



SSPA            AWMAg-C    TT series  
SSPB (BUC)    SSPBMq-C    TT series



### Features

- Full range of output power of 600W in a compact single package
- 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

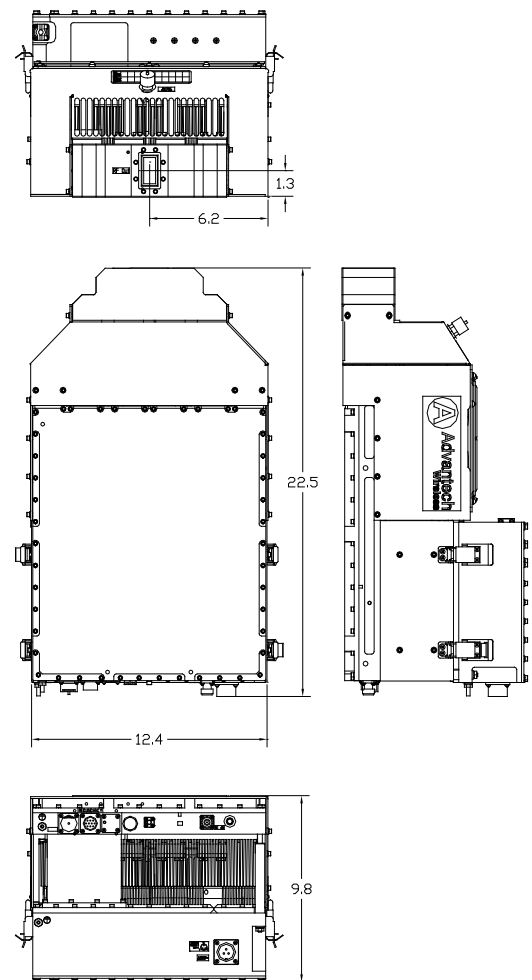
- 1:1 or 1:2 Redundant configuration
- L-Band input (SSPB/BUC operation)
- Internal/External reference with auto-sensing
- Ethernet port

### 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 C-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.



Outline

# 600W C-Band Hubmount SapphireBlu™ SSPA/ SSPB GaN Technology

## General Specifications

Output Power	<b>600W</b>		
P <sub>SAT</sub> (typ.)	+56.5 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	+54.0dBm, min		
Operating Frequency	5.85 – 6.425 GHz / Optional 5.85 – 6.725 GHz		
L-Band input (BUC)	950 – 1525 MHz / Optional 950 – 1825 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 in Receive Band (3.4GHz – 4.2 GHz)		
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.	4.9 GHz		
Internal Reference frequency (optional)	10 MHz	Aging/day	±2 <sup>-10</sup>
		Aging/year	±5 <sup>-8</sup>
		Stability	±2 <sup>-8</sup> over temp range
Phase Noise	-73 dBc/Hz at 100Hz		
	-78 dBc/Hz at 1kHz		
	-88 dBc/Hz at 10 kHz		
	-98 dBc/Hz at 100 kHz		
External Reference Frequency phase noise (max)	10 MHz		
	-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)	22.5" x 12.4" x 9.8" (571.5x315x248.9mm)		
Weight	66.14 lbs. (30 kg)		
AC input voltage	220V AC ± 20% (47 – 63 Hz)	Power Factor 0.95 min.	
Power consumption (nominal)	2200W at P <sub>LINEAR</sub>		
	2400W 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 CPR137
	RS485/RS232/Ethernet	MS3112 type	
Environmental	Temperature	Operating -30°C to +55°C	Optional -50°C to +55°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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An ISO 9001: 2008 Company



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