



**Advantech
Wireless**

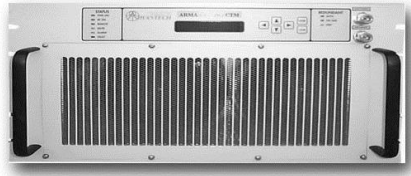
**150W / 200W / 250W Ku-Band Rackmount
SapphireBlu™ SSPA/ SSPB
Super Compact SG Series
GaN Technology**



SSPA
SSPB (BUC)

ARMAg-K
ARMUg-K

SG series
SG series



Features

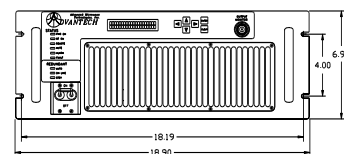
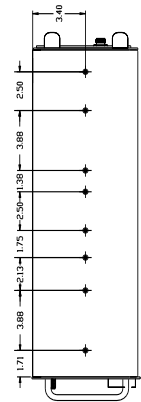
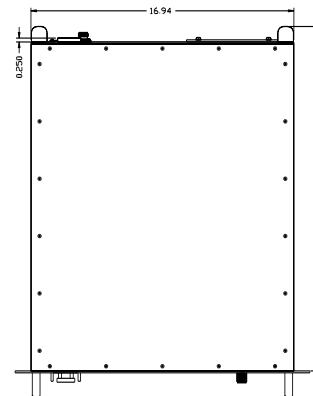
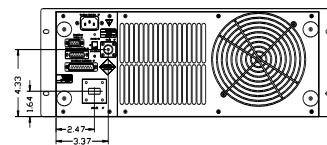
- Output power of 150W to 250W in a compact single package
- High linearity
- Redundant ready with no external controller
- Full M&C capability via RS232, RS485
- Built-in Forward and Reflected precision power metering
- Output RF calibrated Sample Port
- Redundant Systems shipped fully tested
- Infinite 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}	+49.0 dBm		50.0 dBm		+50.5 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)						
Local Oscillator freq.	Ku –13.050 GHz		KX – 12.800 GHz			
Internal Reference frequency (optional)	10 MHz	Aging/day ±2 ⁻¹⁰ Aging/year ±5 ⁻⁸ Stability ±2 ⁻⁸ over temp range				
Phase Noise	-53 dBc/Hz at 10 kHz -63 dBc/Hz at 100Hz -73 dBc/Hz at 1000Hz		-83 dBc/Hz at 10 KHz -93 dBc/Hz at 100 kHz			
External Reference Frequency phase noise (max)	10 MHz -120 dBc/Hz at 10Hz -135 dBc/Hz at 100Hz -150 dBc/Hz at 1000Hz		-155 dBc/Hz at 10 kHz -160 dBc/Hz at 100 kHz			
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} 1000W at P _{SAT}		950W at P _{LINEAR} 1100W at P _{SAT}		1200W at P _{LINEAR} 1500W at P _{SAT}	
Interfaces	Input (RF or L-Band) Output Sample Port RS485/RS232/Ethernet	N type female N type female DB9 / RJ45	AC line RF output	IEC 320 Inlet WR75		
Environmental	Temperature Humidity Altitude	Operating 0°C to +50 °C Storage -55°C to +85 °C 5% to 95% non condensing 10,000’ AMSL, de-rated by 2 °C/1000’ from AMSL				

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