

300W / 400W / 500W Ku-Band Indoor BUC/SSPB/SSPA Second Generation GaN Technology



SapphireBlu™ Super Compact

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

Features

- Output power of 300W, 400W or 500W in a compact single package
- High linearity
- Redundant ready with no external controller
- Full M&C capability via RS232, RS485
- 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, 5RU, 28" deep
- CE marking



Options

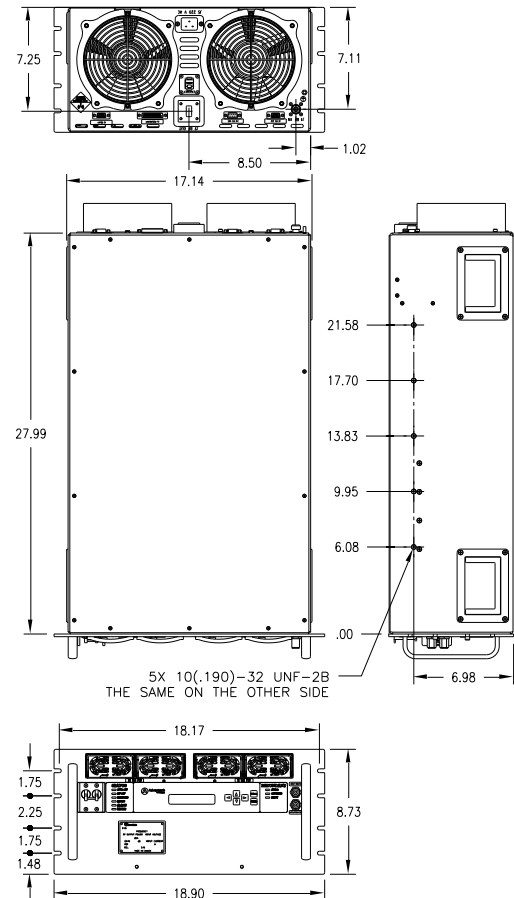
- 1:1 or 1:2 Redundant configuration
- L-Band input (SSPB/BUC operation)
- Internal/External reference with auto-sensing
- Ethernet port

Accessories

- Mounting slides
- Remote M&C panel with optional SNMP
- Flexible and rigid waveguides

Overview

The new Super Compact SG Series Ku-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.



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Technical Specifications					
Output Power	300W		400W		500W
P_{SAT} (nominal)	+55.0 dBm		+56.0 dBm		+57.0 dBm
P_{LINEAR}	+52.0 dBm		+53.0 dBm		+54.0 dBm
Operating Frequency	Ku	14.0 – 14.500 GHz	KX	13.75 – 14.5 GHz	
L-Band input (BUC)	Ku	950 – 1450 MHz	KX	950 – 1700 MHz	
Gain	SSPA	67 dB min	SSPB (BUC)	75 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	-75 dBm/Hz in Transmit Band, -145 dBm/Hz in Receive Band (10.95GHz – 12.75 GHz)				
Spurious at P_{LINEAR}	SSPA: -65 dBc max		SSPB (BUC): -55 dBc max		
Harmonics	-50 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.	Ku –13.050 GHz		KX – 12.800 GHz		
Internal Reference frequency (optional)	10 MHz				
Phase Noise	Aging/day	±2 × 10 ⁻¹⁰	Aging/year	±5 × 10 ⁻⁸	
			Stability	±2 × 10 ⁻⁸ over temp range	
External Reference Frequency phase noise (max)	-53 dBc/Hz at 10 kHz	-73 dBc/Hz at 1000Hz		-93 dBc/Hz at 100 kHz	
	-63 dBc/Hz at 100Hz	-83 dBc/Hz at 10 kHz			
External Reference	10 MHz				
Frequency phase noise (max)	-120 dBc/Hz at 10Hz	-150 dBc/Hz at 1000Hz		-160 dBc/Hz at 100 kHz	
	-135 dBc/Hz at 100Hz	-155 dBc/Hz at 10 kHz			
Weight & Dimensions					
Dimensions (L x W x H)	19" rackmount 5U high , 28" deep				
Weight	99 lbs (44kg)				
AC input voltage	220V AC ± 20% (47 – 63 Hz) PF 0.95 min				
Power consumption (nominal)	1800W at P_{LINEAR}	2300W at P_{LINEAR}		2600W at P_{LINEAR}	
	2500W at P_{SAT}	3100W at P_{SAT}		3500W at P_{SAT}	
Interfaces	Input (RF or L-Band): N type female Output Sample Port: N type female RS485/RS232: DB9		AC line: IEC 320 Inlet RF output: WR75 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-Ku-Rack-300W-500W-001-19049

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