



**Advantech
Wireless**



SapphireBlu™ Class Solid State GaN Technology

3,000W Ku-Band Hubmount UltraLinear™ Modular SSPA/ SSPB

SSPA AWMAg-K 7000-SapphireBlu™ series
SSPB (BUC) SSPBMg-K 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

- ⇒ 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.



- 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



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

www.AdvantechWireless.com

Specifications	KS / KX		
Operating Frequency	14.0 – 14.5 GHz / 13.75 – 14.5 GHz		
L-Band input (BUC)	950 – 1450 MHz / 950 – 1700 MHz		
Output Power	3000W		
PSAT, PA Module	+64.7 dBm nominal		
P _{SAT} , at Flange	+64.0 dBm nominal		
PLINEAR	+61.0 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 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 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	<1.0º/dB P _{LINEAR}		
Third order intermod (two tones)	-25 dBc two signals 5 MHz apart versus total power (61.0 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.	13.05 GHz		12.8 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 - WR75 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
	Humidity	Storage -55°C to +85 °C 100% condensing	
	Altitude	10,000’ AMSL, derated by 2 °C/1000’ from AMSL	

NORTH AMERICA
USA
Tel: +1 703 659 9796
Fax: +1 703 635 2212
info.usa@advantechwireless.com

CANADA
Tel: +1 514 420 0045
Fax: +1 514 420 0073
info.canada@advantechwireless.com

EUROPE
UNITED KINGDOM
Tel: +44 1480 357 600
Fax: +44 1480 357 601
info.uk@advantechwireless.com

RUSSIA & CIS
Tel: +7 495 971 59 18
info.russia@advantechwireless.com
INDIA
Tel: +91 33 2415 5922
info.india@advantechwireless.com

SOUTH AMERICA
Tel: +1 514 420 0045
Fax: +1 514 420 0073
info.latam@advantechwireless.com

BRAZIL
Tel: +55 11 3054 5701
Fax: +55 11 3054 5701
info.brazil@advantechwireless.com

An ISO 9001: 2008 Company



Ref.: PB-SAPPH-Ku-3000-14148

www.advantechwireless.com
Specifications are subject to change without notice