

80W / 100W / 125W 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 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 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

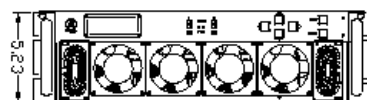
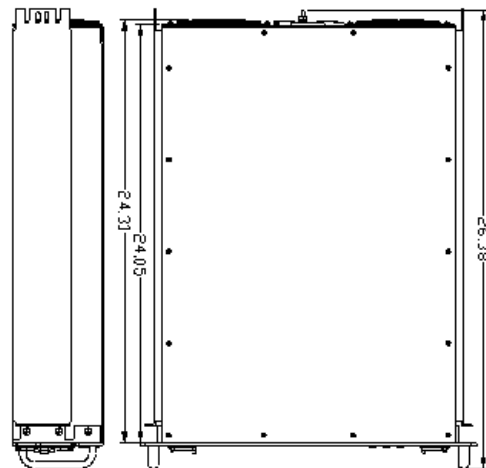
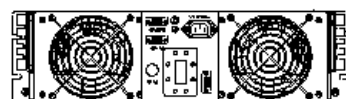
The new Super Compact SG Series C-Band SSPA/BUCs provide highest power density in the industry. Combined with the traditional Advantech Wireless features, these new series of BUCs provide the ultimate in performance and convenience.

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



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Technical Specifications					
Output Power	80W		100W		125W
P_{SAT} (typ.)	+49.0 dBm		+50.0 dBm		+51.0 dBm
P_{LINEAR}	+46.0 dBm		+47.0 dBm		+48.0 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}	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				
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	-88 dBc/Hz at 10 kHz				
	-73 dBc/Hz at 100Hz		-98 dBc/Hz at 100 kHz		
	-78 dBc/Hz at 1000Hz				
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	35.2 lbs (16 kg)				
AC input voltage	95-265 VAC (47 – 63 Hz) PF 0.95 min				
Power consumption (nominal)	380W at P_{LINEAR}		400W at P_{LINEAR}		450W at P_{LINEAR}
	480W at P_{SAT}		500W at P_{SAT}		550W at P_{SAT}
Interfaces	Input (RF or L-Band): N type female		AC line: IEC 320 Inlet		
	Output Sample Port: N type female		RF output: CPR137G		
	RS485/RS232: DB9		Ethernet: RJ45		
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-80W-125W-001-18145

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