400W/500W/600W L/S-Band Hubmount SSPA
Advanced Solid State GaN Technology

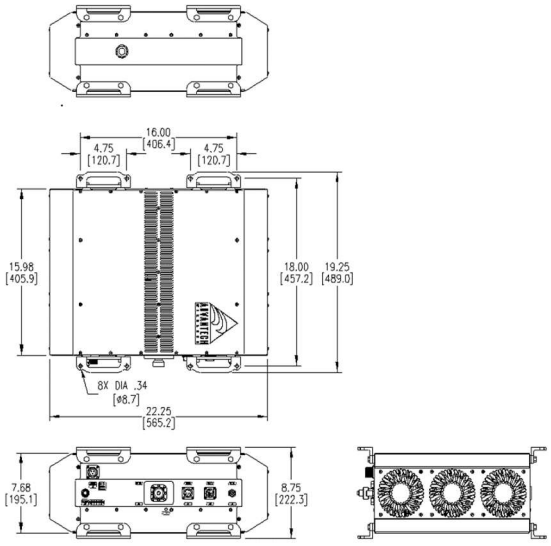
Taurus Line

AWMAg-L/S Tracker Series

Solid State Technology for Satellite TT&C and Deep Space Communication

Features

- Full range of output power up to 600W in a single package
- High linearity and cover both L and S bands from 1.760 - 2.160 GHz
- Unconditionally stable at any load VSWR
- Redundant ready with no external controller
- M&C capability via RS232/485/Ethernet/SNMP
- 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, IP 65 rated housing and fan



Overview

Advantech Wireless L/S-Band line of Amplifiers is intended for satellite TT&C and Deep Space Communication. 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.

This package is available for 400W/500W/600W. Higher power operation may be provided using external phase combining techniques. 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

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Specifications	L/S-band		
Operating Frequency	1.760 – 2.160 GHz		
Saturated Output Power	400W	500W	600W
P_{SAT}, typ.	+56.0 dBm	+57.0 dBm	+58.0 dBm
$P_{LINEAR, min.}$	+52.0 dBm	+53.0 dBm	+54.0 dBm
Gain	70.0dB min		
Gain adjustment range	20 dB in 0.1 dB steps		
Gain flatness over full band	2.5 dB p-p max		
Gain slope over 10 MHz	0.5 dB max		
Gain variation over temperature	± 1.5 dB max		
Input Impedance and VSWR	50 Ω 1.5:1		
Output Impedance and VSWR	50 Ω 1.3:1		
Noise power density	-75dBm/Hz,		
Spurious at P_{LINEAR}	-60 dBc max		
Harmonics	-60 dBc @ P_{LINEAR}		
AM/PM conversion	<1.0°/dB $P_{LINEAR,}$ <2.5°/dB at Psat		
Third order IMD (two tones, 5MHz apart)	-25 dBc at Plin		
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		
Residual Phase Noise, Continuous	-60 dBc/Hz at 10Hz -90 dBc/Hz at 100Hz -100 dBc/Hz at 1000Hz - 110 dBc/Hz at 10 kHz	-115 dBc/Hz at 100 KHz -125 dBc/Hz at 1 MHz -130 dBc/Hz at 10 MHz - 130 dBc/Hz at 100 MHz	
Weight & Dimensions			
Dimensions	22.25" x 16.0" x 7.68" (565.2mm x 406.4mm x 195.1mm)		
Weight	90 lbs. (40.8kg)		
AC input voltage	190 - 265 VAC, (47-63 Hz)		
Power consumption, typ.	2000W	2200W	2400W
Interfaces	Input - N-type female Output Sample Port - N type female RS485/Ethernet - MS3112 type	AC line - MS3102 RF output - DIN 7/16	
Environmental	Operating Temp. -30°C to +55 °C Option 1 -40°C to +55 °C Storage -55°C to +85 °C Humidity 100% condensing Altitude 10,000' AMSL, derated by 2 °C/1000> from AMSL		

Ref.: PB-DB-LS-600W-26005

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