



20W to 80W
SSPB-S2100K[®] series



Features

- Converts L-Band to Ku-Band (see table A)
- Integrated amplifier with an output power of 20W to 80W (see table A)
- Phase-locked oscillator to external 10MHz reference
- High linearity (low intermodulation products)
- Built-in Receive Reject Filter
- Remote Monitor & Control
- Protection against thermal runaway and out-of-lock conditions
- Built-in power supply
- Light weight
- Weatherproof package
- Compact packaging
- CE Marking

Overview

The SSPB-S2100K[®] series are hub-mount up-converter transmitters, operating in the Ku-Band. The SSPB-S2100K[®] is an integrated unit, complete with power supply, phase-locked oscillator, mixer, filter and cooling mechanism. Intended for outdoor operation, the SSPB-2100K[®] 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-2100K[®] series convert an L-Band signal to the Ku-band frequency (see table A). Designed for Ku-Band satellite up-link applications, the SSPB K series are available in output power from 8W to 500W. The SSPB-S2100K[®] series are fully integrated units from 20W to 80W output power designed for mounting outdoors, near the hub of an antenna.

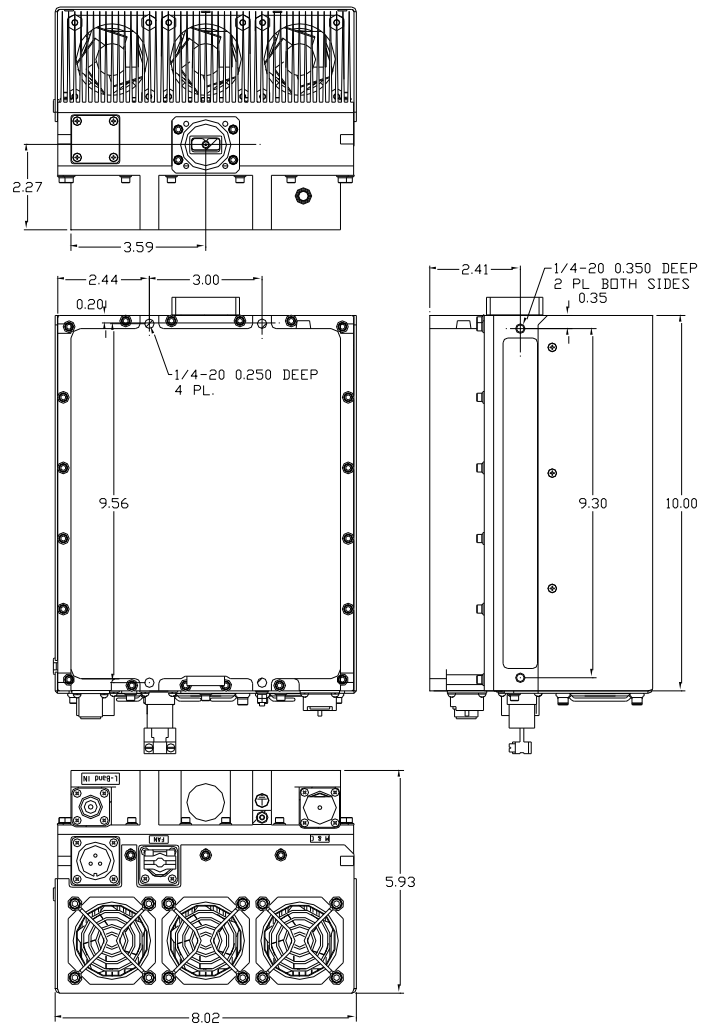


Table A

Band	RF Band (GHz)	IF Band (MHz)	Output Power W	LO (GHz)
KS	14.00 – 14.50	950 - 1450	20-80	13.05
KX	13.75 – 14.5	950 - 1700	20 -80	12.8

*Other frequency sub-bands are available. Please consult factory.

Accessories

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

Compact Ku-Band Hub-mount SSPB

Technical Specifications		20W	25W	30W	40W	50W	60W	80W	
Electrical Characteristics									
KS		√	√	√	√	√	√	√	
KX		√	√	√	√	√	√	√	
Output power (P _{SAT}) typ.	dBm	43	+44	+45	+46	+47	+48	+49	
Output power (P _{1dB}) min	dBm	+42	+43	+44	+45	+46	+47	+48	
Conversion gain @ maximum setting		63 dB	64 dB	65 dB	+66 dB	67 dB	68 dB	69 dB	
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 , max over full band, 1 dB p-p dB/40 MHz							
Gain variation over temperature		±1.5 dB over full operating range							
Gain variation over 24 hours		±0.25 dB max at constant temperature & drive level							
Input VSWR		1.5:1 dB, min							
Output VSWR		1.5:1 dB typical,							
Noise power density (NPD)		-75 dBm/Hz in TX band -135 dBm/Hz in RX band							
Spurious at rated power		-55 dBc, max							
AM/PM conversion		3°/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	-63 dBc/Hz at 100Hz	-83 dBc/Hz at 10 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		-155 dBc/Hz at 10 kHz		-135 dBc/Hz at 100 Hz			-160 dBc/Hz at 100 kHz
Reference frequency level		0 dBm ± 5 dB supplied via input L-Band cable							
Power Requirements									
Input voltage		110 /220V AC (47-63 Hz) auto-ranging (90-132 V / 180-264 V) 24-35V DC or 40-60V DC							
Power consumption (max)		250W	270W	300W	400W	450W	550W	700W	
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 (optional SMA)	RS-485/RS232 MS3112E12-10P		AC Line	MS3102R16-10P			
	RF output	WR-75 contact			DC Line	MS3102R16-10PX			
Environmental Conditions									
Temperature:	Operating Storage	-30°C to +55°C; Option: -40°C to +55°C; -55°C to +85°C							
Humidity		100%, condensing (2" rain/hour)							
Altitude		10,000' AMSL, de-rated 2°C/1,000' from AMSL							

NORTH AMERICA
USA
Tel: +1 678 889-1831
Fax: +1 678 889-1756
info.usa@advantechwireless.com

CANADA
Tel: +1 514 420 0045
Fax: +1 514 420 0073
info.canada@advantechwireless.com

EUROPE
UNITED KINGDOM
Tel: +44 1480 357 600
Fax: +44 1480 357 601
info.uk@advantechwireless.com

RUSSIA & CIS
Tel: +7 495 971 59 18
info.russia@advantechwireless.com

SOUTH AMERICA
USA
Tel: +1 678 889-1831
Fax: +1 678 889-1756
info.latam@advantechwireless.com

BRAZIL
Tel: +55 11 3054 5701
Fax: +55 11 3054 5701
info.brazil@advantechwireless.com

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