



SSPA ARMA-Xg SG series
SSPB (BUC) ARMU-Xg 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
- 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

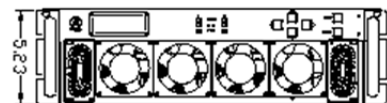
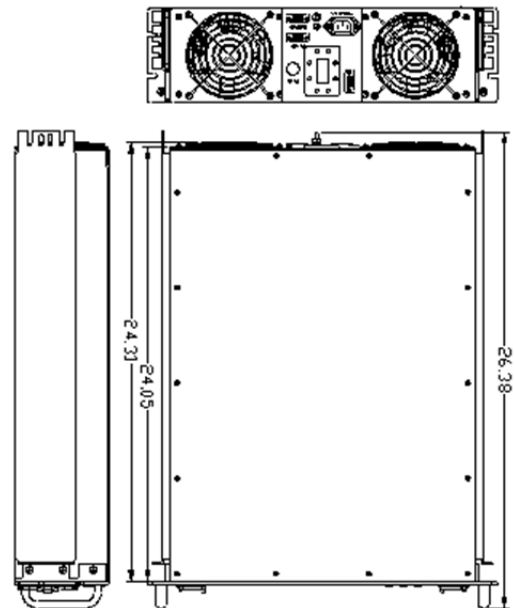
- 1:1 or 1:2 Redundant configuration
- L-Band input (SSPB/BUC operation)
- Internal/External reference with auto-sensing
- Ethernet port

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 X-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 X-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	+53.2 dBm	+55 dBm	+56.0 dBm	+56.2 dBm	+56.5 dBm
P _{LINEAR} is the power at which the IMD specs are met and the spectral regrowth is <-30 dBc @ 1.0 x symbol rate for QPSK/OQPSK/8PSK modulation	+48.0 dBm	+49.0 dBm	+50.0 dBm	+51.0 dBm	+52.0 dBm	+53.0 dBm	+54.0 dBm
Operating Frequency	7.9-8.4 GHz						
L-Band input (BUC)	950 – 1450						
Gain	SSPA 67dB 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	± 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	Aging/year ±5 ⁻⁸			
		Stability	±2 ⁻⁸ over temp range				
Phase Noise	-88 dBc/Hz at 10 kHz		-73 dBc/Hz at 100Hz				
			-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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