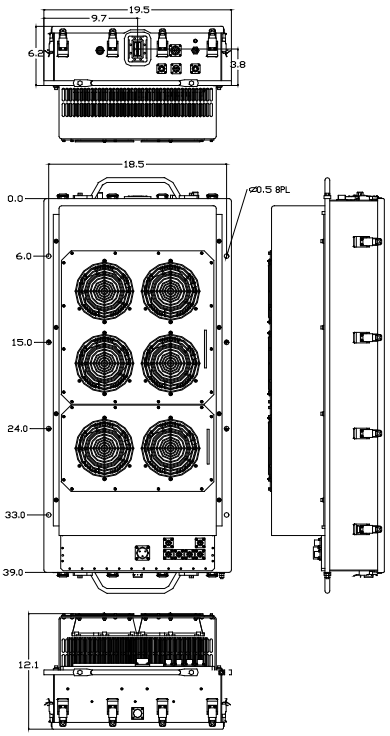
S-Band Hub-mount SSPA

1250W AWMA-S™
Sierra series



Features

- Full range of output power up to 1250W 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
- CE Marking

Overview

Advantech Wireless S-Band line of Amplifiers is intended for satellite up-link applications. The design of these units is based on Advantech Wireless 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 Sierra Package Series is available in output power of 1250W. Higher power operation may be provided using external phase combining techniques offering an output power up to 1800W. Please contact factory for more details.

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

Options

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

Table A

Band	RF Band (GHz)	Output Power (W)
S	2.025 – 2.120	1250
Extended S	2.000-2160	1250

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

Accesories

- Mounting kits
- External Receive Reject Filter
- Remote M&C panel
- Handheld terminal

Redundancy

Advantech Wireless 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.

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1250W AWMA-S Sierra series

Technical Specifications

Table B

SSPA Line

Rated Power W	Psat dBm	P1dB dBm	Gain (dB) (minimum)	Power consumption W (nominal)	Weight	Dimensions	Voltage
1250W	+61	+60	+70	3800W	188 lbs (85 kg)	39"x18.5"x12.1" 990x470x307 mm	220V

General Specifications	
Operating Frequency	See table A
Output Power	See table B
Gain	See table B
Gain adjustment range	20 dB in 0.1 db step size
Gain flatness	±1.5 dB max.
Gain slope over 10 MHz	±0.15 dB 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 max in TX band -85 dBm/Hz max in RX band (without optional filter)
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
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	220 VAC, 47-63 Hz
Interfaces	Input (RF or L-Band) N type female Output Sample Port N type female RF output 7/16 DIN 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

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