

DeepBlu Series - Advanced Solid State Technology for Satellite TT&C and Deep Space Communication

4.0kW L / S-Band Modular SSPA System

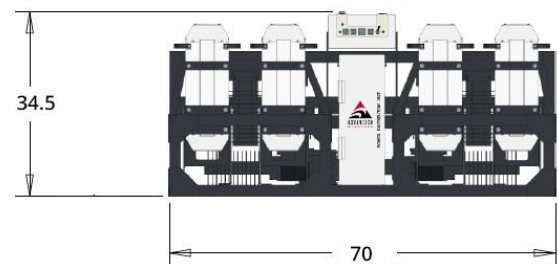
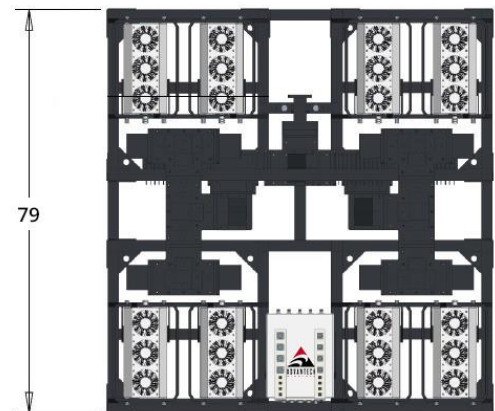
SSPA AWMA-LS 4000
DeepBlu™ Series 1.76 - 2.16 GHz

UltraLinear™ DeepBlu™ Series Solid State Technology for Satellite TT&C and Deep Space Communication

- High power density in a compact, rugged, weatherproof package
- Designed for Multi Carrier Operations
- High Reliability, and Availability, delivers 1600kW/2000kW of Linear Power
- High Performance Modular, Built In Redundancy Outdoor design concept

The Ultimate Solution for Deep Space Communication and Sophisticated TT&C applications for LEO/MEO/GEO Satellites

- Can cover both L and S bands, from 1.76-2.16 GHz
- Achieves 1.6kW of Linear RF power even with one RF module failed
- Rugged, Weatherproof Outdoor Package, very high availability
- 1:N Built in Redundancy, Field replaceable RF module
- Reduced OPEX cost due to less spare parts required
- Backed by over 25 years of Outdoor SSPA design and manufacturing



4.0kW L / S-Band Modular SSPA System

Advanced Solid State Technology

Specifications	L / S	
Operating Frequency	1.76 – 2.16 GHz	
Saturated Output Power *	4.7 kW * (4kW)	
P _{SAT} , at Flange *	+66.6 dBm nominal	
P _{LINEAR}	+63.6 dBm minimum	
	P _{LINEAR} is the power at which the IMD=-25 dBc for two CW signals 5 MHz apart	
Gain	SSPA 65 dB Min	
Gain adjustment range	20 dB in 0.1 dB steps	
Gain flatness over full band	SSPA 3 dB p-p max	
Gain slope over 25 MHz	± 0.3 dB max	
Gain variation over temperature	± 1.5 dB max	
Input Impedance and VSWR	50 Ω 1.5:1	
Output VSWR	1.3:1	
Noise power density	-80 dBm/Hz in Transmit Band, -90 dBm/Hz in Receive Band (2.2-2.4 GHz)	
Spurious at P _{LINEAR}	-60 dBc max In Band	
Harmonics	-60 dBc @ P _{LINEAR}	
AM/PM conversion	<1.0°/dB P _{LINEAR}	
Third order intermod (two tones)	-25 dBc two signals 5 MHz at Plin	
Group delay	Ripple 1 nsec p-p max over any 25 MHz band	
Residual Phase Noise, Continuous	-60 dBc/Hz at 10Hz -115 dBc/Hz at 100 KHz -90 dBc/Hz at 100Hz -125 dBc/Hz at 1 MHz -100 dBc/Hz at 1000Hz -130 dBc/Hz at 10 MHz -110 dBc/Hz at 10 kHz -130 dBc/Hz at 100 MHz	
Weight & Dimensions		
Dimensions (L x W x H)	79 x 70 x 34.5	
Weight	1050 kg	
AC input voltage	400/230 VAC, three-phase (47-63 Hz)	
Power consumption	25 kVA (at Plin)	
Interfaces	Input N-type female Output Sample Port - N type female RF output - WR430 RS485/Ethernet MS3112 type	
Environmental	Temperature Operating -30°C to +55 °C Option 1 -40°C to +55 °C Storage -55°C to +85 °C Humidity 100% condensing Altitude 10,000' AMSL, derated by 2 °C/1000' from AMSL	

*Note: The unit is designed to transmit at 2.0/1.6 kW Linear Power. Internal Overdrive Protection will not allow to reach Psat, and will limit the total power to Linear Power Only

Ref.: PB-AWT-DB-LS-400W-20289

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