

500W to 1000W
AWMA-6000C™ series



Features

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

Overview

The AWMA-C series are the outdoor solid-state power amplifiers (SSPAs), operating in C-Band frequency range. The amplifier is an integrated unit, complete with power supply and cooling system. Intended for outdoor operation, the AWMA-6000C® is weatherproof. Built-in microprocessor controller provides the 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 SSPAs are designed for C-Band satellite up-link applications. They are mounted outdoors, near the hub of an antenna. The AWMA-C series are available in output power from 20W 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 AWMA-C, Advantech also offers a built-in converter.

Redundancy

With the addition of the appropriate waveguide and switch kit, the AWMA-6000C™ amplifiers can be easily converted for the operation in 1:1 redundant configuration with full remote Monitor and Control capability of the redundant system via serial interface. A single Monitor and Control interface is required to manage redundant system.

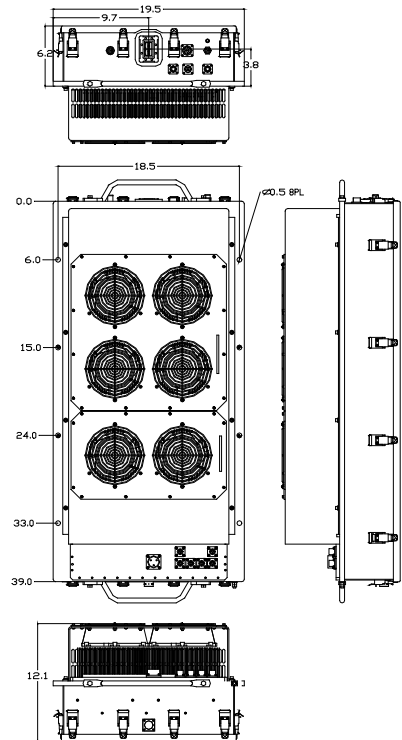


Table A

Band	RF Band (GHz)	Output Power (W)
CL	4.400 - 5.000	600-1000
CP	6.425 - 6.725	500-800
CI	6.725 - 7.025	500-700
CR	5.725 - 6.025	600-1000
CS	5.850 - 6.425	600-1000
CX	5.850 - 6.725	500-800

*Other frequency sub-bands are available. Please consult factory.

Options

- Integrated Block Up Converter
- Additional harmonic filter
- Extreme temperature operation
- Redundant system

Accessories

- Redundancy Kit
- Mounting Frames
- Remote M&C panel (Ethernet port optional)

C-Band Hub-mount SSPA

Technical Specifications	500W	600W	700W	800W	1000W
Electrical Characteristics					
Availability in this series					
CS, CR, CL	Note 1	√	√	√	√
CX, CP	√	√	√	√	--
CI	√	√	√	--	--
Output power (P _{SAT})	+57 dBm	+58 dBm	+58.5 dBm	+59 dBm	+60 dBm
Output power (P _{1dB}) min	+56 dBm	+57 dBm	+57.5 dBm	+58 dBm	+59 dBm
Power Gain @ maximum gain setting	64 dB min	70 dB min			
Operating frequency range	See table A on front page				
Max input power without damage	+10 dBm				
Gain slope	0.6 dB max over 40 MHz				
Gain flatness over 500MHz	±1.0 dB max				
Gain variation over temperature	±1.5 dB over full operating temperature range				
Gain variation over 24 hours	±0.25 dB max @ constant temperature & drive level				
Gain adjustment range	20 dB (0.1 dB resolution)				
Input return loss	18 dB				
Output return loss	19 dB				
Noise power density	-70 dBm/Hz max in TX band				
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 P _{1dB}),				
Third order IMD (2 tones 5 MHz apart)	-26 dBc max at 3 dB total back-off from rated P _{1dB}				
Group delay	Linear: 0.02 nsec/MHz max.				
Residual AM	0-10 kHz	-45 dBc			
Power Requirements					
AC input voltage	220 VAC (47-63 Hz)				
Power consumption, (nominal)	2700W	3500W	4000W	4500W	5500W
Mechanical Characteristics					
Dimensions (L x W x H)	39.00" x 18.50" x 12.10" (99.00 cm x 47.00 cm x 30.70 cm)				
Weight (with mounting frame)	80 kg (176 lbs)				
Interfaces:	RF input	Type N (Female)	Redundancy	MS3112E14-12P	RF output CPR137 contact
Environmental Conditions					
Temperature	Operating	-30°C to +55°C			
Humidity	100%, condensing (2" rain/hour)				
Altitude	10,000' AMSL, derated 2°C/1,000' from AMSL				

Note 1 : Please refer to AWMA-5000C™ product datasheet

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