

30W to 1000W
AWMA-S™ series



Features

- Full range of output power up to 1000W in a single package
- High linearity
- Unconditionally stable at any load VSWR
- Redundant ready with no external controller
- Full M&C capability via RS485 or Ethernet port
- Infinite VSWR protection with automatic high reflected power shutdown
- Forward and Reflected power monitoring
- Output Sample Port
- Redundant Systems shipped fully tested, assembled and tested
- Weatherproof construction

Overview

Advantech AMT S-Band line of Amplifiers is intended for satellite up-link applications. The design of these units is based on Advantech's proven techniques resulting in high linearity and operating efficiency. Conservative thermal design contributes to the high MTBF for these units. Full monitor and control is provided via the serial or Ethernet ports. Special features such as automatic over-temperature shutdown and high-reflected power protection contribute to a trouble free operation.

The AWMA-S series is available in output power from 30W to 1000W. Higher power operation may be provided using external phase combining techniques offering an output power up to 1500W. Please contact factory for more details.

The full set of accessories made available will facilitate the integration of these units in any application.

Table A

Band*	RF Band (GHz)	Output Power (W)
S	2.025 – 2.120	30 - 1000

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

Options

- 1:1 or 1:2 Redundant configuration
- Phase combined systems for higher power

Accessories

- Mounting kits
- Remote M&C panel
- Handheld terminal

Redundancy

Advantech AMT S-Band line of Amplifiers may be configured to operate in 1:1 or 1:2 redundancy mode. No extra controller is required for the redundancy operation as the built-in controller in each unit provides this function. For 1:1 redundancy operation, in addition to the two units (operating and standby) a special redundancy kit is required. For 1:2 redundancy operation another redundancy kit is needed in addition to the three units. The kits include the switches, terminations, splitter, interconnecting cable assemblies and mounting frames.

All redundancy systems are delivered fully assembled, integrated, and tested.

S-Band Hub-mount SSPA



Technical Specifications

Table B

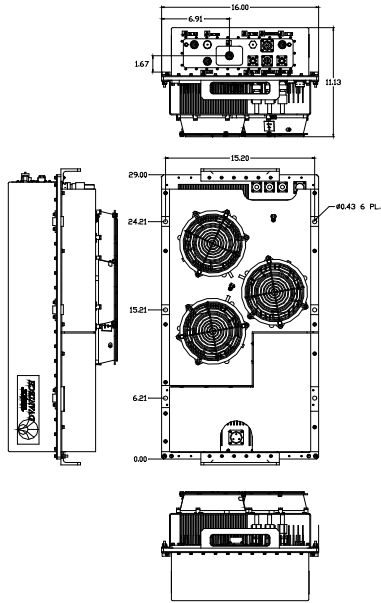
SSPA Line

Rated Power W	Psat dBm	P1dB dBm	Gain (dB) (minimum)	Power consumption W (nominal)	Weight	Dimensions	Voltage	Outline
30W	+45	+44	+55	200W	36 lbs (16 kg)	16"x10"x9" 406x254x229 mm	110/220 Auto ranging Option 48V	1
40W	+46	+45	+56	250W				
50W	+47	+46	+57	300W				
60W	+48	+47	+58	350W				
100W	+50	+49	+59	400W	48.5 lbs (22 kg)	18.5"x10"x9" 470x254x229 mm	110/220 Auto ranging	2
125W	+51	+50	+60	500W				
150W	+52	+51	+62	600W				
200W	+53	+52	+63	800W				
250W	+54	+53	+64	850W	98 lbs (44.5 kg)	30"x16"x11" 762x406x280 mm	220V	3
300W	+55	+54	+65	1400W				
400W	+56	+55	+66	1500W				
500W	+57	+56	+67	1600W				
600W	+58	+57	+68	2500W	176 lbs (80 kg)	39"x18.5"x12.1" 990x470x307 mm	220V	4
700W	+58.5	+57.5	+69	2700W				
800W	+59	+58	+69	3000W				
1000W	+60	+59	+70	3200W				

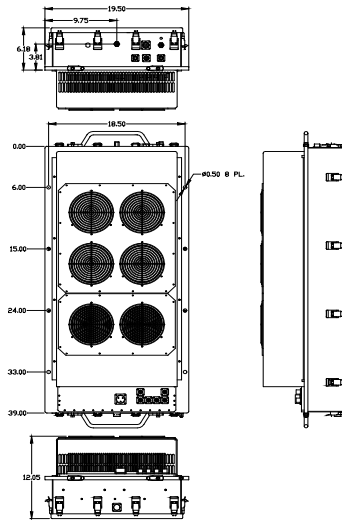
General Specifications

Operating Frequency	2.025 – 2.120 GHz		
Output Power	See table B		
Gain	See table B		
Gain adjustment range	20 dB in 0.1 dB steps		
Gain flatness	1.5 dB p-p max over full band 0.5 dB p-p over 10 MHz at 25°C		
Gain slope	0.06 dB/ MHz max.		
Gain variation over temperature	± 1.5 dB max		
Input Impedance and VSWR	50 Ω 1.3:1		
Output Impedance/VSWR	50 Ω 1.3:1		
Noise power density	-80 dBm/Hz in Transmit Band		
Spurious at P1dB	-60 dBc max		
Harmonics	-60 dBc at P1dB		
AM/PM conversion	2.5°/dB at P1dB		
Third order intermod (2- tones)	-24 dBc at 3 dB total back-off from rated P1dB		
Group delay	Linear 0.02 nsec/MHz max Parabolic 0.003 nsec/MHz ² max Ripple 1 nsec p-p max		
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		
Weight & Dimensions	See table B		
Input voltage	See table B		
Interfaces	Input (RF or L-Band) N type female Output Sample Port N type female RF output N type female AC line MS3102 type RS232 serial port MS3112E10-6P 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		

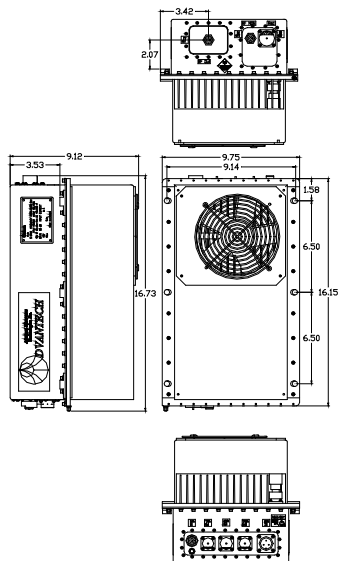
S-Band Hub-mount SSPA



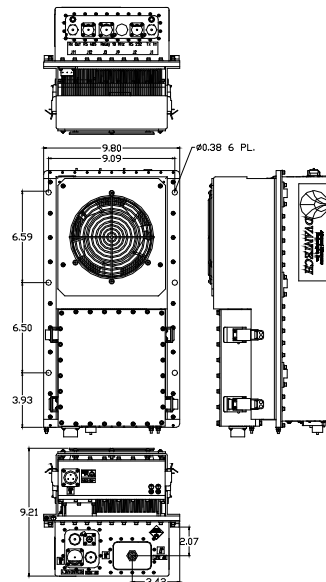
Outline 3



Outline 4



Outline 1



Outline 2

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