

ANTBUC® SERIES

SUPER HIGH POWER DENSITY

300W / 400W / 500W KU-BAND

GaN POWERED SSPA / SSPB / BUC



Smaller, lighter and more Powerful AntBUC® Series World's Smallest and Lightest The Most Powerful and Linear GaN Powered Ku-Band SSPA / BUC 300W / 400W / 500W available on the market today AntBUC® Series allows significant high power Solid State Power Amplifier / Block Up Converter size and weight reduction and at the same time substantially improves thermal efficiency, which leads to higher reliability and longer MTBF. That's why IRT offers 3 years warranty for this product line! The new IRT Technologies Powered by GaN Technology 300W / 400W / 500W Ku-Band SSPAs / BUCs AntBUC® series are very compact, light and extremely powerful. Using patent pending Z-combining method and advanced GaN technology new IRT 300W / 400W / 500W Ku-Band AntBUC® SSPA / SSPB / BUC has truly outstanding power density - up to 500W Psat in this super compact 18.5"x11.6"x9.55" package weighing only 72 lbs. IRT 300W / 400W / 500W Ku-Band AntBUC® BUC features best in class RF characteristics, RF sample port, true RMS power measurements, extensive monitor and control capabilities enabled via Ethernet, Serial and/or Analog Interfaces. 300W / 400W / 500W Ku-Band AntBUC® BUC remarkably compact size and high thermal efficiency results in overall system size and cost reduction making it the ideal candidate for mobile and fixed VSAT applications.

KEY FEATURES

- Extremely High Power Density - Up To 500W Psat in 18.5" x 11.6" x 9.55" Only!
- Superior RF Performance:
 - ✓ Phase noise 8-10dB better than IESS308/309
 - ✓ Psat up to 57dBm
 - ✓ Spurious below -60dBc
 - ✓ Wide dynamic range of Gain Control
 - ✓ High linearity
- RF Overdrive Protection
- BUC or SSPA Optional
- Field Upgradable Software
- Internal / Autosense 10MHz Reference Optional
- Available in Standard, Extended and Low Ku-Band
- Switchable LO Option - Standard and Extended Ku-Band in One Unit
- Input and Output True RMS Power Detection
- Configuration via RS-232 serial console, packet protocol RS-485 - User friendly HTTP based GUI and SNMP
- Automated Level Control (ALC) Optional
- Redundant Ready - No External Redundancy Controller Required
- Status LED
- Antenna Mounting Kit Optional
- External Rackmount Remote M&C Panel Optional

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AntBUC®

300W / 400W / 500W Ku-Band Block-Up-Converter GaN Specification

Parameter	300W	400W	500W
RF Performance			
RF Frequency Range-Available in/switched:	14-14.5GHz		13.75-14.5GHz
IF Frequency Range	950-1450MHz		950-1700MHz
LO Frequency	13.05GHz		12.8GHz
Conversion	Single Conversion; non-inverting		
Saturated Power	55dBm / 300W typ.	56dBm / 400W typ.	57dBm / 500W typ.
Linear Power	+52dBm / +150W min.	+53dBm / +200W min.	+54dBm / +250W min.
Conversion Gain	75dB min, 77dB typ		
Gain Flatness	+/-1dB typ +/-1.5dB max over full band; +/-0.5dB max over any 40MHz		
Gain Stability over temperature	+/-1.5dB over full temperature range		
Gain Stability over input power	3dB typ 4dB max from 10dB back off to rated power		
Gain Control	20dB min dynamic range		
External Reference Frequency	10MHz multiplexed with IF In		
External Reference Required Phase Noise	-130dBc/Hz @ 100Hz; -140dBc/Hz @ 1kHz	-150dBc/Hz @ 10kHz	-155dBc/Hz @ 100 kHz
Up-Converter Phase Noise	-68dBc/Hz @ 100Hz; -80dBc/Hz @ 1kHz; -90dBc/Hz @ 10kHz -95dBc/Hz @ 100kHz -115dBc/Hz @ 1MHz		
Linearity: 2 tone IMD Spectral Re-growth	-24dBc at P linear; -30dBc for QPSK at 1.5xsymbol rate at Plinear+1dB		
Noise Power Density:	Transmit Band Receive Band	-85dBm/Hz max -148dBm/Hz max	
Output Spurious:	Non-signal related Signal related	-60dBc -55dBc	
Power			
AC Voltage Range	190-265VAC 50-60Hz Auto-Ranging PFC		
Power Consumption at rated power	2000W	2300W	2400W
Power Consumption at 3 dB back off	1700W	1900W	2000W
Mechanical			
Size	18.5" x 11.6" x 9.55"		
Weight	72lbs		
Cooling	Forced Air		
Operating temperature	-40°C to +55°C		
Relative Humidity	Up to 100% condensing		
Interfaces			
IF Input Connector	N-type female		
RF Output Connector	WR75 grooved		
RF Sample	N-type female		
AC Power In	MS3112E12-3P		
M&C Interface-Serial, Analog and Ethernet	MS3112E14-19S		
Redundant Interface	MS3112E14-19P		
Part Numbering Information			
IRT Part Number	300W	400W	500W
Ext. Ku-Band, AC Power Supply, Ext. 10MHz Ref.	TPB-KXB0550-HMS0	TPB-KXB0560-HMS0	TPB-KXB0570-HMS0

*Contact us for detailed ordering information at sales@irttechnologies.com

Rev.6

** Specifications are subject to change without prior notice

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