



- Extremely high power density - up to 200W Psat
- Powered by GaN Technology
- Phase noise 8-10dB better than IESS308/309
- Spurious below -60dB
- RF Overdrive Protection
- Switchable LO option - Standard / Extended
- Input and Output True RMS Power Detection
- Redundant Ready - no external controller required
- Antenna Mounting kit optional
- 3 Year GeoSat Product Warranty

## 150W Ku-Band GaN Block Up-Converter (BUC) / SSPA

Model: TPB-KXB0520-HMS0



Section	Item	Specification	
Power Requirement	Voltage	90-265VAC 50-60Hz auto-ranging PFC	
	Power Consumption @ Rated Power	1000W	
	Power Consumption @ 3dB Backoff	600W	
RF Characteristics	RF Frequency Range	14-14.5GHz / 13.75-14.5GHz	
	IF Frequency Range	950-1450MHz / 950-1700MHz	
	LO Frequency	13.05GHz / 12.8GHz	
	Saturated Power	52dBm typ	
	Linear Power	48dBm min	
Interface:	IF Input	N-Female	
	Reference Input	WR75 grooved	
	RF Sample	N-type female	
	M&C -Serial, Analog and Ethernet	MS3112E14-19S	
	Redundant Interface	MS3112E14-19P	
	AC Power In	MS3112E12-3P	
External Reference:	Frequency	10MHz multiplexed with IF In	
	External Ref. Required Phase Noise	-130dBc/Hz @ 100Hz	-140dBc/Hz @ 1kHz
		-150dBc/Hz @ 10kHz	-155dBc/Hz @ 100 kHz

Continued on the next page ▼

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Section	Item	Specification
Transfer Characteristics	Type	Single Conversion; non-inverting
	Frequency Sense	Non-inversion
	Gain	75dB min, 77dB typ
	Gain Flatness ▼	
	<i>Typical</i>	+/-1dB
	<i>Over RF Output band:</i>	+/-1.5dB
	<i>Over any 40 MHz segment</i>	+/-0.5dB max
	Gain Adjustment Range	20dB min dynamic range
	Gain Stability Over Input Power	3dB typ 4dB max from 10dB back off to rated power
	Gain Stability Over Temperature	+/-1.5dB over full temperature range
	Output Spurious ▼	
		-60 dBc Non-Signal Related
		-55 dBc Signal Related
	Linearity: 2 tone IMD Spectral Re-growth	-24dBc at P linear / -30dBc for QPSK at 1.5x symbol rate at Plinear+1dB
	Up-Converter Phase Noise ▼	
	100Hz -68 dBc/Hz max.	
	1kHz -80 dBc/Hz max.	
	10kHz -90 dBc/Hz max.	
	100kHz -95 dBc/Hz max.	
	1mHz -115 dBc/Hz max.	
	Noise Power Density ▼	
		-85dBm/Hz max Transmit Band
		-148dBm/Hz max Receive Band
Environmental:	Operating Temperature Range	-40°C to +55°C
	Humidity	Up to 100% condensing
Physical	Size	(LxWxH): 15.5 "x10"x6.3"
	Weight	28lbs
	Cooling	Forced Air