

## S-Band Rack-mount SSPA

150W to 250W  
ARMA-2000S™ series



### Features

- High gain and linearity
- Output power up to 200W
- 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

### Overview

The ARMA-2000S™ 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 four rack-mounting spaces (4 RU - 7") 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 50W to 1000W. For higher power Advantech provides phase-combined systems. 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.

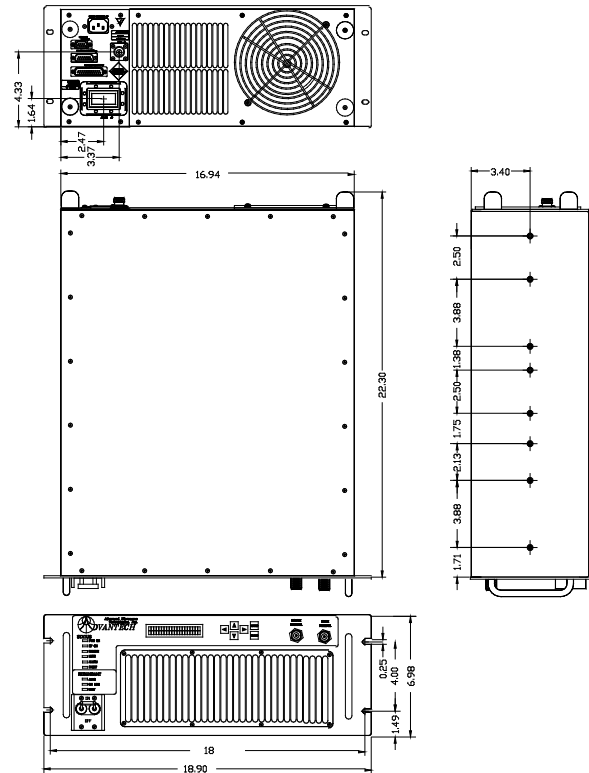


Table A

Band	RF Band (GHz)	Output Power (W)
S	2.025 - 2.120	150 - 250

### Options

- 1:1 or 1:2 Redundant configuration
- Phase combined systems for higher power
- L-Band input (SSPB/BUC operation)
- SNMP interface

### Accessories

- Mounting slides
- Remote M&C panel

### Redundancy

With the addition of the appropriate waveguide and switch kit, the ARMA-2000S™ 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

Technical Specifications		150W	200W	250W
<b>Electrical Characteristics</b>				
Availability in this series				
S		√	√	√
Output power (P <sub>SAT</sub> )		+52 dBm	+53 dBm	+54 dBm
Output power (P1dB) min		+51 dBm	+52 dBm	+53 dBm
Power Gain @ max setting		65 dB min		
Frequency range		2.025 GHz - 2.120 GHz		
Gain adjustment range		20 dB		
Max input power w/out damage		+10 dBm		
Gain flatness		1.5 dB p-p max over full band 0.5 dB p-p over 10 MHz at 25°C		
Gain slope		0.05 dB/20 MHz max.		
Gain variation over temperature		± 2 dB over full operating range (temperature compensation mode)		
Gain variation over 24 hours		±0.25 dB max at constant temperature & drive level		
Input VSWR		1.3:1		
Output VSWR		1.4:1		
Noise Power Density		-80 dBm/Hz max in TX band -85 dBm/Hz max in RX band (without optional filter)		
Spurious at rated power		-65 dBc, max.		
Harmonics at rated power		-60 dBc, max		
AM/PM conversion at rated power		2.5°/dB max. at P1dB, 1°/dB max. at 3 dB back-off from rated P1dB		
Third order IMD (two equal tones 5 MHz apart)		-26 dBc max. at 3 dB total back-off from rated P1dB		
Group Delay		Linear: 0.01 nsec/MHz max. Parabolic: 0.002 nsec/MHz <sup>2</sup> max. Ripple: 0.5 nsec p-p max.		
Residual AM (F* - frequency in kHz)		0-10 kHz -45 dBc 10 kHz - 500 kHz -20 (1.25+log F*) dBc 500 kHz - 1 MHz -80 dBc		
<b>Power Requirements</b>				
AC input voltage		90-264 VAC auto ranging (47-63 Hz)		
Power consumption (nom.) (W)		600	800	1000
<b>Mechanical Characteristics</b>				
Panel Height		4 RU of 19" rack		
Weight		30 kg (66 lbs)		
Interfaces:	RF input	N-Type (F)	RedundancyD-sub 25S	Discrete port D-sub 9S
	RF output	N-Type (F)	RS-232D-sub 9S	AC Line IEC 320 inlet
	Output sample port	N-Type (F)	RS-485D-sub 9S	
<b>Environmental Conditions</b>				
Temperature:	Operating	0°C to +50°C		
	Storage	-55°C to +85°C		
Humidity		5%-95%, non-condensing		
Altitude		10,000' AMSL, de-rated 2°C/1,000' from AMSL		

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