

This compact yet powerful 200W outdoor SSPA/BUC harnesses advanced Gen III GaN technology, delivering exceptional broadband RF performance, high efficiency, and outstanding linearity and 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

- HPA or 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 exceptional 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



With an IP67 ingress protection rating, the device can be mounted outdoor under the direct sun rays on an antenna post/kingpost, or on the platform behind the antenna, or inside the antenna hub, effectively eliminating the W/G RF loss commonly associated with indoor units. Additionally, it does not require air-conditioning, resulting in significant reductions in ongoing electrical costs and maintenance expenses, while often eliminating the need for nearby shelter construction

* SSPA: SBS0200K; SSPB (BUC): SBB0200K

SBS0200K/SBB0200K 200W Appendix 30B-15 and Kx-band Outdoor Multicarrier Gen III GaN SSPA/BUC

Technical Specifications

MODELS		
	SBS0200KL/SBB0200KL	SBS0200KX/SBB0200KX
RF Frequency range	12.75 – 13.25 GHz	13.75 – 14.5 GHz / 14.0 – 14.5 GHz
IF Frequency range*	950-1525 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	± 1.5 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	± 2.0 dB max
Gain stability over 24h at constant drive and temperature	0.5 dB peak-to-peak
Linearity: IMD3	-25 dBc at total power = P _{Lin2C}
Measured with 2 equal tones 5 MHz apart	-30 dBc at 6 dB total power back-off from P _{Sat}
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; -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
Up-Converter SSB Phase Noise, max* (not present if SSPA)	
Integrated Phase Noise	1° RMS max
Output Spurious: In-band	< -60 dBc
Out-of-band	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 < - 155 dBm/Hz
Output RF Power Monitor	52 dB, 1dBpp flatness over frequency range

INTERFACES		ENVIRONMENTAL	
IF Input connector	50 Ohms N-type (F)	Cooling systems	Forced Air
Input VSWR	1.5:1 max	Temperature	
RF Output Connector	WR75 grooved	Operating	-40°C to +55°C
Output VSWR	1.3:1 max	Storage	-55°C to +85°C
RF Sample	50 Ohms N-type (F)	Relative Humidity	100%, up to 4" of rain precipitation/hour
AC Power In	MS3102E16-10P	Altitude	10,000 ft (3,000 m) AMSL
M&C Interfaces: Ethernet, Serial RS-232 & RS-485, Form-C	MS3112E14-19P	Adiabatic Derating (Altitude Temperature Derating Factor)	5°C / 1000 m
Redundancy	MS3112E14-19S	Environmental	IP67 Rating

POWER		MECHANICAL	
AC Voltage Range	196-265 VAC	Dimensions (LxWxH)	20.00 x 15.00 x 5.48 in 508 x 381 x 139 mm
Frequency Range	47-63 Hz	Weight	58 lb (26.4 kg)
Power Consumption at P _{Sat}	1200 W		
Power Consumption at P _{Lin2C}	1000 W		

*Parameters marked with asterisk related to the BUC option

** Switchable Local Oscillator