

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

SapphireBlu™

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

Features

- Full range of output power of 150W to 500W 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 10G at 11 ms ½ sine wave non-operating conditions and MIL-STD-810G, method 514-4 transportation vibration.

Overview

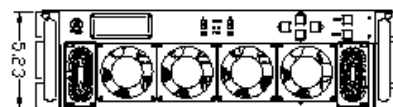
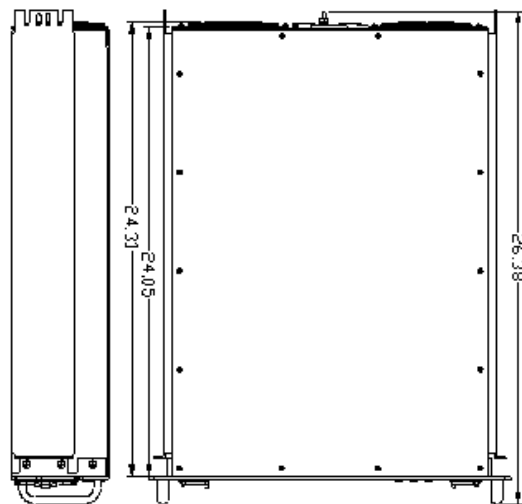
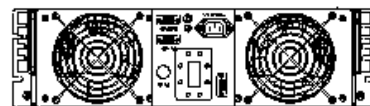
The SG Series C-Band SSPA/BUCs provide highest power density in the industry. Combined with the traditional Advantech Wireless features, these new series of BUCs provide the ultimate in performance and convenience.

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





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Technical Specifications						
Output Power	150W	200W	250W	300W	400W	500W
P _{SAT} (typ.)	+52.0 dBm	+53.0 dBm	+54.0 dBm	+55.0 dBm	+56.0 dBm	+57.0 dBm
P _{LINEAR}	+49.0 dBm	+50.0 dBm	+50.5 dBm	+52.0 dBm	+53.0 dBm	+53.5 dBm
Operating Frequency	CS: 5.850 – 6.425 GHz	CX: 5.850 – 6.725 GHz	Ci-Band: 6.725 – 7.025 GHz		CRL: 5.750 – 6.670 GHz	
L-Band input (BUC)	CS: 950 – 1525 MHz	CX: 950 – 1825 MHz	Ci-Band: 1275 -1575 MHz		CRL: 950 – 1870 MHz	
Gain	SSPA 67 dB min	SSPB (BUC) 75dB 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	SSPA ± 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, -155 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 IMD (two tones)	-25 dBc max (two tones 5 MHz apart at P _{LINEAR} relative to the single tone level)					
Spectral Regrowth	-30 dBc max at P _{LINEAR} (for QPSK, 8PSK, 16APSK at 1.5 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 ±2 × 10 ⁻¹⁰		Aging/year ±5 × 10 ⁻⁸	Stability ±2 × 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 Frequency phase noise (max)	10 MHz	-120 dBc/Hz at 10Hz		-155 dBc/Hz at 10 kHz		-135 dBc/Hz at 100Hz
		-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)			220V AC ± 20%		
	PF0.95 min			(47 – 63 Hz) PF 0.95 min		
Power consumption (nominal)	1000W at P _{LIN}	1300W at P _{LIN}	1500W at P _{LIN}	1700W at P _{LIN}	2000W at P _{LIN}	2200W at P _{LIN}
	1300W at P _{SAT}	1700W at P _{SAT}	1900W at P _{SAT}	2400W at P _{SAT}	2700W at P _{SAT}	2900W at P _{SAT}
Interfaces	Input (RF or L-Band)	N type female	RF output	CPR 137	AC line	IEC 320 inlet
	Output Sample Port	SMA female	RS-232 serial port	D-sub 9S	RS-485	D-sub 9S
	Redundancy	D-sub 25S	Relay	D-sub 9P	Ethernet (option)	RJ-45
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-500W-20265

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