

100-1000W X-BAND GaN SSPA & BUC RACK-MOUNT

DATASHEET



The new generation of ALGA high powered Rack-Mount X-Band SSPA and BUC (GaN)

Choose one of our high power rack-mount SSPA's and BUC's for X-Band and you'll receive a value priced solution, when you need it, where you need it, with everything you need.

The Alga series of high power SSPA's and BUC's are designed for use primarily in satellite communications applications. The operating frequency band of 7.90GHz to 8.40GHz in the standard X-Band. Other frequency ranges are also available to customer specification. These units are characterized by high linearity and high power efficiency, as well as excellent thermal efficiency and dependability over the full operating temperature range.

KEY FEATURES

- Operating temperature range of 0°C to +50°C
- Redundancy ready
- Light weight and compact – highest power density on the market
- High thermal dissipation efficiency resulting in “Best in Class” Mean Time Before Failure
- Over temperature shutdown
- High Mean Time Before Failure (MTBF over 100 K hours)
- Monitor & Control Interface
- Serial and Analog M&C
- Internet web page interface
- Alarms: Voltage/Current/Temperature/Summary
- Control: Mute/Gain
- RF power detection

MECHANICAL FEATURES

- Light weight
- Smallest size

OPTIONS

- Frequency range options available
- 1:1 and 1:2 Redundancy Systems
- Extended Warranty
- BUC: BUILT IN with or without internal 10 MHz ref

COST EFFECTIVE SOLUTIONS FOR THE FUTURE

SALES@ALGA.CA | WWW.ALGA.CA | 1-514-694-8666



RACK-MOUNT SSPA SPECIFICATIONS

ELECTRICAL CHARACTERISTICS

Frequency Range	7.9 – 8.4 GHz
Gain	70 dB nominal
Max Input Power w/o Damage	0 dBm
Gain flatness Over Full Band	± 1.0 dB max
Gain Slope	± 0.4 dB max / 40 MHz max.
Gain Variation	± 1.0 dB over max over operating temperature range
Gain Adjustment Range	20 dB in 0.1 dB steps
In/Output Return Loss (VSWR)	14 dB min. (1.5:1 max)
Noise figure at maximum gain	10 dB nominal
Spurious	-55dBc max @ PLinear
Harmonics	-40 dBc max @ PLinear
AM/PM conversion	2.0 degrees/dB max @ PLinear
Group Delay (per 40 MHz)	Linear 0.01 ns/MHz; Parabolic 0.003 ns/MHz ² ; Ripple 1.0 ns p-p
Third order IMD (2 equal tones 5MHz apart)	-25 dBc max. @ PLinear
Prime Power Voltage	90 – 265 VAC (high power models 190 – 265)
Prime Power Frequency	47 – 63 Hz

INTERFACE

Power	AC
M&C – RS-232/485/Ethernet	RJ-45 and (DB 9 or DB 15)
Redundancy	RJ-45 and DB 15
Output Interface	CPR 112G (Other options available)
Input Interface	N-Type Female, 50 Ohms

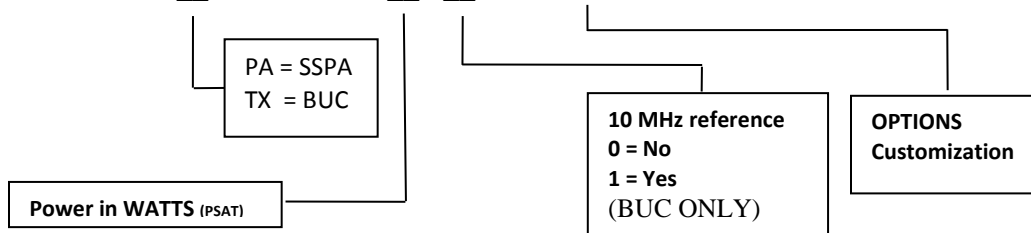
SPECIFICATION BY SSPA POWER

SSPA POWER PSAT (TYPICAL) /dBm (WATTS/dBm)	OUTPUT POWER @ PLinear (PSAT -3dBm) (WATTS/dBm)	POWER REQUIREMENT	POWER CONSUMPTION (Watts)	DIMENSIONS RU	WEIGHT (LBS/KG)
100W / 50	50W / 47.0	110-220VAC (*1)	900	3 RU	32 / 14.5
125W / 51	60W / 47.5	110-220VAC (*1)	975	3 RU	32 / 14.5
200W / 53	100W / 50.0	220VAC (*1)	1500	3 RU	32 / 14.5
250W / 54	112W / 50.5	220VAC (*1)	1800	3 RU	32 / 14.5
400W / 56	200W / 53.0	220VAC	2800	3 RU	52 / 23.5
500W / 57	225W / 53.5	220VAC	3000	3 RU	52 / 23.5
800W / 59	400W / 56.0	220VAC	4500	5 RU	82 / 37
1000W / 60	450W / 56.5	220VAC	4800	5 RU	82 / 37

(*1) 48 VDC isolated optional on 100W – 250W units

ORDERING INFORMATION To place an order, build your specific C-BAND SSPA by specifying the following in your ordering number:

Ordering Number: AL__ - RM - G - X - __ - __ - OPTIONS



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