



**Advantech
Wireless**

80W to 125W 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 80W to 125W 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

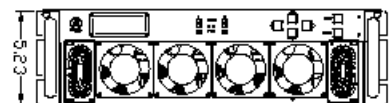
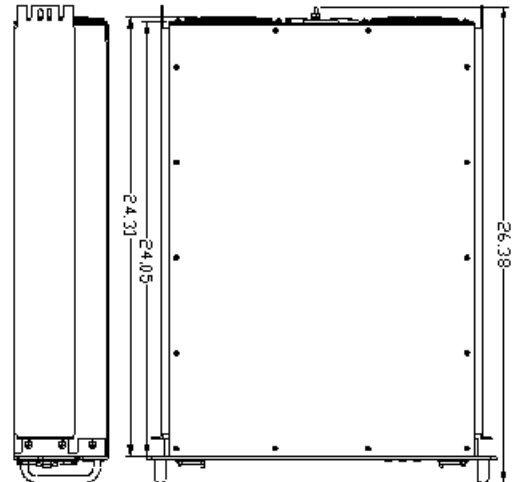
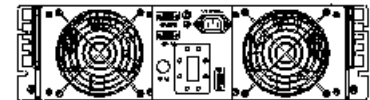
- 1:1 or 1:2 Redundant configuration
- L-Band input (SSPB/BUC operation)
- Internal/External reference with auto-sensing
- Ethernet port

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

80W to 125W C-Band Rackmount SSPA/ SSPB SapphireBlu™ GaN Technology



General Specifications					
Output Power	80W		100W		125W
P _{SAT} (typ.)	+49.0dBm		+50.0 dBm		+51.0 dBm
P _{LINEAR}	+45.0 dBm		+46.0 dBm		+47.0 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	35.2 lbs. (16 kg)				
AC input voltage	95 – 265 VAC(47 – 63 Hz) PF0.95 min				
Power consumption (typical)	500W at P _{LINEAR} 600W at P _{SAT}		550W at P _{LINEAR} 650W at P _{SAT}		600W at P _{LINEAR} 700W 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				

NORTH AMERICA
USA
Tel: +1 703 659 9796
Fax: +1 703 635 2212
info.usa@advantechwireless.com

CANADA
Tel: +1 514 420 0045
Fax: +1 514 420 0073
info.canada@advantechwireless.com

EUROPE
UNITED KINGDOM
Tel: +44 1480 357 600
Fax: +44 1480 357 601
info.uk@advantechwireless.com

RUSSIA & CIS
Tel: +7 495 971 59 18
info.russia@advantechwireless.com

INDIA
Tel: +91 33 2415 5922
info.india@advantechwireless.com

SOUTH AMERICA
Tel: +1 514 420 0045
Fax: +1 514 420 0073
info.latam@advantechwireless.com

BRAZIL
Tel: +55 11 3054 5701
Fax: +55 11 3054 5701
info.brazil@advantechwireless.com

An ISO 9001 : 2008 Company



Ref.: PB-SSPBg-C-Rack- 80W-125W-13325