

## S-BAND RACK-MOUNT SSPA 500W to 1000W ARMA-5000S® series



#### **KEY FEATURES**

- High gain and linearity
- Output power up to 1000W
- Gain adjustment (Local & Remote)
- Remote Monitor & Control (Local & Remote)
- Output sample monitor port
- > Temperature gain compensation
- > Automatic over-temperature shutdown
- Automatic high reflected power shutdown
- Infinite VSWR protection
- Power factor correction
- CE Marking

#### **OPTIONS**

- Integrated Block Up Converter
- > RF input sample port
- Redundant system

#### **ACCESSORIES**

- Redundancy Kit
- Shelf slides
- Band pass filter
- Remote M&C panel (Ethernet port optional)

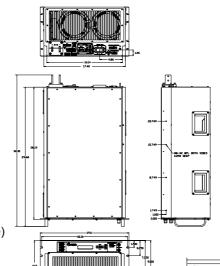
#### **OVERVIEW**

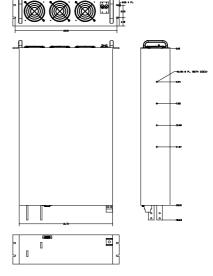
The ARMA-5000S® series are the rack-mount solid-state power amplifiers (SSPAs), operating in S-Band frequency range. The amplifier is an integrated unit, complete with power supply and cooling system. Intended for indoor operation, the amplifiers are of compact size and occupy nine rack-mounting spaces (9 RU - 15³/₄") of a standard 19-inch rack. Built-in microprocessor controller provides capability for serial port interfaces (RS485) for remote monitoring and control.

Advantech's SSPAs set the industry standard for linearity and operating efficiency. Built-in design features and assembly methods incorporated with efficient combining techniques result in the trouble-free operation of the amplifier.

#### **APPLICATION**

The featured SSPAs are designed for S-Band satellite up-link applications. They are designed for 19-inch rack mounting in a protected environment. The ARMA-S series are available in output power from 100W to 1000W. For higher power Advantech provides phase-combined systems.





### Table A

Band	RF Band (GHz)	Output Power (W)
S	2.025 - 2.120	500 - 1000

Other SSPAs are available for operation at other satellite frequency bands. With all the features of the ARMA-S, Advantech also offers a built-in converter.

#### REDUNDANCY

With the addition of the appropriate waveguide and switch kit, the ARMA-5000S® amplifiers can be easily converted for the operation in 1:1 redundant configuration without the use of any external controller. Full remote Monitor and Control of the redundant system is accessible via the serial port (RS-485).



# S-BAND RACK-MOUNT SSPA 500W to 1000W **ARMA-5000S**® **series**



TECHNICAL SPECIFICATIONS	500W	600W	700W	800W	1000W		
Electrical Characteristics							
Availability in this series							
S	√	√	√	√	√		
Output power (P <sub>SAT</sub> )	+57 dBm	+58 dBm	+58.5 dBm	+59 dBm	+60 dBm		
Output power (P1dB) min	+56 dBm	+57 dBm	+57.5	+58 dBm	+59 dBm		
Gain at maximum setting	70 dB min						
Frequency range	2.025 - 2.120 GHz						
Gain adjustment range	20 dB						
Max input power without damage	+10 dBm						
Gain flatness	±2.0 dB max over full band						
Gain slope	±0.6 dB over 10 MHz at 25°C 0.015 dB/MHz, max						
Gain variation over temperature	±1.5 dB over full operating range (temperature compensation mode)						
Gain variation over 24 hours	±0.5 dB max at constant temperature & drive level						
Input VSWR	1.3: 1						
Output VSWR	1.3: 1						
Noise Power Density	-90 dBm/Hz m	ax in TX band					
Spurious at rated power	-65 dBc max						
Harmonics at rated power	-45 dBc max						
AM/PM conversion	3.5°/dB max at P <sub>1dB</sub>						
	1°/dB max at 3 dB total back-off from rated P1dB						
Third order IMD (two equal tones 5 MHz apart)	-24 dBc max at 3 dB total back-off from rated P1dB						
Onesia Delesi	Linear: 0.02 nsec/MHz max.						
Group Delay	Parabolic: 0.003 nsec/MHz <sup>2</sup> max.  Ripple: 1 nsec p-p max.						
Residual AM	0-10 kHz	sec p-р шах.	-45 dl	3c			
(F* - frequency in kHz)	10 kHz - 500 kHz -20 (1.25+log F*) dBc						
(1 Hequency III Ki IZ)	10 kHz - 300 kHz 500 kHz - 1 MHz - 80 dBc						
Power Requirements	-00 db0						
Power Requirements  DC input voltage 180-264 VAC (47-63 Hz)							
<u> </u>	180-264 VAC (47-63 Hz)						
Power consumption, (nominal)	2000W	2500W	3250W	3500W	4000W		
Mechanical Characteristics							
Dimensions (L x W x H) Weight	9 RU of 19" rack (6 RU amplifier + 3 RU power supply unit) 80 kg (176 lbs)						
Interfaces: RF input N-Type (I							
RF output 7-16 DIN							
Output sample port N-Type (I	F) RS-485 D-sub 9S AC Line IEC 320 inlet						
Environmental Conditions							
Temperature Operating	0°C to +50°C						
Storage	-55°C to +85°C						
Humidity	5% to 95% non-condensing						
Altitude 10,000' AMSL, derated 2°C/1,000' from AMSL							

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Specifications are subject to change without notice

CE

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