150W / 200W / 250W Ku-Band Rackmount SapphireBlu™ SSPA/ SSPB Super Compact SG Series GaN Technology

SSPA	*ARMAg-K*	*SG series*
SSPB (BUC)	*ARMUg-K*	*SG series*



Features

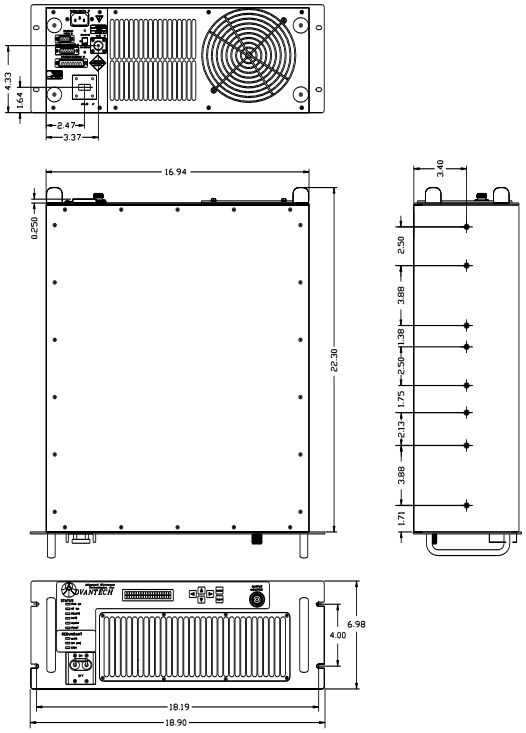
- Output power of 150W to 250W in a compact single package
- High linearity
- Redundant ready with no external controller
- Full M&C capability via RS232, RS485
- Built-in Forward and Reflected precision power metering
- Output RF calibrated Sample Port
- Redundant Systems shipped fully tested
- Infinite VSWR protection with automatic high reflected power shutdown
- Detachable power supply module
- 19” Rackmount, 4RU, 28” deep
- CE marking

Options

- 1:1 or 1:2 Redundant configuration
- L-Band input (SSPB/BUC operation)
- Internal/External reference with auto-sensing
- Ethernet port

Accessories

- Mounting Slides
- Remote M&C panel with optional SNMP
- Flexible and rigid waveguides



Outline

Overview

The new Super Compact SG Series Ku-Band SSPA/BUCs provide highest power density in the industry. Combined with the traditional Advantech Wireless features, these new series of BUCs provide the ultimate in performance and convenience.

150W to 250W Ku-Band Rackmount SSPA/ SSPB SapphireBlu™ GaN Technology

General Specifications

Output Power	150W	200W	250W
$P_{SAT\ (nominal)}$	+ 52.0 dBm	+53.0 dBm	+54.0 dBm
P_{LINEAR}	+48.0 dBm	+49.0 dBm	+50.0 dBm
Operating Frequency	Ku 14.0 – 14.500 GHz	KX 13.75 –14.5 GHz	
L-Band input (BUC)	Ku 950 – 1450 MHz	KX 950 – 1700 MHz	
Gain	SSPA 62 +/- 3 dB	SSPB (BUC) 72 +/- 3 dB	
Gain adjustment range	20 dB in 0.1 dB steps		
Gain flatness over full band	SSPA 2dB p-p max	SSPB (BUC) 4 dB p-p max	
Gain slope over 40 MHz	± 0.3 dB max	SSPB (BUC) ± 0.5 dB max	
Gain variation over temperature	± 1.5 dB max		
Input Impedance and VSWR	50 Ω SSPA 1.3:1	SSPB (BUC) 1.4:1	
Output VSWR	1.3:1		
Noise power density	-75 dBm/Hz in Transmit Band, -145 dBm/Hz in Receive Band (10.95GHz – 12.75 GHz)		
Spurious at $P_{LINEAR\ 1}$	SSPA: -65 dBc max	SSPB (BUC): -55 dBc max	
Harmonics	-50 dBc at P_{LINEAR}		
AM/PM conversion	1º/dB at P_{LINEAR}		
Third order intermod. (two tones)	-25 dBc two signal 5 MHz apart at P_{LINEAR} relative to total power		
Spectral Regrowth	-30 dBc at P_{LINEAR} (for QPSK at 1.5 x symbol rate and OQPSK at 1,0 x symbol rate)		
Group delay	Ripple 1 nsec p-p max over any 40 MHz band		
Residual AM Noise	0 – 10 kHz -45 dBc 10 kHz – 500 kHz -20 (1.25 + log F) dBc F = Frequency in kHz 500 kHz – 1 MHz -80 dBc		
SSPB (BUC)			
ocal Oscillator freq.	Ku –13.050 GHz	KX – 12.800 GHz	
Internal Reference frequency (optional)	10 MHz Aging/day $\pm 2^{-10}$ Aging/year $\pm 5^{-8}$ Stability $\pm 2^{-8}$ over temp range		
Phase Noise	-53 dBc/Hz at 10 kHz -83 dBc/Hz at 10 KHz -63 dBc/Hz at 100Hz -93 dBc/Hz at 100 kHz -73 dBc/Hz at 1000Hz		
External Reference Frequency phase noise (max)	10 MHz -120 dBc/Hz at 10Hz -155 dBc/Hz at 10 kHz -135 dBc/Hz at 100Hz -160 dBc/Hz at 100 kHz -150 dBc/Hz at 1000Hz		
Weight & Dimensions			
Dimension	19” rackmount 4RU high , 28” deep		
Weight	66 lbs (30kg)		
AC input voltage	90-265 VAC (47 – 63 Hz) PF 0.95 min		
Power consumption (typical)	800W at P_{LINEAR} 950W at P_{LINEAR} 1200W at P_{LINEAR} 1000W at P_{SAT} 1100W at P_{SAT} 1400W at P_{SAT}		
Interfaces	Input (RF or L-Band) N type female AC line IEC 320 Inlet Output Sample Port N type female RF output WR75 RS485/RS232/Ethernet DB9 / RJ45		
Environmental	Temperature Operating 0ºC to +50 ºC Storage -55ºC to +85 ºC Humidity 5% to 95% non condensing Altitude 10,000’ AMSL, de-rated by 2 ºC/1000> from AMSL		

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