

400W/500W X-Band Hubmount SSPA/ SSPB Super Compact TT Series

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

Features

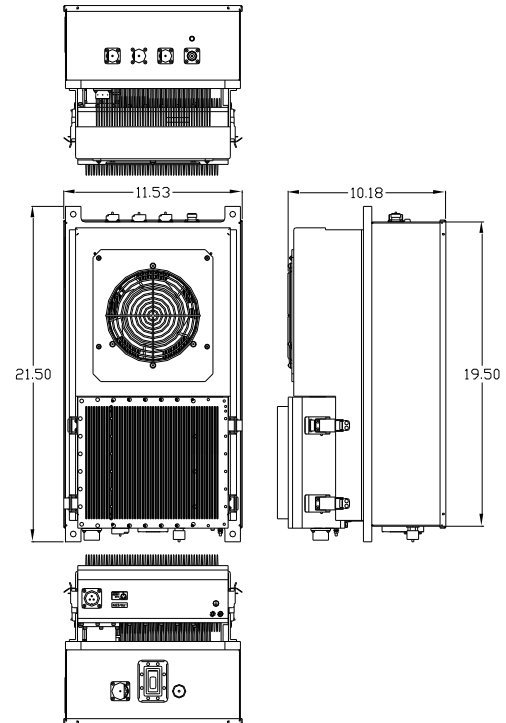
- Full range of output power of up to 400W or 500W in a compact single package
- High linearity
- Redundant ready with no external controller
- Full M&C capability via RS232, RS485 or Ethernet port
- Built-in Forward and Reflected precision power metering
- Output RF calibrated Sample Port
- Redundant Systems shipped fully tested
- Infinite VSWR protection with automatic high reflected power shutdown
- Detachable power supply module
- Weatherproof construction
- MIL-STD-188-164A latest revision compliant

Options

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

Overview

The new Super Compact TT-Series X-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 and convenience.



Accessories

- Mounting kits
- External Receive Reject Filter
- External Transmit Reject Filter (for RX path)
- Remote M&C panel with optional SNMP
- Handheld terminal
- Flexible and rigid waveguides
- Mounting frames
- High power terminations
- Replacement fans

400W/500W X-Band Hubmount SSPA/SSPB Super Compact TT Series



General Specifications

Output Power	400W		500W	
P_{SAT} (typ.)	+56.0 dBm (nominal)		57.0 dBm (nominal)	
P_{LINEAR}	+52.0 dBm		+53 dBm	
Operating Frequency	7.9 – 8.4 GHz			
L-Band input (BUC)	950 – 1450 MHz			
Gain	SSPA 67 dB min	SSPB (BUC)	77 dB min	
Gain adjustment range	20 dB in 0.1 dB steps			
Gain flatness over full band	SSPA 2dB p-p max	SSPB (BUC)	3 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	-80 dBm/Hz in Transmit Band, -110 dBm/Hz in Receive Band (7.25 – 7.75 GHz)			
Spurious at $P_{LINEAR 1}$	SSPA: -65 dBc max	SSPB (BUC):	-55 dBc max	
Harmonics	-50 dBc at P_{LINEAR}			
AM/PM conversion	2.5°/dB at P_{LINEAR}			
Third order intermod (two tones)	-25 dBc two signal 5 MHz apart at P_{LINEAR}			
Spectral Regrowth	-32 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.	6.95 GHz			
Internal Reference frequency (optional)	10 MHz	Aging/day	±2 ⁻¹⁰	
		Aging/year	±5 ⁻⁸	
		Stability	±2 ⁻⁸ over temp range	
Phase Noise	-53 dBc/Hz at 10Hz	-83 dBc/Hz at 10 kHz		
	-63 dBc/Hz at 100Hz	-95 dBc/Hz at 100 kHz		
	-73 dBc/Hz at 1000Hz			
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 19.5" x 11.5" x 10.2" (495x292x259 mm)			
Weight	66 lbs (30 kg)			
AC input voltage	220V AC ± 20% (47 – 63 Hz)		Power Factor 0.95 min.	
Power consumption (nominal)	1200W at P_{LINEAR} (1600W at P_{SAT})		1450W at P_{LINEAR} (1900W 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 +60 °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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