



SSPA  
SSPB (BUC)

ARMA-Cg  
ARMU-Cg

SG series  
SG series



### Features

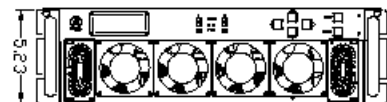
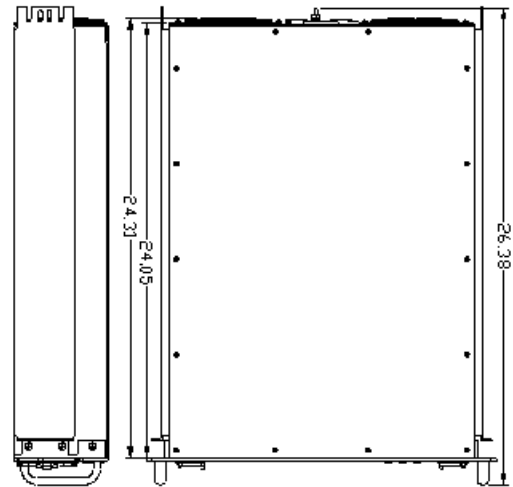
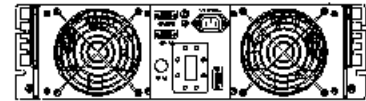
- Full range of output power of 150W to 600W in a compact single package
- High linearity
- Redundant ready with no external controller
- Full M&C capability via RS232, RS485 or Ethernet port
- Built-in Forward and Reflected precision power metering
- Output RF calibrated Sample Port
- Redundant Systems shipped fully tested
- Infinite VSWR protection with automatic high reflected power shutdown
- Detachable power supply module
- 19" Rackmount, 24" deep
- CE marking
- Designed to withstand 20G at 11 ms ½ sine wave non-operating conditions and MIL-STD-810G, method 514-4 transportation vibration

### Options

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

### Accessories

- Mounting kits
- External Harmonics reject filter (-65dBc)
- Remote M&C panel with optional SNMP
- Flexible and rigid waveguides
- High power terminations



Outline

### Overview

The new Super Compact SG Series C-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 600W C-Band Rackmount SSPA/ SSPB SapphireBlu™ GaN Technology

General Specifications							
Output Power	150W	200W	250W	300W	400W	500W	600W
$P_{SAT}$ (typ.)	+52.0 dBm	+53.0 dBm	+54.0 dBm	+54.7 dBm	+56.0 dBm	+57.0 dBm	+57.8 dBm
$P_{LINEAR}$	+48.0 dBm	+49.0 dBm	+50.0 dBm	+51.0 dBm	+52.0 dBm	+53.0 dBm	+54.0 dBm
Operating Frequency	CS 5.85 – 6.425 GHz		CX 5.85 – 6.725 GHz ( Pout = - 0.5 dB less)				
L-Band input (BUC)	CS 950 – 1525 MHz		CX 950 – 1825 MHz				
Gain	SSPA 67 dB min		SSPB (BUC) 77 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	-70 dBm/Hz in Transmit Band, -145 dBm/Hz in Receive Band (3.4GHz – 4.2 GHz)						
Spurious at $P_{LINEAR1}$	SSPA: -65 dBc max		SSPB (BUC): -55 dBc max				
Harmonics	-35 dBc at $P_{LINEAR}$						
AM/PM conversion	1 <sup>o</sup> /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.	4.9 GHz						
Internal Reference frequency (optional)	10 MHz		Aging/day ±2 <sup>-10</sup>		Aging/year ±5 <sup>-8</sup>		
			Stability ±2 <sup>-8</sup> over temp range				
Phase Noise	-88 dBc/Hz at 10 kHz		-73 dBc/Hz at 100Hz		-98 dBc/Hz at 100 kHz		
			-78 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 3U high , 24" deep						
Weight	38 lbs. (17 kg)		48.5 lbs (22 kg)		55.1 lbs (25kg)		
AC input voltage	95 – 265 VAC(47 – 63 Hz) PF0.95 min		95 – 265 VAC(47 – 63 Hz) PF0.95 min		220V AC ± 20% (47 – 63 Hz) PF 0.95 min		
Power consumption (typical)	750W at $P_{LINEAR}$ 900W at $P_{SAT}$		1550W at $P_{LINEAR}$ 1900W at $P_{SAT}$		1800W at $P_{LINEAR}$ 2100W at $P_{SAT}$		
Interfaces	Input (RF or L-Band)		N type female		AC line MS3102 type		
	Output Sample Port		N type female		RF output CPR137		
	RS485/RS232/Ethernet		MS3112 type				
Environmental	Temperature		Operating 0°C to +50 °C				
			Storage -55°C to +85 °C				
	Humidity		100% condensing				
	Altitude		10,000' AMSL, de-rated by 2 °C/1000' from AMSL				

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Ref.: PB-SSPBg-C-Rack- 150W-600W-13200