

X-Band Antenna-Mount SSPAs

PXB8SxxxLA

These high power solid-state amplifiers offer output powers of 50, 100, 125, or 200 watts across the standard 7.90 to 8.40 GHz satellite uplink band. Housed in a compact weatherproof enclosure, the amplifiers can be mounted in an antenna hub or outdoors in applications where it is desirable to reduce cable losses by mounting the SSPA close to the antenna. The amplifiers feature a microprocessor-based M&C system that facilitates easy setup and control.

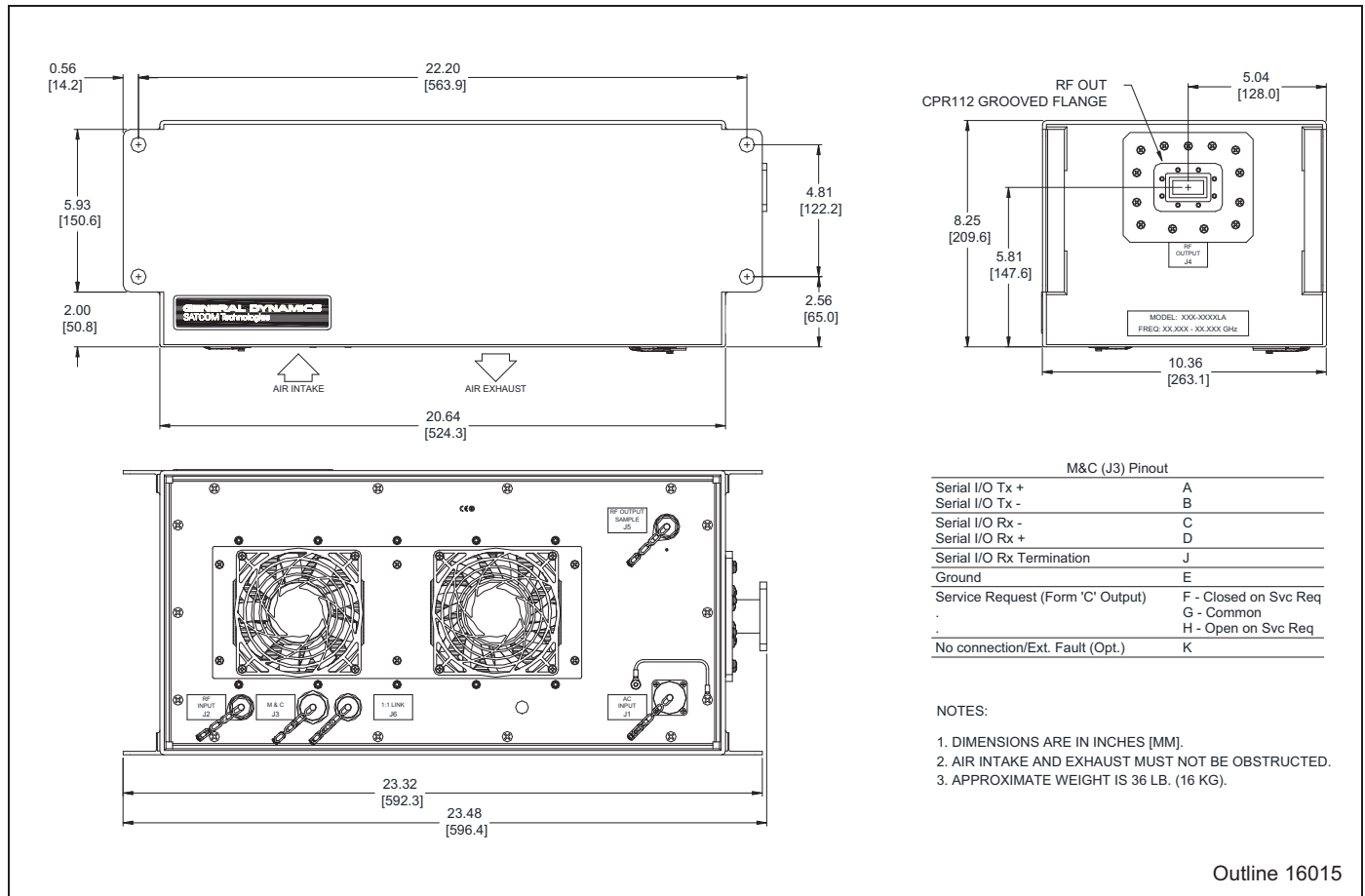
Options

- 1:1 and 1:2 redundant systems
- Integrated block upconverter with L-band input

Features

- 50/100/125/200 W saturated output power
- 70 dB gain
- Built-in monitor and control
- Temperature-compensated gain from -40 to +50 °C
- Serial interface (RS-232/-422/-485)
- Output isolator for high load VSWR protection
- 20 dB range digital gain adjustment
- RF output sample port (-40 dBc)
- Output power monitor
- Extremely light weight, nominally 36 lb (16 kg)
- Mounts on small antennas

SSPA Outline Drawing



Outline 16015

BUY NOW



Digisat International Inc.
 4195 W. New Haven Ave., Suite 15
 Melbourne, FL 32904
 USA
 +1-321-676-5250
 Email: sales@digisat.org
 http://www.digisat.org

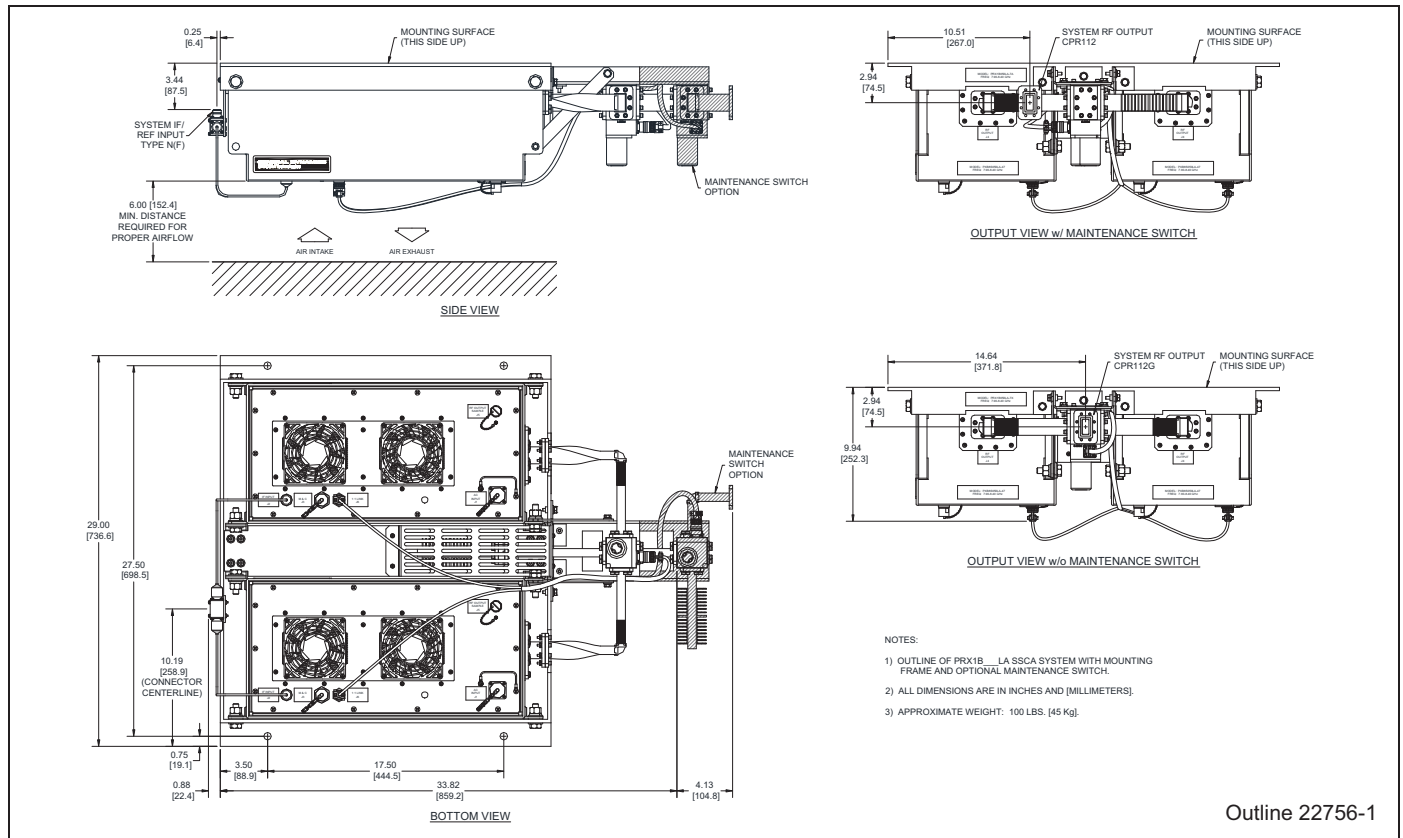
Single-Thread SSPA Specifications

Parameter	Notes	Min.	Nom./Typ. [†]	Max.	Units
Frequency Range		7.90		8.40	GHz
Input Frequency Range	with Option 7, internal BUC	950		1450	MHz
Gain, at maximum gain setting		70			dB
Gain Adjust Range		20			dB
Gain Flatness	Full band, standard			±1.0	dB
	Full band, with Option 7			±1.5	dB
	Per 40 MHz, standard			±0.3	dB
	Per 40 MHz, with Option 7			±0.5	dB
Gain Stability vs. Temperature	-40 to +50 °C, standard		±1.0	±1.5	dB
	-40 to +50 °C, with Option 7		±2.0	±2.5	dB
Saturated Power Output	50 W		+47 (50)		dBm (W)
	100 W		+50 (100)		dBm (W)
	125 W		+51 (125)		dBm (W)
	200 W		+53 (200)		dBm (W)
Power Output, at 1 dB compression (P _{1 dB})	50 W	+46.5 (45)			dBm (W)
	100 W	+49.0 (80)			dBm (W)
	125 W	+50.0 (100)			dBm (W)
	200 W	+52.0 (158)			dBm (W)
Two-tone Intermodulation	At 3 dB total backoff from 1 dB compression point		-30	-25	dBc
Group Delay	Linear			0.03	ns/MHz
	Parabolic			0.003	ns/MHz ²
	Ripple			1.0	ns p-p
AM/PM Conversion	At P _{1 dB}		2.5	3.5	°/dB
Noise Figure	At maximum gain, standard		8		dB
	At max. gain, with Option 7		15		dB
VSWR	Input		1.20	1.30	:1
	Input, with Option 7		1.35	1.50	:1
	Output		1.20	1.30	:1
Output Sample Port Connectors	Input		-40		dBc
Power Requirements	Output		Type N Female		
	Sample Port		CPR112G Waveguide		
	I/O		Type N Female		
	Power		10-pin MS, mate supplied		
			3-pin MS, mate supplied		
	Voltage		90-135 or 180-265		Vac
Frequency	47			63	Hz
Power, 50 W			375	500	W
Power, 100 W			600	800 ^A	W
Power, 125 W			750	1000 ^A	W
Power, 200 W			850	1200 ^A	W
Power factor corrected			0.99		
Cooling System			Forced air		
Operating Temperature Range	Ambient air temperature	-40		+50	°C
Weight	Approximate		36 (16)		lb (kg)
Dimensions	See outline drawing		8.25 x 23.32 x 10.36		inches
			210 x 592 x 263		mm

[†] When there is only one value on a line, the Nom./Typ. column is a nominal value; otherwise it is a typical value. Typical values are intended to illustrate typical performance, but are not guaranteed.

^A Cold start, at -40 °C and P_{OUT} in saturation.

Typical 1:1 Redundant System Outline Drawing



Part Number/Ordering Information

SSPA:

Part/Model No. **PXB8S** **LA-XX**

7.90–8.40 GHz = B

50 Watts = 050

100 Watts = 100

125 Watts = 125

200 Watts = 200

Option:

1:1 Redundancy 4

Redundant Capability
(required for units in 1:1 systems)

Block Upconverter 7

L-Band IF Input

1:1 Redundant Systems* (Consists of 1:1 switching assembly, two SSPAs, and interconnecting cables):

Part/Model No. **PRX1B** **LA-XX**

7.90–8.40 GHz = B

50 Watts = 050

100 Watts = 100

125 Watts = 125

200 Watts = 200

Options:

Block Upconverter 7

L-Band IF Input

Maintenance Switch A

Selects antenna or dummy load at system output

* Performance specifications of a redundant system depend on the installed configuration and optional accessories. Contact the factory for more information and for 1:2 system capabilities.

Related Accessory:

RCP-2001, SSPA Remote Control Panel

1U-high rack-mount panel enables remote manual control of the SSPA. Can be located up to 1.3 km (4000 ft.) away and interconnects with inexpensive cable. (One panel is required for each SSPA in a redundant system, for full remote manual control.)



Other Products

- Low Noise Amplifiers and LNA Systems
- Solid-State Power Amplifiers and SSPA Systems
- General Purpose Converters
- Satellite Communications Equipment
- Custom Subsystems

GENERAL DYNAMICS
SATCOM Technologies

© General Dynamics. All rights reserved. General Dynamics reserves the right to make changes to its products and specifications at any time and without notice. All trademarks indicated as such herein are trademarks of General Dynamics. All other product and service names are the property of their respective owners.