



Hub-mount SSPB

5W,7W

Ku-BAND

**C-Band
Hubmount
SSPB
(5 W, 7 W)
SSPB-200K**

**Series
SSPB-K5;
SSPB-K7**

INTRODUCTION

The SSPB-200K[®] series described in this section is from Advantech's family of hub-mount BUC (Block Up Converter) transmitters, operating in the Ku-Band. The SSPB-200K[®] is used in conjunction with an L-Band modem or an indoor L-Band transceiver. The SSPB-200K[®] is an integrated unit, complete with power supply, phase-locked oscillator, mixer, filter and cooling mechanism. Intended for outdoor operation, the SSPB-200K[®] is assembled in a robust self-contained weatherproof package and provides the utmost in convenience and efficiency. Other Advantech BUCs are also available for higher powers or for operation at other up-link frequencies.

STANDARD FEATURES

- Converts synthesized L-Band (950-1450 MHz) to the Ku-Band (14.0 – 14.5 GHz)
- Phase-locked local oscillator locks directly to an external 10 MHz reference
- Fully meets IESS 308/309 Phase/Noise requirements
- Wide range of output power from 5 watts to 7 watts
- Robust, Weatherproof package
- Power feed (DC) via coaxial cable
- Compact packaging
- Protection against thermal runaway and out-of-lock conditions
- Receive Reject Filter
- CE Marking

OPTIONS

- RS-485 serial Interface for
 - Remote Monitoring and Control
 - Remote Power Control

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TECHNICAL SPECIFICATIONS		5 W	7 W
Electrical Characteristics			
Input L-Band frequency range	950-1450 MHz;		
Input Level	-20 dBm for P1dB (-30 dBm optional)		
Output frequency range	14.00 - 14.50 GHz (SSPB-100 K® series) ;		
Conversion gain at center frequency	58 dB ±1 dB	59 dB ± 1 dB	
Output power (P1dB) typical	+37dBm	+38 dBm	
Gain flatness	±2.0 dB, max over 500 MHz, ± 0.75 dB/40 MHz		
Gain variation over temperature	±1.5 dB over full operating range (temperature compensation mode) (±1 dB over full operating range in Power Track™ mode)		
Input impedance	50 ohm (75 ohms optional)		
Input VSWR, in-band	1.4:1		
Output VSWR	1.5 :1		
Output impedance	50 ohm		
Noise Figure	15 dB, max		
Spurious at rated power	-50 dBc, max		
Harmonics at rated power	-45 dBc, max		
AM/PM conversion	3°/dB typical (at P1dB)		
Third order IMD (two equal tones 5 MHz apart)	-24 dBc, max (at SCL 6 dB back-off from rated P1dB)		
Local Oscillator frequency (LO)	13.050 GHz (SSPB-200 K® series)		
LO leakage	< -50 dBm when Receive Reject Filter Installed		
Local Oscillator Phase noise, max.	-60 dBc/Hz at 100 Hz -70 dBc/Hz at 1000 Hz	-80 dBc/Hz at 10 kHz -90 dBc/Hz at 100 kHz	
Integrated (SSB) Phase Noise	2° RMS Typ.		
RF Monitor Coupling Ratio	-30 ± 5 dB		
RF Monitor Coupling Flatness	± 1 dB over the full band		
External Reference			
Reference frequency	10 MHz		
Reference frequency phase noise, min. (Fref = 10 MHz)	-105 dBc/Hz at 10 Hz -135 dBc/Hz at 100 Hz -145 dBc/Hz at 1000 Hz	-150 dBc/Hz at 10 kHz -160 dBc/Hz at 100 kHz	
Reference frequency level	0 dBm ± 5 dB		
Power Requirements			
Supply voltage	+ 48 VDC Power supplied via coax cable;		
Power consumption, (typical)	50 W	55 W	
Mechanical Characteristics			
Dimensions (W x H x L)	6.29" x 3.90" x 9.78"		
Weight	8 lb. (3.6 kg)		
Interfaces:			
RF input	Type N (F)		
RF output	WR75 grooved or Type N (F) (option)		
RS485 Serial Port with optional Power Track™	MS3102R20-29P (Male) (option)		
RF Monitor	Type SMA (F) (option)		
Environmental Conditions			
Temperature	Operating Storage	-30°C to +55°C (Option F: -40°C to +55°C ; Option 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		

Advantech reserves the right to change specifications without notice

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