



25W to 60W
SSPB-2100C™ series



Features

- Converts L-Band to C (see table A)
- Integrated amplifier with an output power of 25W to 60W(see table A)
- Phase-locked oscillator to external 10MHz reference
- High linearity (low intermodulation products)
- Remote Monitor & Control
- Protection against thermal runaway and out-of-lock conditions
- Output sample monitoring port
- Built-in power supply
- Light weight
- Weatherproof package
- Compact packaging
- Redundant ready (option)
- CE Marking

Accessories

- Remote M&C panel (Ethernet port optional)
- Handheld terminal
- Boom mounting kit

Overview

The SSPB-2100C™ series are hub-mount up-converter transmitters, operating in the C/X and Ku-Band. The SSPB-2100C™ is an integrated unit, complete with power supply, phase-locked oscillator, mixer, filter and cooling mechanism. Intended for outdoor operation, the SSPB-2100™ provides the utmost in convenience and efficiency. Other SSPB's are also available for higher powers or for operation at other up-link frequencies.

The design of these units is based on ADVANTECH Wireless industry proven reliable solid-state high power amplifiers. The use of high efficiency power supply and conservative thermal designs contribute to the trouble-free operation of the amplifier.

Built-in microprocessor controller provides the capability for serial port interfaces (RS232/485) for remote monitoring and control.

Application

The SSPB-2100C™ series convert an L-Band signal to the C-band frequency (see table A). Designed for satellite up-link applications, the SSPB series are available in output power from 10W to 1000W. The SSPB-2100C™ series are fully integrated units from 25W to 125W output power designed for mounting outdoors, near the hub of an antenna.

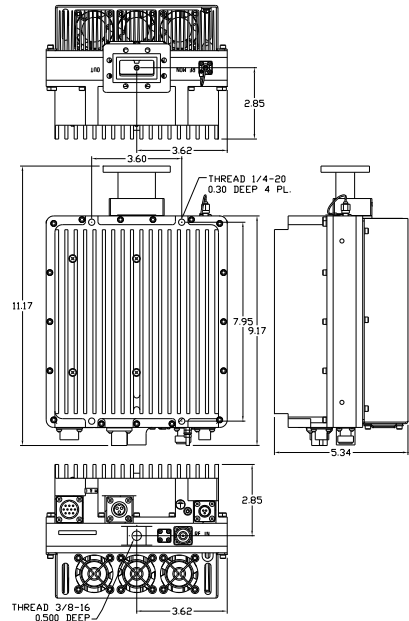


Figure 1: Outline 25W – 30W

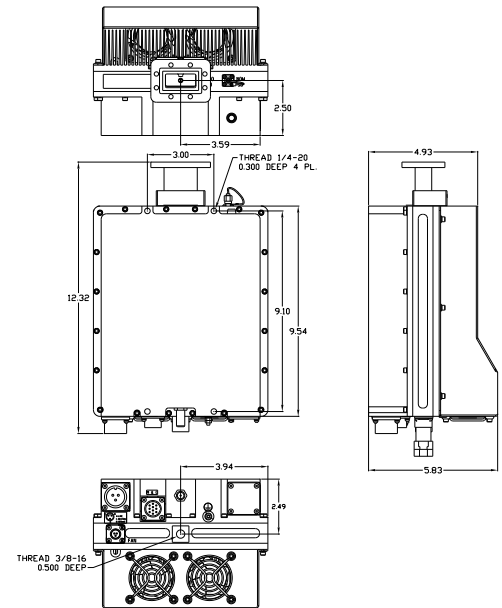


Figure 2: Outline 40W – 60W

Table A

Band	RF-Band (GHz)	IF-Band (MHz)	LO GHz
CS	5.850 - 6.425	950 - 1525	4.900
CP	6.425- 6.725	1025 - 1325	5.400
CI	6.725- 7.025	1225 - 1525	5.500
CR	5.725 – 6.025	950 - 1250	4.775
CX	5.850 – 6.725	950 - 1825	4.900

Compact C-Band Hub-mount SSPA/BUC

Technical Specifications		25W	30W	40W	50W	60W
Electrical Characteristics						
C-Band	CS/CR/ CP/CI/CX	√ √	√ √	√ √	√ √	√ √
Output power (P _{SAT})	dBm	+44	+45	+46	+47	+48
Output power (P _{1dB}) min	dBm	+43	+44	+45	+46	+47
Conversion gain @ maximum setting	dB	64	65	66	67	68
Gain adjustment range		20 dB min				
Input/Output frequency range		See table A on front page				
Max input power without damage		+10 dBm				
Gain flatness		3.0 dB p-p for CS, CP, CI, CR, CL - band, 4 dB p-p for CX-band, 1.0 dB p-p/40 MHz				
Gain variation over temperature		±1.5 dB over full operating range (temperature compensation mode)				
Gain variation over 24 hours		±0.5 dB max at constant temperature & drive level				
Input VSWR		1.5 :1 dB, min				
Output VSWR		2 :1 dB min				
Noise power density (NPD)		-80 dBm/Hz in TX band -155 dBm/Hz in RX band				
Spurious at rated power		-55 dBc, max				
AM/PM conversion		2.5°/dB typical (at P _{1dB})				
Third order IMD (2 tones)		-26 dBc, max at 3 dB back-off from P _{1dB}				
Local Oscillator frequency (LO)		See table A on front page				
LO leakage		-20 dBm max				
Phase noise		-50 dBc/Hz at 10Hz -63 dBc/Hz at 100Hz -73 dBc/Hz at 1000Hz	-83 dBc/Hz at 10 kHz -93 dBc/Hz at 100 kHz -105 dBc/Hz at 1 MHz			
Group delay (over any 40 MHz):	Linear Parabolic Ripple	0.02 ns /MHz, max 0.003 ns/MHz ² , max 1 nsec p-p, max				
External reference						
Reference frequency		10 MHz				
Reference frequency phase noise		-115 dBc/Hz at 10 Hz -135 dBc/Hz at 100 Hz -148 dBc/Hz at 1000 Hz		-155 dBc/Hz at 10 kHz -160 dBc/Hz at 100 kHz		
Reference frequency level		0 dBm ± 5 dB supplied via input L-Band cable				
Power Requirements						
AC input voltage		110 /220 VAC (47-63 Hz) auto-ranging (90-132 V / 180-264 V)				
Power consumption (W nominal)		200	250	300	375	400
Mechanical Characteristics						
Dimensions (L x W x H)		11.7" x 8" x 4.8" (297 x 203 x 114 mm)			DC 12.3" x 8" x 4.8" (312 x 203 x 114 mm) AC 13" x 8" x 5.2" (330 x 203 x 132 mm)	
Weight		14.4 lbs (6.5 kg)		15,6 lbs (7.0 kg)	22 lbs (10.0 kg)	
Interfaces:	RF input RF output	Type N (F) CPR137	RS-485/RS232MS3112E12-10P		AC Line DC Line	MS3102R16-10P MS3102R16-10PX
Environmental Conditions						
Temperature:	Operating Storage	-30°C to +55°C; Option: E-40°C to +55°C; G: -50°C to +50°C -55°C to +85°C				
Humidity		100%, condensing (2" rain/hour)				
Altitude		10,000' AMSL, de-rated 2°C/1,000' from AMSL				

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