SPACEBRIDGE
ALL THINGS CONNECTED

SBIS0200K/SBIB0200K* 200W Appendix 30B-15 and Kx-band Indoor Multicarrier Gen III GaN SSPA/BUC

This compact yet powerful 200W intdoor SSPA/BUC harnesses advanced Gen III GaN technology, delivering industry-leading broadband RF performance, exceptional efficiency, outstanding linearity, and long-term reliability for applications such as multicarrier, multi-transponder DTH contribution or distribution, CBH, HTS VSAT Hub

Key Features

- Built-in 2:1 and 1:1 Redundancy, no External Redundancy Controller required
- High Linearity, efficiency and MTBF
- Built-in High Precision true RMS Output Power Meter
- Web Interface, SNMP support
- Output Overdrive Protection
- Output VSWR Protection
- Thermal shutdown

Options

- SSPA or SSPB (BUC)
- Appendix 30B-15 (KL, 12.75-13.25GHz) and Kx (KX, 13.75-14.5GHz) bands
- Internal high-stability 10 MHz Reference
- 1U Rack mountable RCP (Remote Control Panel) for 1:1 redundancy
- 2U Rack mountable RCP 2:1 redundancy



In addition to its industry-leading performance and reliability, this device boasts a comprehensive suite of monitoring and control capabilities, easily accessible via Ethernet, serial RS232, RS485 interfaces, or dry contacts. It is the premier choice for demanding applications, specifically designed for outdoor installations, and because its ultra-linear performance offers the capability to utilize 256 APSK modulation on small (1.8m) antennas for contribution, as well as multicarrier, multi-transponder use for DTH distribution and data transmission, such as HTS/UHTS VSAT Hubs/UT

Designed for indoor teleport and gateway environments, this amplifier combines exceptional power density, efficiency, and reliability in a compact rackmount platform. Its optimized thermal architecture and integrated forced-air cooling simplify installation in standard equipment racks while reducing facility operating costs. The unit delivers maximum performance in teleports, broadcast facilities, network operations centers, and other mission-critical satellite communication infrastructures.

* SSPA: SBIS0200K; SSPB (BUC): SBIB0200K

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Technical Specifications

MODELS		
	SBIS0200KL/SBIB0200KL	**SBIS0200KX/SBIB0200KX**
RF Frequency range	12.75 – 13.25 GHz	13.75 – 14.5 GHz / 14.0 – 14.5 GHz
IF Frequency range*	950-1450 MHz	950 - 1700 MHz / 950 – 1450 MHz
LO Frequency*	11.8 GHz	12.8 GHz / 13.05 GHz**

RF CHARACTERISTICS	
P_{Sat} , Rated Output Power	53 dBm / 200 W min
P_{Lin1C} , Linear Power as defined by MIL-STD-188-164C, 1 carrier	51 dBm / 126 W min
P_{Lin2C} , Linear Power as defined by MIL-STD-188-164C, 2 carriers	50 dBm / 100 W min
Small Signal Gain	70 dB typ
Gain Flatness over full frequency range	± 2.0 dB max
Gain Flatness over any 40 MHz	± 0.5 dB max
Gain Control	20 dB min dynamic range, 0.1 dB steps
Gain Stability over full Temperature and Frequency ranges	± 2.5 dB max between 0°C and 50°C
Gain stability over 24h at constant drive and temperature	± 0.5 dB max
Linearity: IMD3, with 2 equal CW carriers 5 MHz apart	-25 dBc max at total power = P_{Lin2C}
External Reference Frequency*	10 MHz, sinusoidal, multiplexed with L-band (IF In)
External Reference Level*	0 dBm, ±5 dB
External Reference SSB Phase Noise, max	-110 dBc/Hz @ 10 Hz; -125 dBc/Hz @ 100 Hz; -140 dBc/Hz @ 1 kHz; -155 dBc/Hz @ 10 kHz; -165 dBc/Hz @ 100 kHz; -165 dBc/Hz @ 1 MHz;
Up-Converter SSB Phase Noise, max*	-54 dBc/Hz @ 10 Hz; -72 dBc/Hz @ 100 Hz; -80 dBc/Hz @ 1 kHz; -90 dBc/Hz @ 10 kHz; -100 dBc/Hz @ 100 kHz; -115 dBc/Hz @ 1 MHz
Integrated Phase Noise	1° RMS max
Output Spurious: In-band Out-of-band	< -60 dBc Complies with ETSI EN 301 428/430 and MIL-STD188-164C
Harmonics at P_{Lin2C}	< -60 dBc
AM/PM Conversion	2.0 °/dB max at P_{Lin1C}
Noise Power Density	Tx < - 80 dBm/Hz Rx < - 145 dBm/Hz
Output RF Power Monitor	-40 dB, 1dB peak-to-peak flatness over frequency range, calibration chart provided

INTERFACES	
IF Input connector	50 Ohms N-type (F)
Input VSWR	1.5:1 max
RF Output Connector	CPR137 grooved, threaded 10-32 UNF
Output VSWR	1.3:1 max
RF Sample	50 Ohms N-type (F)
AC Power In	C13
M&C Interfaces: Ethernet, Serial RS-232 & RS-485, Form-C	DB-25 & RJ-45
Redundancy	DB-15

ENVIRONMENTAL	
Cooling systems	Forced Air
Temperature Operating Storage	 -0°C to +55°C -20°C to +60°C
Relative Humidity	95%
Altitude	10,000 ft (3,000 m) AMSL

MECHANICAL	
Dimensions (LxWxH)	5.25 x 19.00 x 17.00 in 133.35 × 482.6 × 431.8 mm
Weight	55 lb (25 kg)

POWER	
AC Voltage Range	180-265 VAC
Frequency Range	47-63 Hz
Power Consumption at P_{Sat}	1300 W
Power Consumption at P_{Lin2C}	1100 W

*Parameters marked with asterisk related to the BUC option ** Switchable Local Oscillator

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