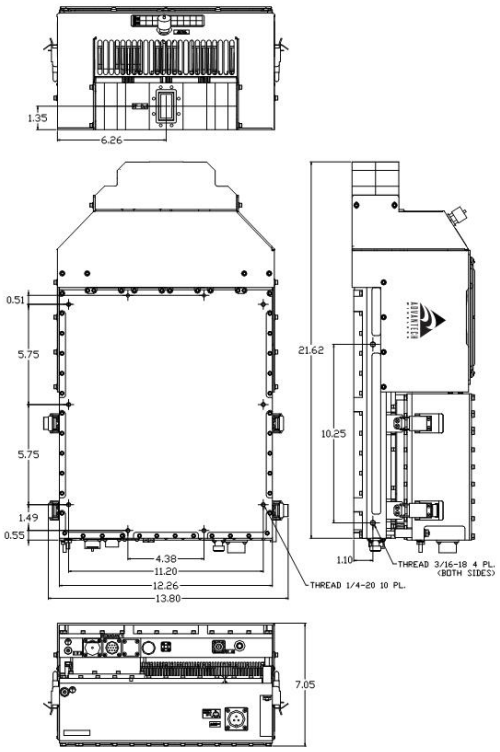
350W/400W/500W/600W C-Band BUC/SSPB/SSPA
Second Generation GaN Technology

SapphireBlu™

SSPA	AWMAg-C	TT series
SSPB (BUC)	SSPBMg-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 RS485, 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

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 Wireless' features, these new series of BUCs provide the ultimate in performance, reliability, and convenience.

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Technical Specifications

	350W	400W	500W	600W
$P_{SAT\ (typ.)}$	+55.5 dBm (nominal)	+56 dBm (nominal)	+57 dBm (nominal)	+57.8 dBm (nominal)
Linear Output power, P_{LINEAR} *	+52.5 dBm (Min)	+53 dBm (Min)	+54 dBm (Min)	+54.8 dBm (Min)
	P_{LINEAR} 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			
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) 75dB min		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}	SSPA: -65 dBc max SSPB (BUC): -55 dBc max			
Harmonics	- 35 dBc at P_{LINEAR}			
AM/PM conversion	1.0°/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 $\pm 2 \times 10^{-10}$ Aging/year $\pm 5 \times 10^{-8}$ Stability $\pm 2 \times 10^{-8}$ over temp range			
Phase Noise	-78 dBc/Hz at 100Hz -95 dBc/Hz at 10 kHz -85 dBc/Hz at 1kHz -112 dBc/Hz at 100 kHz			
External Reference Frequency phase noise (max)	10 MHz -120 dBc/Hz at 10Hz -150 dBc/Hz at 1000Hz -160 dBc/Hz at 100 kHz -135 dBc/Hz at 100Hz -155 dBc/Hz at 10 kHz			
Weight & Dimensions				
Dimensions (L x W x H)	21.6" x 12.26" x 7.05" (549x311x179 mm)			
Weight	57.3 lbs. (26 kg)			
AC input voltage	220V AC ± 20% (47 – 63 Hz) Power Factor 0.95 min.			
Power consumption (nominal)	1400W at P_{LINEAR} 1600W at P_{SAT}	1500W at P_{LINEAR} 1800W at P_{SAT}	1900W at P_{LINEAR} 2400W at P_{SAT}	2100W at P_{LINEAR} 2700W at P_{SAT}
Interfaces	Input (RF or L-Band): N type female AC line: MS3102 type Output Sample Port:N type female RF output: CPR137 RS485/Ethernet: MS3112 type			
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, de-rated by 2 °C/1000> from AMSL			

*Linearizer Required

Ref.: PB-SSPBMg-2G-C-300W-500W-001-18217

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