

## 350W/400W/500W CL-Band Hubmount SSPA/SSPB Second Generation GaN Technology for TROPO Applications

### Phoenix Line

SSPA	AWMAg-CL	TT series
SSPB (BUC)	SSPBMg-CL	TT series



### Features

- Full range of output power of 350W/400W or 500W in a compact single package, transmitting in 4.4-5.0 GHz
- High linearity
- Redundant ready with no external controller
- Full M&C capability via RS232, RS485 or Ethernet port
- Built-in Forward precision powering metering
- Output RF calibrated Sample Port
- Redundant Systems shipped fully tested
- Infinite VSWR protection with automatic high reflected power shutdown
- Detachable power supply module
- Weatherproof construction
- CE marking



### Options

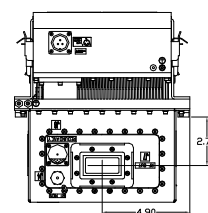
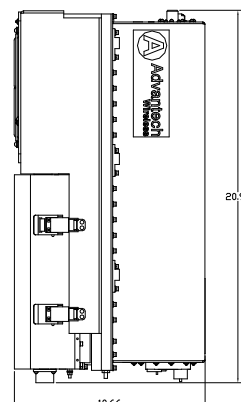
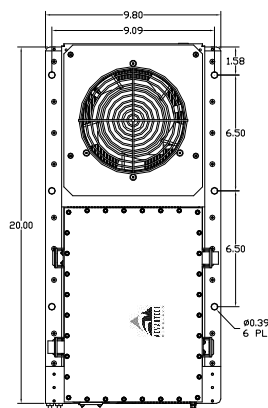
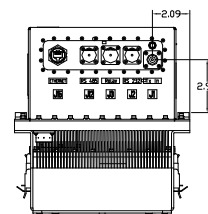
- 1:1 or 1:2 Redundant configuration
- L-Band input (SSPB/BUC operation)
- Internal/External reference with auto-sensing
- Ethernet port

### Accessories

- Mounting kits
- External Harmonics Reject Filter (-65dBc)
- Remote M&C panel with optional SNMP
- Handheld terminal
- Flexible and rigid waveguides
- Mounting frames
- High power terminations

### Overview

The new Super Compact TT-Series CL-Band SSPA/BUCs provide highest power density in the industry. Combined with the traditional Advantech features, these new series of BUCs provide the ultimate in performance and convenience for Tropo applications using 4.4-5.0 GHz frequency band.



## 350W/400W/500W CL-Band Hubmount SSPA/SSPB Second Generation GaN Technology for TROPO Applications

General Specifications				
Output power	350W	400W	500W	
P <sub>SAT</sub> (typ.)	+55.5dBm (nominal)	+56.0 dBm (nominal)	+57.0 dBm (nominal)	
P <sub>LINEAR</sub> is the power at which the IMD=-25 dBc for two CW signals 5 MHz apart and the spectral regrowth is <-30 dBc @ 1.0 x symbol rate for a single QPSK/OQPSK/8PSK signal	+51.5dBm	+52.0dBm	+53.0dBm	
Operating Frequency	4.4 – 5.0 GHz			
L-Band input (BUC)	950 – 1550 MHz			
Gain	SSPA 67dB min	SSPB (BUC) 77dB min		
Gain adjustment range	20 dB in 0.1 dB steps			
Gain flatness over full band	SSPA 2dB p-p max	SSPB (BUC) 4 dB p-p max		
Gain slope over 40 MHz	± 0.3 dB max	SSPB (BUC) ± 0.5 dB max		
Gain variation over temperature	± 1.5 dB max			
Input Impedance and VSWR	50 Ω	SSPA 1.3:1	SSPB (BUC) 1.4:1	
Output VSWR	1.3:1			
Noise power density	-75 dBm/Hz in Transmit Band; -135 dBm/Hz, max (in receive band)			
Spurious at P <sub>LINEAR</sub>	SSPA: -65 dBc max	SSPB (BUC): -55 dBc max		
Harmonics	-35 dBc at P <sub>LINEAR</sub>			
AM/PM conversion	1°/dB at P <sub>LINEAR</sub>			
Third order intermod (two tones)	-25 dBc two signal 5 MHz apart at P <sub>LINEAR</sub> relative to total power			
Spectral Regrowth	-30 dBc at P <sub>LINEAR</sub> (for QPSK at 1.5 x symbol rate and OQPSK at 1.0 x symbol rate)			
Group delay	Ripple	1 nsec p-p max over any 40 MHz band		
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		
SSPB (BUC)				
Local Oscillator freq.	3.450 MHz			
Internal Reference frequency (optional)	10 MHz	Aging/day	±2-10	
		Aging/year	±5-8	
		Stability	±2-8 over temp range	
Phase Noise	-63 dBc/Hz at 100Hz		-73 dBc/Hz at 1kHz	
	-83 dBc/Hz at 10 kHz		-93 dBc/Hz at 100 kHz	
External Reference	10 MHz			
Frequency phase noise (max)	-120 dBc/Hz at 10Hz	-155 dBc/Hz at 10 kHz		
	-135 dBc/Hz at 100Hz	-160 dBc/Hz at 100 kHz		
	-150 dBc/Hz at 1000Hz			
Weight & Dimensions				
Dimensions (L x W x H)	20.0" x 9.8" x 10.7" (508 x 249 x 272mm)			
Weight	57.3 lbs. (26 kg)			
AC input voltage	220V AC ± 20% (47 – 63 Hz) Power Factor 0.95 min.			
Power consumption (typical)	1200 W at P <sub>LINEAR</sub> 1600 W at P <sub>SAT</sub>			
Interfaces	Input (RF or L-Band)	N type female	AC line	MS3102 type
	Output Sample Port	N type female	RF output	CPR187
	RS485/RS232	MS3112	Ethernet	RJ45
Environmental	Temperature	Operating -30°C to +55°C	Optional -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		

\*Consult the factory for optional temp. -50°C to +55°C

Ref.: PB-SSPBg-CL-350W-500W-001-24045

### NORTH AMERICA

**USA**  
info.usa@advantechwireless.com

**CANADA**  
Info.canada@advantechwireless.com

### EUROPE

**UNITED KINGDOM**  
info.uk@advantechwireless.com

### SOUTH AMERICA

info.latam@advantechwireless.com

**BRAZIL**  
info.brazil@advantechwireless.com

### ASIA

info.asia@advantechwireless.com

**INDIA**  
info.india@advantechwireless.com