

# 150W/ 200W/ 250W/ 300W/ 400W/ 500W/ 600W C-Band Indoor BUC/SSPB/SSPA Second Generation GaN Technology

## SapphireBlu™ Super Compact

SSPA	ARMAg-C	SG series
SSPB (BUC)	ARMUg-C	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 precision powering 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

## Overview

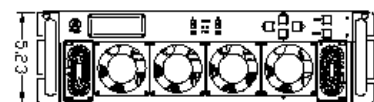
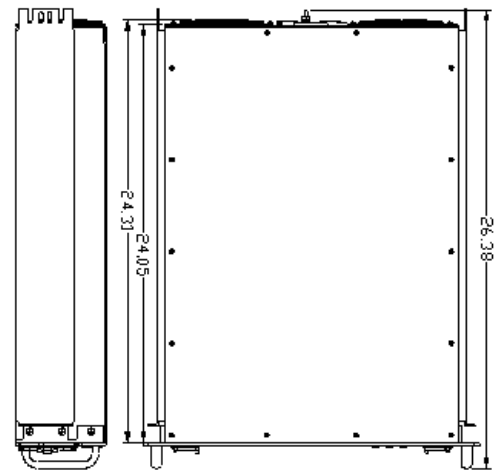
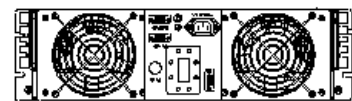
The new Super Compact SG Series C-Band SSPA/BUCs provide highest power density in the industry. Combined with the traditional Advantech Wireless features, these new series of BUCs provide the ultimate in performance and convenience.

## Accessories

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

## Options

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



## 150W/ 200W/ 250W/ 300W/ 400W/ 500W/ 600W C-Band Indoor BUC/SSPB/SSPA Second Generation GaN Technology

Technical Specifications							
Output Power	150W	200W	250W	300W	400W	500W	600W
$P_{SAT}$ (typ.)	+52.0 dBm	+53.0 dBm	+54.0 dBm	+55.0 dBm	+56.0 dBm	+57.0 dBm	+57.8 dBm
$P_{LINEAR}$	+49.0 dBm	+50.0 dBm	+51.0 dBm	+52.0 dBm	+53.0 dBm	+54.0 dBm	+55.0 dBm
	P <sub>LINEAR</sub> is the power at which the IMD=-25 dBc for two CW signals 5 MHz apart and the spectral regrowth is <-30 dBc @ 1.0 x symbol rate for a single QPSK/OQPSK/8PSK signal						
Operating Frequency	CS 5.850 – 6.425 GHz	CX 5.850 – 6.725 GHz	Pout = - 0.5 dB less)		CRL 5.750 – 6.670 GHz		
L-Band input (BUC)	CS 950 – 1525 MHz	CX 950 – 1825 MHz			CRL 950 – 1870 MHz		
Gain	SSPA 70dB min	SSPB (BUC)		77dB 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	± 0.5 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 (3.4GHz – 4.2 GHz)						
Spurious at $P_{LINEAR}$	SSPA: -65 dBc max SSPB (BUC): -55 dBc max						
Harmonics	-35 dBc at $P_{LINEAR}$						
AM/PM conversion	1°/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 for CS/CX-band			4.8 GHz for CRL-band			
Internal Reference frequency (optional)	10 MHz	Aging/day $\pm 2 \times 10^{-10}$		Aging/year $\pm 5 \times 10^{-8}$	Stability $\pm 2 \times 10^{-8}$ over temp range		
Phase Noise	-78 dBc/Hz at 100Hz	-95 dBc/Hz at 10 kHz					
	-85 dBc/Hz at 1 kHz	-112 dBc/Hz at 100 kHz					
External Reference	10 MHz						
Frequency phase noise (max)	-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							
Dimensions (L x W x H)	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) PF 0.95 min		220V AC $\pm$ 20% (47 – 63 Hz) PF 0.95 min	
Power consumption (nominal)	650W at $P_{LIN}$ 800W at $P_{SAT}$	700W at $P_{LIN}$ 850W at $P_{SAT}$	800W at $P_{LIN}$ 950W at $P_{SAT}$	1000W at $P_{LIN}$ 1200W at $P_{SAT}$	1350W at $P_{LIN}$ 1600W at $P_{SAT}$	1500W at $P_{LIN}$ 1900W at $P_{SAT}$	1700W at $P_{LIN}$ 2000W 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					

Ref.: PB-SSPBg-2G-C-Rack-150W-600W-18145

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