



FEATURES

- Converts L-Band to C (see table A)
- Integrated amplifier with an output power of 25W to 100W (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

- External Receive Reject Filter
- 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-2100X® series converts an L-Band signal to the X-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-2100X® series are fully integrated units from 25W to 120W output power designed for mounting outdoors, near the hub of an antenna.

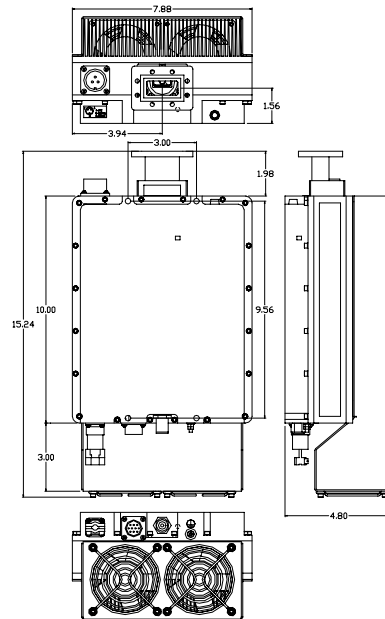


Figure 1: Outline 80-120 W units

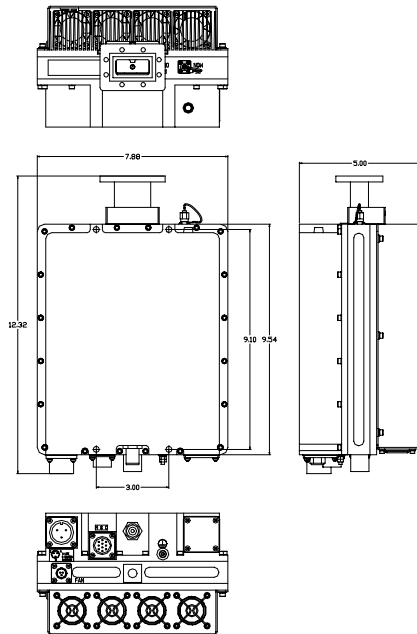


Figure 21: Outline 25-60 W units

Table A

Band	RF-Band (GHz)	IF-Band (MHz)	Output Power	LO GHz
X-Band	7.9 – 8.4	950 - 1450	25- 120	6.950

COMPACT X-Band Hubmount SSPB (BUC)
 SSPB/BUC 25W TO 125W
 SSPB-2100X[®] series



COMPACT X-Band SSPB/BUC

TECHNICAL SPECIFICATIONS	25W	30W	40W	50W	60W	80W	100W	125W
Electrical Characteristics								
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 dB p-p, max over full band, 1.0 dB/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)	-85 dBm/Hz in TX band -115 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)	-25 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		-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				-155 dBc/Hz at 10 kHz			
	-135 dBc/Hz at 100 Hz				-160 dBc/Hz at 100 kHz			
	-148 dBc/Hz at 1000 Hz							
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" x 4.8" (254 x 203 x 114 mm)					DC 13" x 8" x 4.8" (330 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)					18 lbs (8.2 kg)		
Interfaces:	RF input	Type N (F)	RS-485/RS232 MS3112E12-10P			AC Line	MS3102R16-10P	
	RF output	CPR112				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							



SATCOM Services

Mike Termondt
 25 Creek Lane
 Oak View, CA 93022

Tel.: (805) 649-1384

Fax: (805) 500-4328

Email: mike@satcom-services.com

