



**Advantech
Wireless**



**SapphireBlu™ Class
Solid State GaN Technology
2,000W DBS-Band Hubmount
UltraLinear™ Modular SSPA/ SSPB**

**SSPA
SSPB (BUC)**

**AWMAg-DBS 7000-SapphireBlu™ series
SSPBMg-DBS 7000-SapphireBlu™ series**



**THE ULTIMATE SOLUTION FOR
DIRECT TO HOME TV**

Save 8 to 10 dB power compared to Indoor Klystron

Save Millions of dollars in Energy Cost, Satellite Bandwidth, CAPEX

Can cover multiple transponders, full DVB-S2 enabled

Rugged, Weatherproof Outdoor Package, MIL-STD-188-164A Compliant

Built in Redundancy, Field replaceable RF or Power Supplies Modules

- High power density in a compact, rugged, weatherproof package
- UltraLinear™, designed for Multi Carrier Operations
- High Performance GaN Technology SSPA Outdoor Modular design concept
- High Reliability, High Linearity, Built in Redundancy

- ⇒ **The Highest Linear Power Available!** Exceeds all barriers between Klystrons, TWTs and SSPAs
- ⇒ **We can now saturate all transponders of an entire satellite and obtain maximum bandwidth/power efficiency!**
- ⇒ **3 years warranty, due to increased GaN Technology reliability**
- ⇒ **Backed by over 25 years of Outdoor SSPA design and manufacturing.**



Please call or visit our site for more information >>>

www.AdvantechWireless.com

Specifications	DBS		
Operating Frequency	17.3 –18.1 GHz		
L-Band input (BUC)	950 – 1750 MHz		
Output Power	2000W		
PSAT, PA Module	+63.0 dBm nominal		
P _{SAT} , at Flange	+62.5 dBm nominal		
PLINEAR	+59 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 QPSK/OQPSK/8PSK modulation		
Gain SSPA	68 ± 3 dB		
SSPB (BUC)	78 ± 3 dB		
Gain adjustment range	20 dB in 0.1 dB steps		
Gain flatness over 500 MHz	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 (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 power (59 dBm Plinear)		
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.	16.350 GHz		
Internal Reference frequency (optional)	10 MHz	Aging/day	±2 ⁻¹⁰
		Aging/year	±5 ⁻⁸
		Stability	±2 ⁻⁸ over temp range
Phase Noise	-53 dBc/Hz at 10Hz		-83 dBc/Hz at 10 kHz
	-63 dBc/Hz at 100Hz		-93 dBc/Hz at 100 kHz
	-73 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			
Dimensions	L x W x H 81.00" x 63.00" x 47.00" (206 x 160 x 120 cm)		
Weight	1320 lbs (600 kg)		
AC input voltage	190 – 265 VAC (47-63 Hz)		
Power consumption	20,000W at P _{LINEAR} 25,000W at P _{SAT}		
Interfaces	Input (RF or L-Band) - N type female	AC line	MS3102 type
	Output Sample Port - N type female	RF output -	WR62 Cover
	RS485/Ethernet	MS3112 type	
Environmental	Temperature	Operating -30°C to +55 °C	Option 1 -40°C to +55 °C Option 2 -50°C to +50 °C
		Storage -55°C to +85 °C	
	Humidity	100% condensing	
Altitude	10,000' AMSL, derated by 2 °C/1000' from AMSL		

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