



Advantech Wireless

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



400W C-Band Hubmount SSPA/ SSPB SapphireBlu™ UltraLinear™ SuperWideband™ Super Compact TT Series GaN Technology 5.850-7.025GHz



Features

- Output power of 400W over wide C-band in a compact single package (in subbands)
- UltraLinear™ extra high linearity up to saturation
- Perfect for Multi Carrier, Multi Transponder Uplinking
- 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

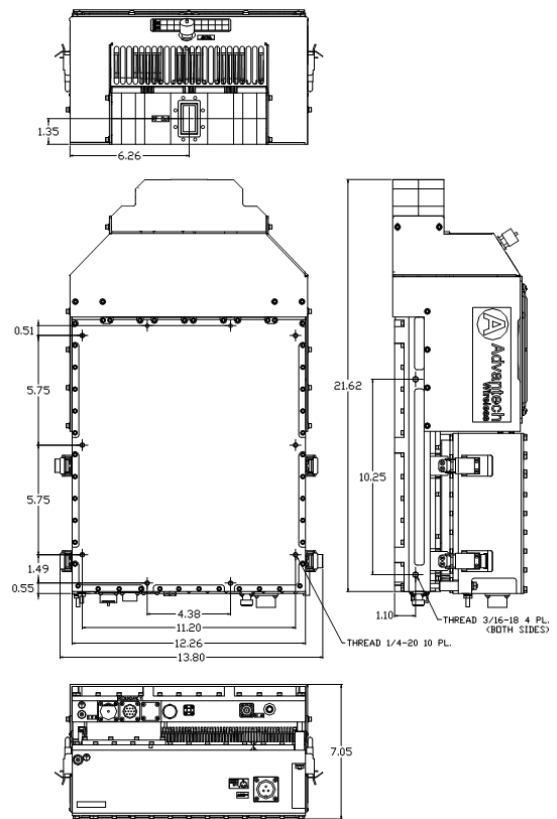
- 1:1 or 1:2 Redundant configuration
- L-Band input (SSPB/BUC operation)
- Internal/External reference with auto-sensing
- Ethernet port with SNMP V3.0, Webinterface, Telnet, CLI

Accessories

- Mounting kits
- External Harmonics Reject Filter (-65dBc)
- Receive Reject Filter
- Remote M&C panel with optional Ethernet (SNMP, Telnet, Webinterface, CLI)
- Handheld terminal
- Flexible and rigid waveguides
- Mounting frames
- High power terminations and circulators
- Dehydrators, pressure windows

Overview

The new Super Compact TT-Series C-Band SSPA/BUCs provide highest linear power density in the industry. Combined with the traditional Advantech Wireless features, these new series of BUCs provide the ultimate in performance and convenience for Multichannel, Multitransponder transmission for HDTV and DTH.



Outline

General Specifications			
Output Power	400W		
Subband dependent, factory preset in Subband B1 or Subband B2	P_{SAT} (typ.)	B1 (or B2) :+56 dBm (nominal) B2 (or B1) :+54 dBm (nominal) B1: 5.850-6.425 GHz B2: 6.725-7.025 GHz	
	P_{LINEAR}	B1 (or B2) :+53 dBm B2 (or B1) :+ 50 dBm	
Operating Frequency	5.850 – 7.025 GHz covered in two subbands B1: 5.85-6.425 GHz; B2: 6.725-7.025 GHz		
L-Band input (BUC)	950 – 2125 MHz		
Gain	SSPA 67 dB min	SSPB (BUC)	75 dB min
Gain adjustment range	20 dB in 0.1 dB steps		
Gain flatness over 500MHz	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 $P_{LINEAR 1}$	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 for 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 ⁻¹⁰
		Aging/year	±5 ⁻⁸
		Stability	±2 ⁻⁸ over temp range
Phase Noise	-63 dBc/Hz at 100 Hz	Integrated SSB Phase Noise < 1.5 deg. rms @ P_{LINEAR}	
	-73 dBc/Hz at 1 kHz		
	-88 dBc/Hz at 10 kHz		
	-108 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)	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)	1500W at P_{LINEAR} 2000W 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/RS232/Ethernet	MS3112 type	
Environmental	Temperature	Operating -30°C to +55°C Storage -55°C to +85°C	
	Humidity	100% condensing	
	Altitude	10,000ft AMSL, de-rated by 2 °C/1000ft from AMSL	

NORTH AMERICA
USA
Tel: +1 703 659 9796
Fax: +1 703 635 2212
info.usa@advantechwireless.com

CANADA
Tel: +1 514 420 0045
Fax: +1 514 420 0073
info.canada@advantechwireless.com

EUROPE
UNITED KINGDOM
Tel: +44 1480 357 600
Fax: +44 1480 357 601
info.uk@advantechwireless.com

RUSSIA & CIS
Tel: +7 495 971 59 18
info.russia@advantechwireless.com

INDIA
Tel: +91 33 2415 5922
info.india@advantechwireless.com

SOUTH AMERICA
Tel: +1 514 420 0045
Fax: +1 514 420 0073
info.latam@advantechwireless.com

BRAZIL
Tel: +55 11 3054 5701
Fax: +55 11 3054 5701
info.brazil@advantechwireless.com

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