



**Advantech
Wireless**

**350W/400W/500W/600W C-Band
Hubmount
SapphireBlu™ SSPA/ SSPB
Super Compact TT Series
GaN Technology**



SSPA AWMA-C TT series
SSPB (BUC) SSPBM-C TT series



Features

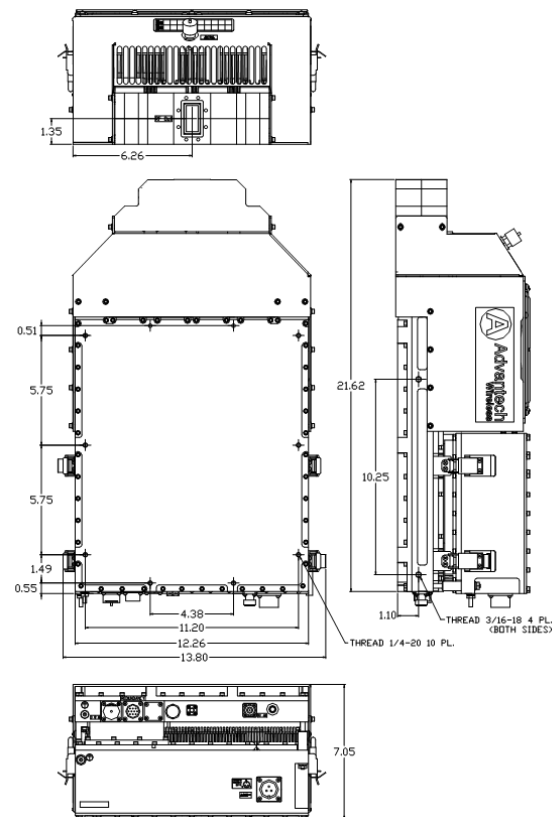
- Full range of output power of 350W/400W/500W or 600W in a compact single package
- High linearity
- Redundant ready with no external controller
- Full M&C capability via RS232, RS485 or Ethernet port
- Built-in Forward and Reflected precision power metering
- Output RF calibrated Sample Port
- Redundant 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



Outline

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.

350W/400W/500W/600W C-Band Hubmount SapphireBlu™ SSPA/ SSPB GaN Technology

General Specifications

Output Power	350W	400W	500W	600W
P_{SAT} (typ.)	+55.5 dBm (nominal)	+56.0 dBm (nominal)	+57.0 dBm (nominal)	+57.8 dBm (nominal)
P_{LINEAR}	+51.5 dBm	+52.0 dBm	+53.0 dBm	+54.0 dBm
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	-70 dBm/Hz in Transmit Band, -145 dBm/Hz in Receive Band (3.4GHz – 4.2 GHz)			
Spurious at P_{LINEAR} 1	SSPA: -65 dBc max	SSPB (BUC):	-55 dBc max	
Harmonics	-35 dBc at P_{LINEAR}			
AM/PM conversion	1°/dB at P_{LINEAR}			
Third order intermod (two tones)	-25 dBc two signal 5 MHz apart at P_{LINEAR} relative to total power			
Spectral Regrowth	-30 dBc at P_{LINEAR} (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 Aging/year Stability	±2 ⁻¹⁰ ±5 ⁻⁸ ±2 ⁻⁸ 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 -135 dBc/Hz at 100Hz -150 dBc/Hz at 1000Hz	-155 dBc/Hz at 10 kHz -160 dBc/Hz at 100 kHz		
Weight & Dimensions				
Dimensions (L x W x H)	21.6" x 12.26" x 7.05" (549x311x179mm)			
Weight	57.3 lbs. (26 kg)			
AC input voltage	220V AC ± 20% (47 – 63 Hz)		Power Factor 0.95 min.	
Power consumption (nominal)	1550W at P_{LINEAR} 2000W at P_{SAT}		1900W at P_{LINEAR} 2400W at P_{SAT}	2200W at P_{LINEAR} 2400W at P_{SAT}
Interfaces	Input (RF or L-Band) Output Sample Port RS485/RS232/Ethernet	N type female N type female MS3112 type	AC line MS3102 type RF output CPR137	
Environmental	Temperature Humidity Altitude	Operating -30°C to +55°C Storage -55°C to +85°C 100% condensing 10,000' AMSL, derated by 2 °C/1000' from AMSL Optional -50°C to +55°C		

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