

SBS0400X/SBB0400X* 400W X-Band Outdoor MIL-STD188-164C Gen III GaN SSPA/BUC

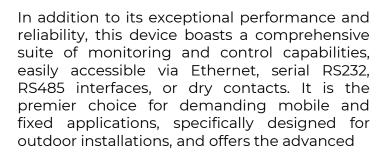
This compact and robust 400W Outdoor SSPA/BUC, powered by cutting-edge third-generation GaN technology, offers exceptional performance with its lightweight design, low power consumption, and superior linearity. Engineered for optimal efficiency and reliability, it is perfectly suited for SCOTP and SCOTM applications, including mobile and marine environments

Key Features

- MIL-STD-188-164C compliant
- Built-in 1:1 Redundancy, no External Redundancy Controller required
- · High Linearity, efficiency and MTBF
- Built-in High Precision true RMS Output Power Meter
- Built-in 110/220VAC power supply
- Web Interface, SNMP support
- Output Overdrive Protection
- Output VSWR Protection
- Thermal shutdown

Options

- Internal High-stability 10 MHz Reference
- White or FS34083 Aerospace flat green





capability to utilize high MODCOD on small antennas for high data rate transmission. With an IP67 ingress protection rating, the device can be installed outdoor under the direct sun rays, at a short distance from the antenna feed, usually on the antenna boom, which contributes to significantly improve link budget and save electrical and maintenance costs.

* SSPA: SBS0400X; SSPB (BUC): SBB0400X







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Technical Specifications

MODEL			
RF CHARACTERISTICS	SBS0400X/SBB0400X		
RF Frequency range	7.9 – 8.4 GHz		
IF Frequency range*	950 - 1450 MHz		
LO Frequency*	6.950 GHz		

RF CHAF	RACTERISTICS
P _{Sat} , Output Power	56 dBm / 400 W
P _{Lin1C} , Linear Power as defined by MIL-STD-188-164C, 1 carrier	54 dBm / 250 W
P _{Lin2C} , Linear Power as defined by MIL-STD-188-164C, 2 carriers	53 dBm / 200 W
Small Signal Gain	70 dB nom
Input Level without damage	0 dBm max
Gain Flatness over full frequency range	± 1.5 dB max
Gain Flatness over any 40 MHz	± 0.4 dB max
Gain Control	20 dB min dynamic range, 0.1 dB steps
Gain Stability over full Temperature and Frequency ranges	± 1.5 dB max
Gain stability over 24h at constant drive and temperature	±0.5 dB
Power Measurement Stability for built-in True RMS Power Meter	0.5 dBpp
Linearity: IMD3, measured 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 not present if SSPA)	-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 SSB Phase Noise	1° RMS max
Output Spurious: In-band Out-of-band	< -60 dBc Complies with ETSI EN 301 428/430 and MIL-STD-188-164C
Harmonics at P _{Lin2C}	< -60 dBc
AM/PM Conversion	2.0°/dB max at P _{LinIC}
Noise Power Density	Tx < - 80 dBm/Hz Rx < - 145 dBm/Hz (with external TRF and RRF)
0.1.1.DED	-50 dB, 1dB peak-to-peak flatness over frequency range, calibration

Output R	F Power	Monitor
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INTERFACES				
IF Input connector	50 Ohms N-type (F)			
Input VSWR	1.5:1 max			
RF Output Connector	CPR112, grooved			
Output VSWR	1.3:1 max			
RF Sample	50 Ohms N-type (F)			
AC Power In	MS3102e16-10P**			
M&C Interfaces: Ethernet, Serial RS-232 & RS-485, Form-C	MS3112E14-19P**			
Redundancy	MS3112E14-19S**			

ENVIRONMENTAL				
Cooling system	Forced Air			
Temperature:				
Operating	-40° C to +55° C			
Storage	-55° C to +85° C			
Relative Humidity	100%, up to 4" of rain precipitation/hour			
Altitude	10,000 ft (3,000 m) AMSL			
Adiabatic Derating (Altitude Temperature Derating Factor)	5° C/1000 m			
Ingress Protection	IP67			

POWER			
DC Voltage Range	180 – 265 VAC		
Power Consumption at P _{sat}	2500 W		
Power Consumption at P _{Lin2C}	2150 W		

MECHANICAL

 Dimensions (LxWxH)
 12.88" x 11" x 7.36"

 327 x 279 x 187 mm

 Weight
 30 lb (13.6 kg)





chart provided, accuracy ±0.25 dB

^{*} Parameters marked with asterisk related to the BUC option

^{**} Mating connectors included