

X-Band Solid-State Power Amplifiers

Using technology developed for VertexRSI's ModuMAX™ amplifiers, these rack-mount SSPAs offer output powers of 100, 125, or 200 watts across the standard 7.90 to 8.40 GHz satellite uplink band. The SSPAs incorporate a modular architecture that includes the RF modules, power supplies, logic, fans, and front panel assembly. The amplifiers are designed for reliable service in fixed and mobile applications.

Features

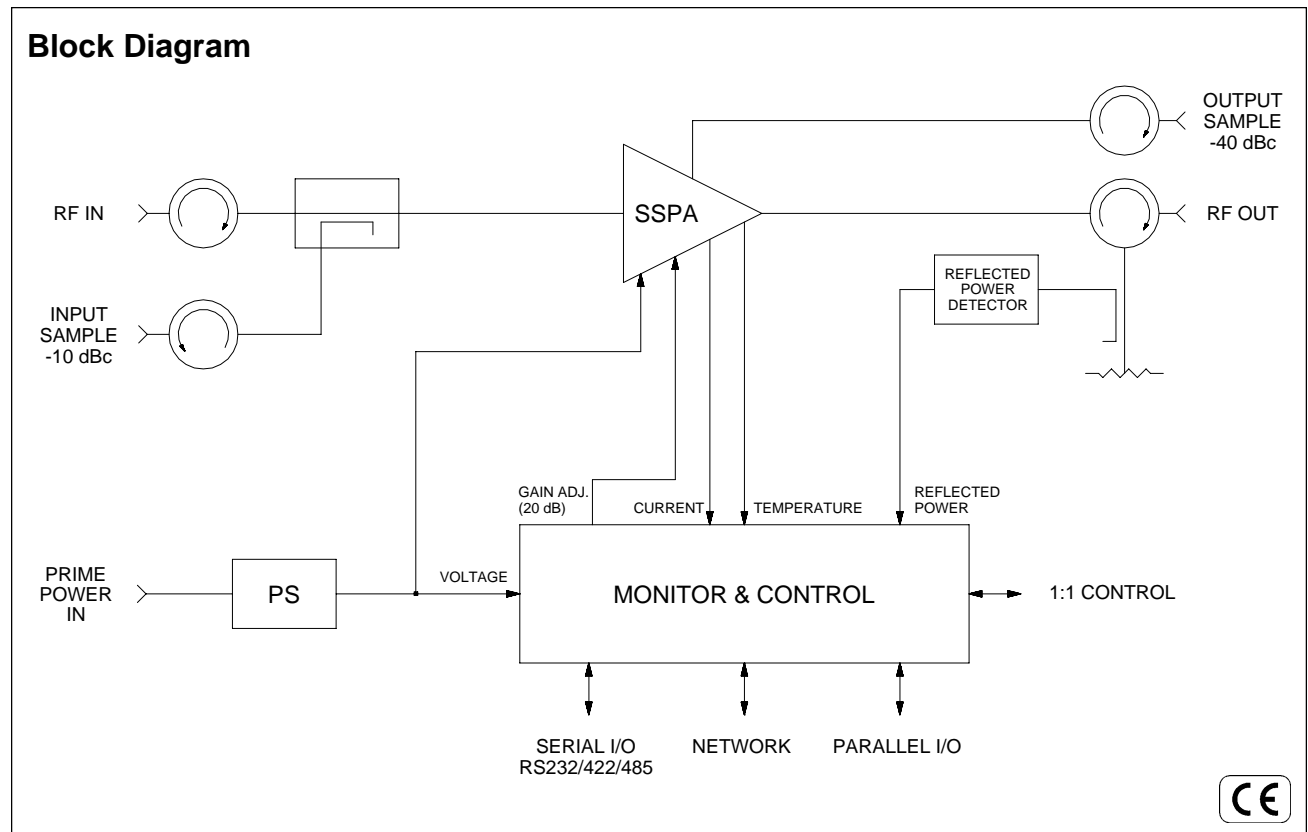
- 100/125/200 W saturated output power
- Digital gain adjustment (20 dB range)
- Forward and reflected power monitoring
- Microprocessor-based monitor and control
- Serial interface (RS232/422/485) standard
- 10 Base-T Network interface (SNMP, HTTP)
- RF input and output sample ports
- Integral 1:1 redundancy control

Applications

- Single-thread SSPA
- Redundant systems (1:1, 1:2)
- Fixed installations
- Mobile terminals
- Government/Military systems

Accessories

- RCP-2001 Remote Panel



GENERAL DYNAMICS

C4 Systems

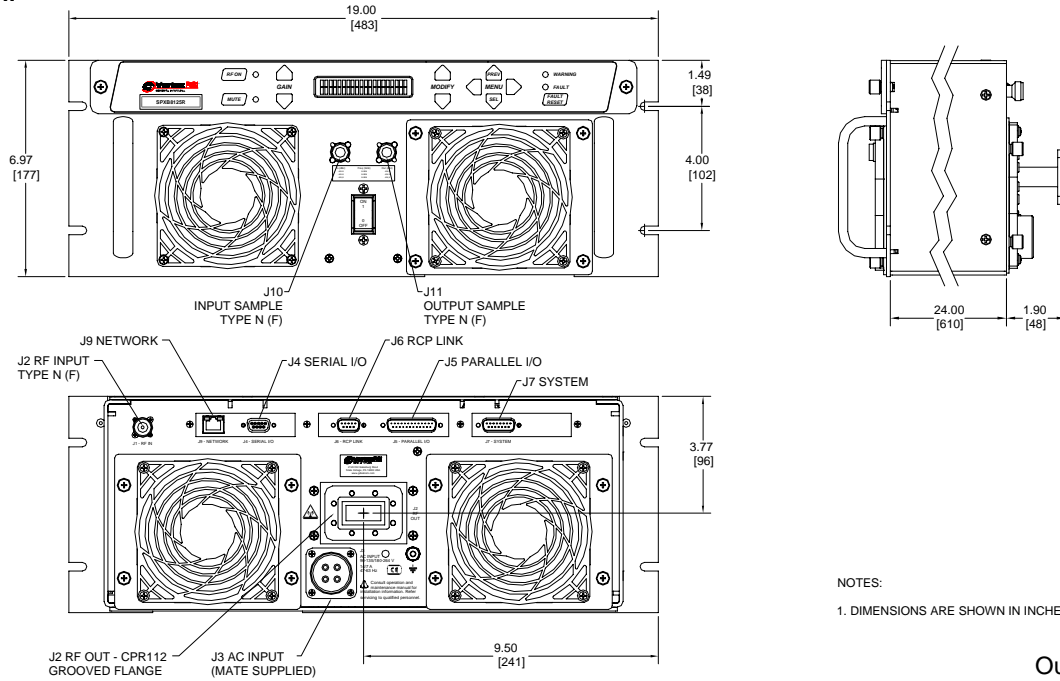
Parameter	Notes	Min	Nom/Typt	Max	Units
Frequency Range	Band "B"	7.90		8.40	GHz
Gain	At maximum gain setting	70			dB
Gain Adjust Range		20			dB
Gain Flatness	Full band			±0.75	dB
	Per 40 MHz			±0.3	dB
Saturated Power Output	100 W		+50 (100)		dBm (W)
	125 W		+51 (125)		dBm (W)
	200 W		+53 (200)		dBm (W)
Power Output, at 1 dB compression (P _{1dB})	100 W	+49.5 (89)			dBm (W)
	125 W	+50 (100)			dBm (W)
	200 W	+52 (159)			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 _{1dB}		2.5	3.5	%/dB
Noise Figure	At maximum gain		8		dB
VSWR	Input		1.25	1.30	:1
	Output		1.20	1.30	:1
Front Panel Sample Ports	Input		-10		dBc
	Output		-40		dBc
Connectors	Input		Type N Female		
	Output		CPR112G Waveguide		
	Sample Ports		Type N Female		
	Serial I/O		9-pos D, Female		
	Parallel I/O		25-pos D, Male		
	Power		4-pos CE05		
	System		15-pos D, Male		
	Network		RJ-45 jack		
Power Requirements	Voltage		90-135 or 180-270		Vac
	Frequency	47		63	Hz
	Power, 100 W		650	850 ^A	W
	Power, 125 W		850	1000 ^A	W
	Power, 200 W		1000	1200 ^A	W
	Power factor corrected		0.99		
Cooling System		Forced air. Intake on front panel.			
Operating Temperature Range	Ambient air temperature	0		+50	°C
Size		19 W x 7 H x 24 D 483 W x 178 H x 610 D			inches mm

† When there is only one value on a line, this 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 0 °C and Pout in saturation.

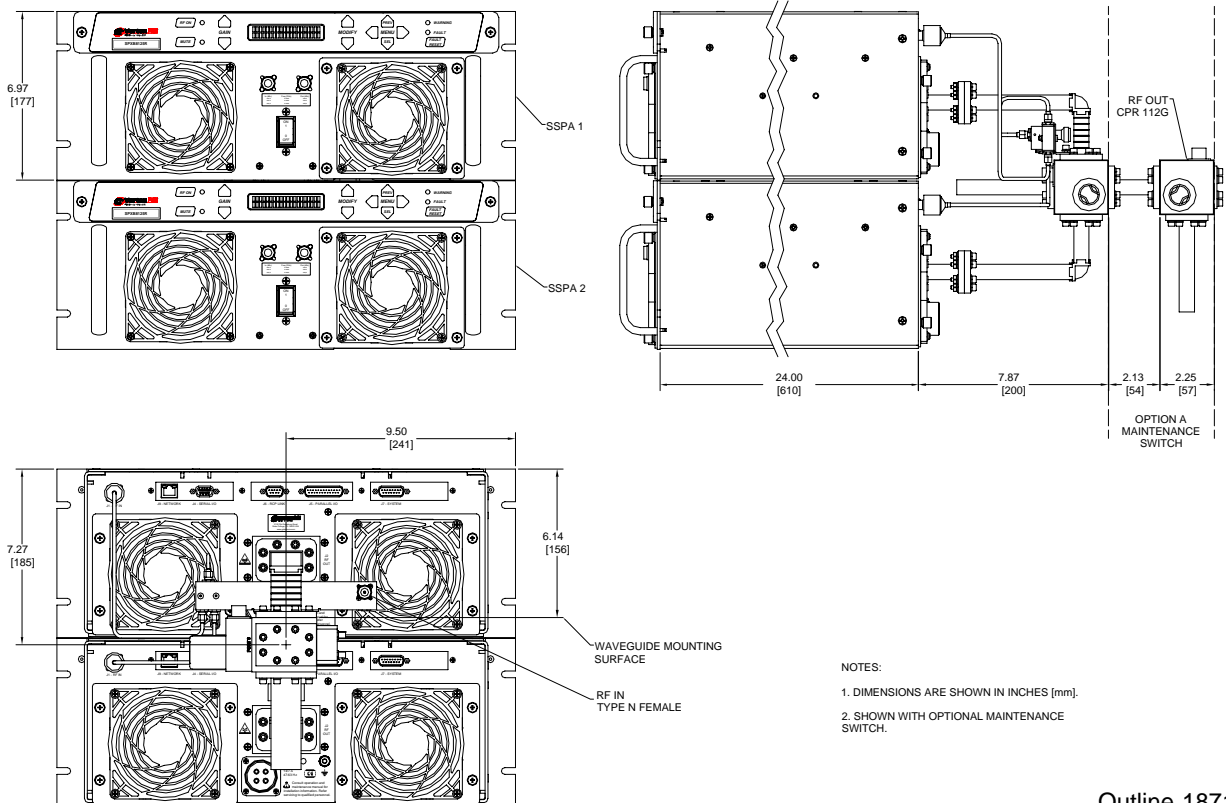
Outline Drawings

SSPA:



Outline 18501

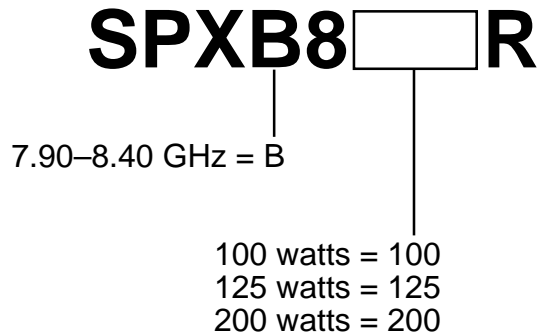
1:1 Redundant System:



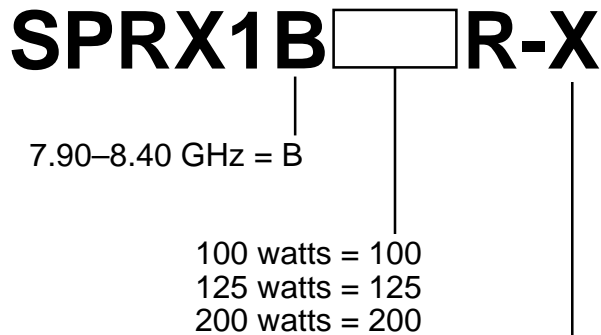
Outline 18711

Part Number/Ordering Information

SSPAs:



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



Options

Maintenance Switch A
Allows selection of antenna or dummy load at system output

Related Accessories:

- **RCP-2001** SSPA Remote Control Panel
1U-high rack-mounted panel duplicates all menus and functions available at SSPA front panel. Can be located up to 1.3 km (4000 ft) away and interconnects with inexpensive cable.

OTHER VertexRSI PRODUCTS

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



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Specifications are subject to change at VertexRSI's discretion.