



**Advantech
Wireless**

150W to 600W C-Band Rackmount SapphireBlu™ SSPA/ SSPB Super Compact SG Series GaN Technology



SSPA
SSPB (BUC)

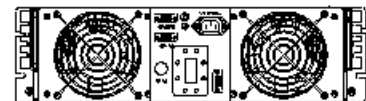
ARMA-Cg
ARMU-Cg

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

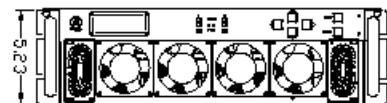
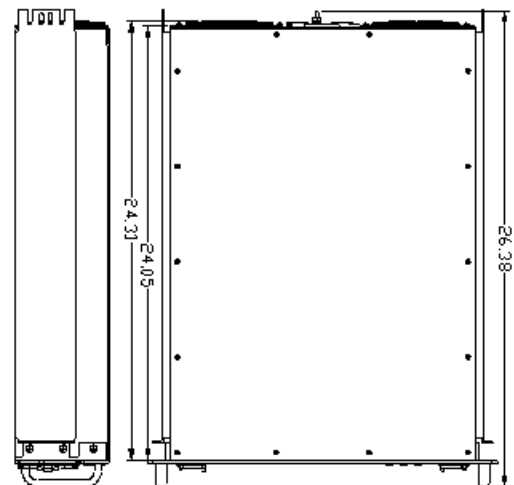
- 1:1 or 1:2 Redundant configuration
- L-Band input (SSPB/BUC operation)
- Internal/External reference with auto-sensing
- Ethernet port

Accessories

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

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.



Outline

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 _{LINEAR 1}	SSPA: -65 dBc max SSPB (BUC): -55 dBc max						
Harmonics	-35 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.	4.9 GHz						
Internal Reference frequency (optional)	10 MHz Aging/day ±2 ⁻¹⁰ Aging/year ±5 ⁻⁸ Stability ±2 ⁻⁸ 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}		1900W at P _{LINEAR} 2400W 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 5% to 95% non-condensing Altitude 10,000’ AMSL, de-rated by 2 °C/1000’ from AMSL						

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Ref.: PB-SSPBg-C-Rack- 150W-600W-13325