

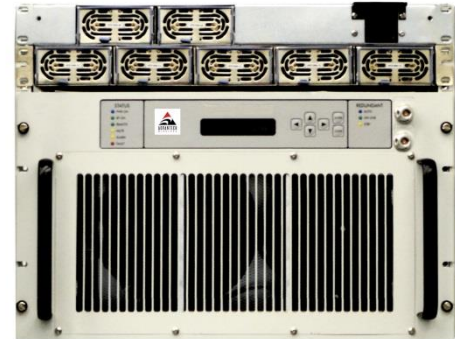
800W Ku-Band Indoor BUC/SSPB/SSPA Second Generation GaN Technology



SSPA	ARMAg-K	5200-SapphireBlu™ series
SSPB (BUC)	ARMUg-K	5200-SapphireBlu™ series

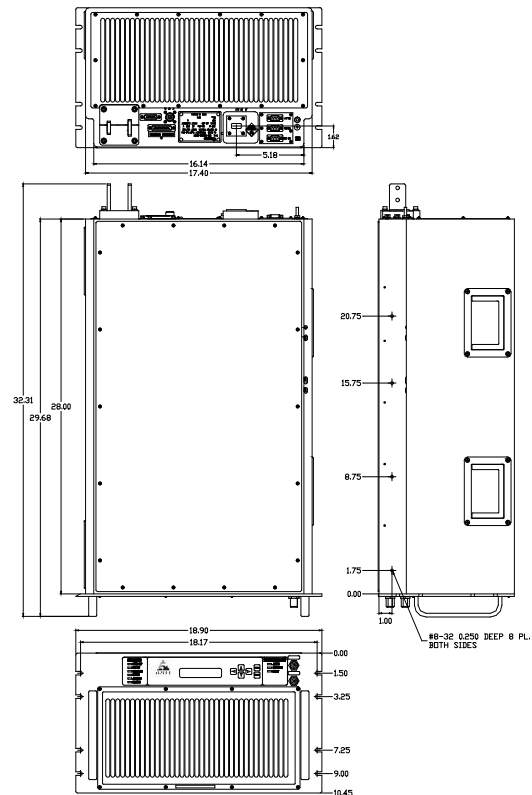
SapphireBlu™ Super Compact

- High power density in a compact indoor package
- UltraLinear™, designed for Multi Carrier Operations
- High Performance GaN Technology SSPA Indoor design concept
- High Reliability, High Linearity, Low Energy Consumption



The Ultimate Solution for Direct to Home TV

- We can now saturate all transponders of an entire satellite and obtain maximum bandwidth/power efficiency! (using modular RF concept)
- 2 years warranty, due to increased GaN Technology reliability
- Backed by over 25 years of Indoor SSPA design and manufacturing



- Exceeds all barriers between Klystrons, TWTs and SSPAs
- Save Millions of dollars in Energy Cost, Satellite Bandwidth, CAPEX
- Can cover multiple transponders, full DVB-S2 enabled
- Indoor Package, MIL-STD-188-164A Compliant
- Redundant Ready, Power Expandable to
- 3kW by phase combining

800W Ku-Band Indoor BUC/SSPB/SSPA Second Generation GaN Technology

Technical Specifications					
Output Power		800W			
P_{SAT} , PA Module		+59.0 dBm nominal			
P_{SAT} , at Flange		+58.0 dBm nominal			
P_{1dB}		57.0 dBm			
P_{LINEAR}		+55.0 dBm minimum			
	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				
Operating Frequency	KS	14.0 – 14.500 GHz	KX	13.75 – 14.5 GHz	
L-Band input (BUC)	KS	950 – 1450 MHz	KX	950 – 1700 MHz	
Gain	SSPA	68 ± 3 dB	SSPB (BUC)	78 ± 3 dB	
Gain adjustment range	20 dB in 1.0 dB steps				
Gain flatness over full band	SSPA	2dB p-p max	SSPB (BUC)	4 dB p-p max (KS); 4dB p-p (KX)	
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 (10.95 GHz – 12.75 GHz)				
Spurious at P_{LINEAR}	SSPA:	-65 dBc max	SSPB (BUC):	-55 dBc max	
Harmonics	-50 dBc @ P_{LINEAR}				
AM/PM conversion	<1.0°/dB P_{LINEAR}				
Third order intermod (two tones)	-25 dBc two signals 5 MHz apart versus total +56 dBm P_{LINEAR}				
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.	KS	-13.050 GHz	KX	-12.800 GHz	
Internal Reference frequency (optional)	10 MHz	Aging/day	±2 × 10 ⁻¹⁰	Aging/year	±5 × 10 ⁻⁸
Phase Noise	-53 dBc/Hz at 10 kHz	-73 dBc/Hz at 1000Hz	Stability		±2 × 10 ⁻⁸ over temp range
	-63 dBc/Hz at 100Hz	-83 dBc/Hz at 10 kHz			
External Reference Frequency phase noise (max)	10 MHz	-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 6 RU + 2 RU Power supply 28" deep				
Weight	198 lbs (90 kg)				
AC input voltage	190 – 265 VAC (47-63 Hz)				
Power consumption (nominal)	3.5kW at 53 dBm	4.8 kW at P_{LINEAR}	6.0kW 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: WR75 Cover		
	RS485/ Ethernet: DB9/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-800W-001-18352

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