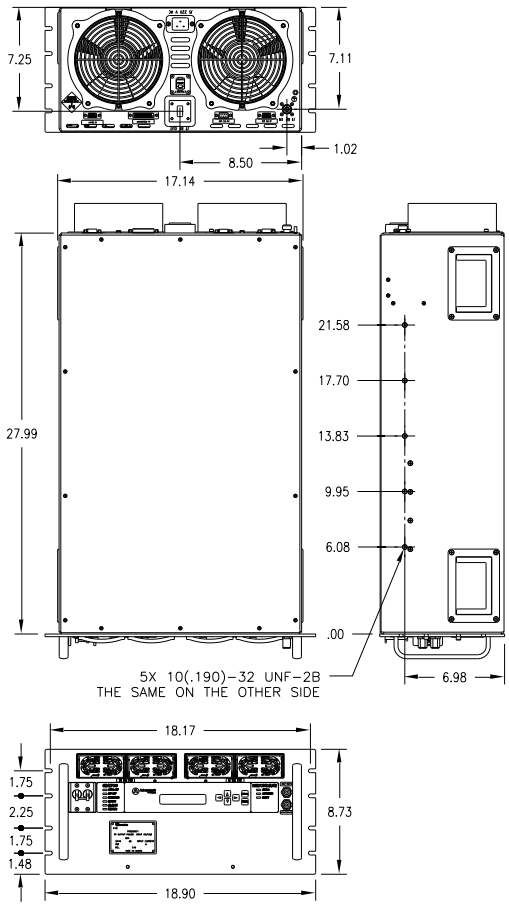
300W / 400W / 500W Ku-Band Indoor BUC/SSPB/SSPA Second Generation GaN Technology

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 Aging/day ±2 × 10^{-10}	Aging/year ±5 × 10^{-8}	Stability ±2 × 10^{-8} over temp range
Phase Noise	-53 dBc/Hz at 10 kHz -63 dBc/Hz at 100Hz	-73 dBc/Hz at 1000Hz -83 dBc/Hz at 10 KHz	-93 dBc/Hz at 100 kHz
External Reference Frequency phase noise (max)	10 MHz -120 dBc/Hz at 10Hz -135 dBc/Hz at 100Hz	-150 dBc/Hz at 1000Hz -155 dBc/Hz at 10 kHz	-160 dBc/Hz at 100 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)	2100W at P_{LINEAR} 2900W at P_{SAT}	2300W at P_{LINEAR} 3100W at P_{SAT}	2600W at P_{LINEAR} 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-001-18145

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