

300W / 400W / 500W C-Band BUC/SSPB/SSPA Second Generation GaN Technology

Ranier-Line

SapphireBlu™

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

Features

- Output power of 300W / 400W / 500W in a compact single package
- High linearity
- Redundant ready with no external controller
- Full M&C capability via RS485, 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

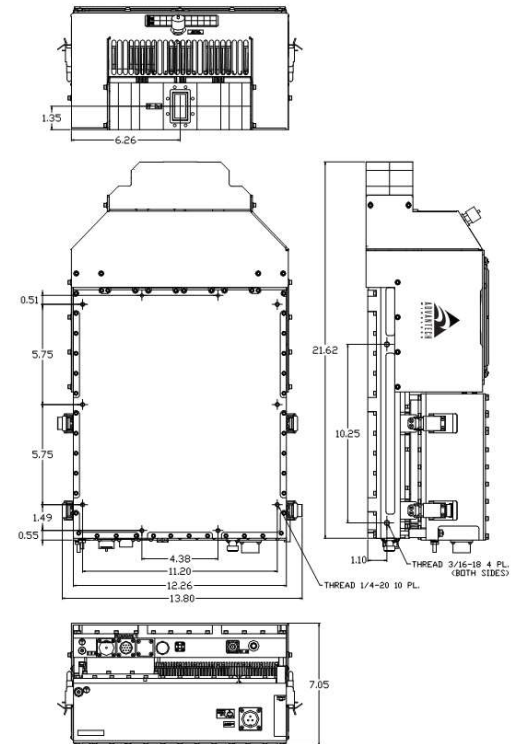
- 1:1 or 1:2 Redundant configuration
- L-Band input (SSPB/BUC operation)
- Internal/External reference with auto-sensing
- Ethernet port

Accessories

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

Overview

The Super Compact TT-Series C-Band SSPA/BUCs provide highest power density in the industry. Combined with the traditional Advantech Wireless' features, these series of BUCs provide the ultimate in performance, reliability, and convenience.



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Technical Specifications			
	300W	400W	500W
P _{SAT} (typ.)	+55 dBm (nominal)	+56 dBm (nominal)	+57 dBm (nominal)
P _{LINEAR}	+52 dBm (Min)	+53 dBm (Min)	+53.5 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 tested with a single QPSK, 2MS/s SR, 0.35 roll-off		
Operating Frequency	5.850 – 6.425 GHz (Cs-band)	or 5.850 – 6.725 GHz (Cx-band)	or 6.725 – 7.025 GHz (Ci-band)
L-Band input (BUC)	950 – 1525 MHz (for Cs-band)	or 950 – 1825 MHz (for Cx-band)	or 965 – 1265 MHz (for Ci-band)
Gain	SSPA 67dB min	SSPB (BUC) 75dB 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, -135 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 at P _{LINEAR}		
Spectral Regrowth	-30 dBc at P _{LIN} (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	
	500 kHz – 1 MHz	-80 dBc	
SSPB (BUC)			
Local Oscillator freq.	4.9 GHz for Cs/Cx-band	5.76 GHz for Ci-band	
Internal Reference frequency (optional)	10 MHz	Aging/day	±2 × 10 ⁻¹⁰
		Aging/year	±5 × 10 ⁻⁸
		Stability	±2 × 10 ⁻⁸ over temp range
Phase Noise	-53 dBc/Hz at 10Hz	-63 dBc/Hz at 100Hz	-83 dBc/Hz at 10 kHz
	-73 dBc/Hz at 1kHz	-93 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)	1500W at P _{LINEAR}		1900W at P _{LINEAR}
	1800W at P _{SAT}		2400W at P _{SAT}
Interfaces	Input (RF or L-Band): N type female	AC line: MS3102 type	
	Output Sample Port:N type female RS485/Ethernet: MS3112 type	RF output: CPR137	
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		

* Please consult factory for optional operation temperature

Ref.: PB-SSPBmG-2G-C-300W-400W-500W-22215

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