



**Advantech
Wireless**

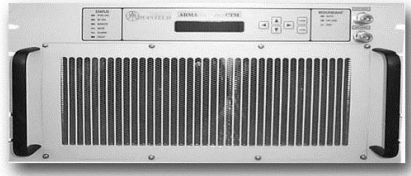
300W / 400W Ku-Band Rackmount SapphireBlu™ SSPA/ SSPB Super Compact SG Series GaN Technology



SSPA
SSPB (BUC)

ARMAg-K
ARMUg-K

SG series
SG series



Features

- Output power of 300W or 400W 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, 5RU, 28" deep
- CE marking

Options

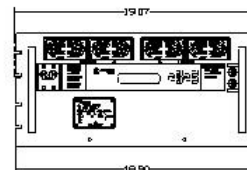
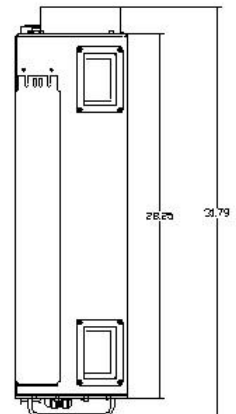
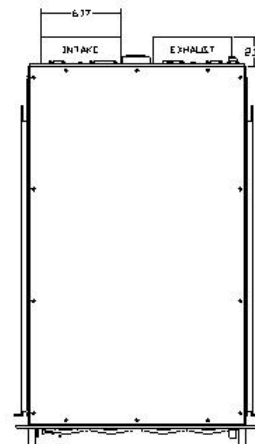
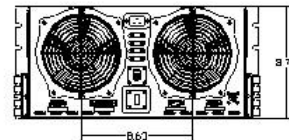
- 1:1 or 1:2 Redundant configuration
- L-Band input (SSPB/BUC operation)
- Internal/External reference with auto-sensing
- Ethernet port

Accessories

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

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.



Outline

300W to 400W Ku-Band Rackmount SSPA/ SSPB SapphireBlu™ GaN Technology

General Specifications				
Output Power	300W		400W	
P _{SAT} (nominal)	+55.0 dBm		+56.0 dBm	
P _{LINEAR}	+51.0 dBm		+52.0 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	67 dB min	SSPB (BUC)	75 dB min
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		-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 5U high , 28” deep			
Weight	99 lbs (44kg)			
AC input voltage	220V AC ± 20% (47 – 63 Hz) PF 0.95 min			
Power consumption (typical)	1800W at P _{LINEAR} 2100W 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 0°C to +50 °C		
		Storage -55°C to +85 °C		
	Humidity	5% to 95% non condensing		
	Altitude	10,000’ AMSL, de-rated by 2 °C/1000’ from AMSL		

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Ref.: PB-SSPBg-Ku-Rack-300W-400W-13325