 W
P _{LIN2C}	47 dBm / 50 W

Gain (nom)

70 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}	<-30 dBc
OQPSK @ 1x SR @ P _{LIN1C}	<-30 dBc

Input VSWR

2:1 typ

Output VSWR

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	-77 dBm / Hz

Spurious Output

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

Prime Power

	90 to 264 VAC
	50-60 Hz
Optional Power	28 VDC, 48 VDC

Power Consumption

P _{RATED} (typ)	400 W
P _{LIN2C}	280 W

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

Maximum Input Power

+10 dBm

M&C

19-pin connector	RS-485, RS-232
	Optional: Ethernet

Dimensions

L x W x H (in)	13.2" x 5.5" x 5.5"
L x W x H (mm)	335 x 140 x 140

Weight

lbs	11
kg	5