



COMPACT C-BAND HUB-MOUNT
SSPB/BUC 25W TO 120W
SSPB-2100C® series



FEATURES

- Converts L-Band to C (see table A)
- Integrated amplifier with an output power of 25W to 120W (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
- CE Marking

OPTIONS

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

OVERVIEW

The SSPB-2100® series are hub-mount up-converter transmitters, operating in the C/X and Ku-Band. The SSPB-2100® 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 AMT™ 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-2100® 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 1W to 500W. The SSPB-2100C® series are fully integrated units from 25W to 120W output power designed for mounting outdoors, near the hub of an antenna.

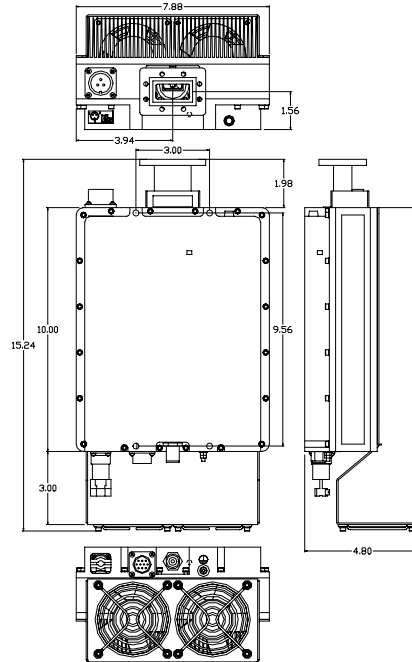


Figure 1: Outline 80W – 120W

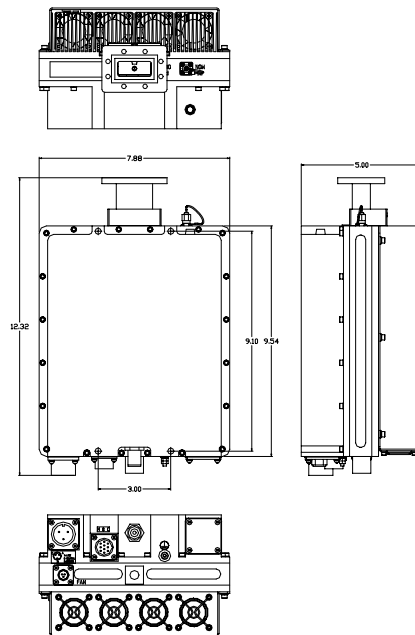


Figure 2: Outline 25W – 60W

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
CL	4.400 - 5.000	950 - 1550	3.450
CX	5.850 - 6.725	950 - 1825	4.900

COMPACT C-Band Hubmount SSPB (BUC)
SSPB-2100C® series



COMPACT C-Band SSPB/BUC 2100C

TECHNICAL SPECIFICATIONS		25W	30W	40W	50W	60W	80W	100W	120W	
Electrical Characteristics										
C-Band	CS/CR/ CP/CI/CX	√	√	√	√	√	√	√	√	
Output power (P _{SAT})	dBm	+44	+45	+46	+47	+48	+49	+50	+51	
Output power (P _{1dB}) min	dBm	+43	+44	+45	+46	+47	+48	+49	+50	
Conversion gain @ maximum setting	dB	64	65	66	67	68	69	70	71	
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	1.5 :1 dB min									
Noise power density (NPD)	-80 dBm/Hz in TX band -135 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		-73 dBc/Hz at 1000Hz		-93 dBc/Hz at 100 kHz		-63 dBc/Hz at 100Hz	
					-83 dBc/Hz at 10 kHz		-105 dBc/Hz at 1 MHz			
Group delay (over any 40 MHz):	Linear	0.02 ns /MHz, max								
	Parabolic	0.003 ns/MHz ² , max								
	Ripple	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)	150	180	200	300	350	400	450	500		
Mechanical Characteristics										
Dimensions (L x W x H)	10" x 8" x4.8" (254 x 203 x 114 mm)					DC 13" x 8" x4.8" (330 x 203 x 114 mm)				
						AC 13" x 8" x5.2" (330 x 203 x 132 mm)				
Weight	14.4 lbs (6.5 kg)					18 lbs (8.2 kg)				
Interfaces :	RF input	Type N (F)	RS-485/RS232		MS3112E12-10P		AC Line	MS3102R16-10P		
	RF output	CPR137					DC Line	MS3102R16-10PX		
Environmental Conditions										
Temperature:	Operating	-30°C to +55°C; Option: E-40°C to +55°C; G: -50°C to +50°C								
	Storage	-55°C to +85°C								
Humidity	100%, condensing (2" rain/hour)									
Altitude	10,000' AMSL, de-rated 2°C/1,000' from AMSL									

United States

1553 W Todd Dr, Suite 206
Tempe, Arizona
United States, 85283-4805
Tel.: (480) 839-4136
Fax: (480) 839-0860

Email: Sales@AdvantechAMT.com

CANADA

657 Orly Avenue
Dorval, Quebec
Canada H9P 1G1
Tel.: (514) 420-0045
Fax: (514) 420-0073

Email: Sales@AdvantechAMT.com

EUROPE

39 Edison Road
St. Ives Huntingdon, Cambridgeshire
United Kingdom PE27 3LF
Tel.: +44 (1480) 357 600
Fax: +44 (1480) 357 601

Email: Sales.Europe@AdvantechAMT.com

