DPXB8350R X-Band Solid-State Power Amplifiers

Using technology developed for ModuMAX™ amplifiers, this rack-mount SSPA offers an output power of 350 watts accross the standard 7.90-8.40 GHz satellite uplink band

The SSPA incorporates a modular architecture that includes the RF modules, power supplies, logic, fans, and front panel assembly. The amplifier is designed for reliable service in fixed and mobile applications.

FEATURES:

- 350 W saturated output power
- Digital gain adjustment (20 dB range)
- Forward and reflected power monitoring
- Microprocessor based monitor and control
- Serial interface (RS-232/-422/-485) standard
- 10 Base-T network interface (SNMP, HTTP)
- RF input and output sample port
- Integral 1:1 redundancy control

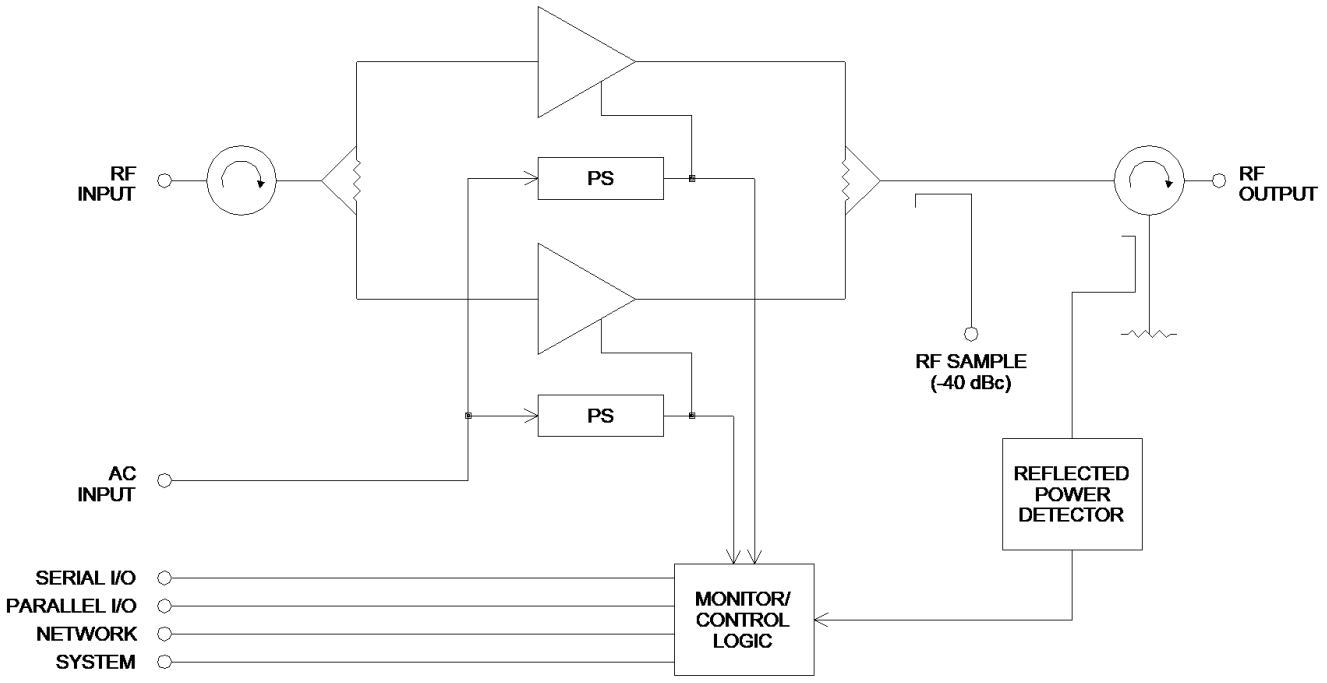
APPLICATIONS:

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

ACCESSORIES:

- RCP-2001 remote panel

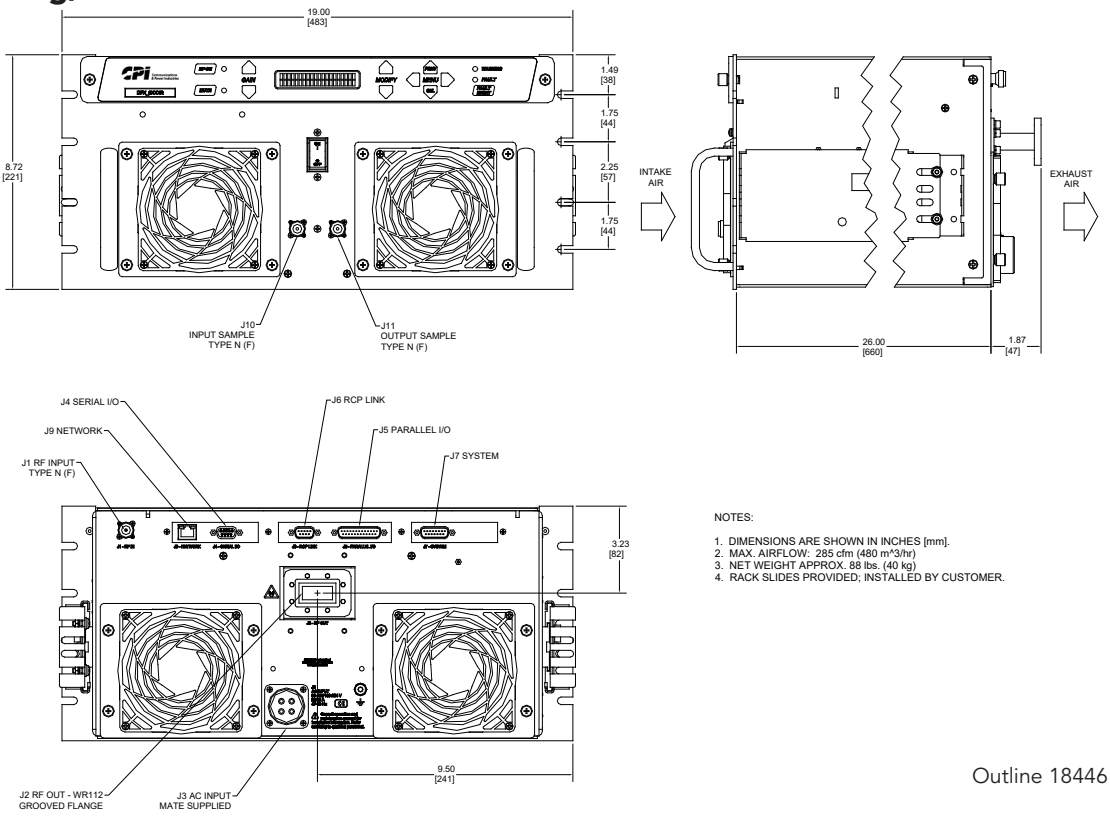
Block Diagram



Parameter	Notes	Specification
Frequency Range		7.90 to 8.40 GHz
Gain, at Maximum Setting		67 dB min., Standard
Gain Adjustment Range	Digital	20 dB min. in 0.1 dB steps
Gain Flatness		±1.0 dB over the full band; ±0.3 dB over any 40 MHz
Saturated Power Output		+55.5 dBm typ. (358 W)
Power Output at 1dB compression ($P_{1\ dB}$)		+54.8 dBm min. (305 W)
Two Tone Intermodulation		-25 dBc max.,-30 dBc typical at 3 dB total backoff from 1dB compression point
Group Delay	Linear Parabolic Ripple	0.03 ns/MHz 0.003 ns/MHz^2 1.0 ns peak to peak
AM/PM Conversion		2.5°/dB typical, 3.5°/dB max.at ($P_{1\ dB}$)
VSWR	Input Output	1.25:1 max, 1.30:1 typical 1.20:1 max, 1.30:1 typical
RF Sample Ports	Input Output	-10 dB typical -40 dB typical
Connectors	RF Input RF Output Sample Ports Serial I/O Parallel I/O System RCP Link Network Power	Type N Female CPR112G Waveguide Type N Female 9-pos D-sub Female, mate supplied 25-pos D-sub Male, mate supplied 15-pos D-sub Male, 9-pos D-sub, Male RJ-45 Jack 4-pos CE05, mate supplied
Power Requirements	Voltage Frequency Power Power factor corrected	90 to 135 VAC or 180 to 270 VAC 63 Hz max., 47 Hz min. 1900 W typical, 2100 W max. (1) .98 typical
Cooling System		Forced Air
Operating Temperature Range	Ambient air temperature	0°C to +50°C
Dimensions	See outline drawing	8.75" H x 19" W x 27.88" D; 222 mm H x 483 mm W x 708 mm D
Weight	Approximate	93 lb (42 kg)

(1) Cold start, at -40 °C and P_{OUT} in saturation.

Outline Drawing, SSPA

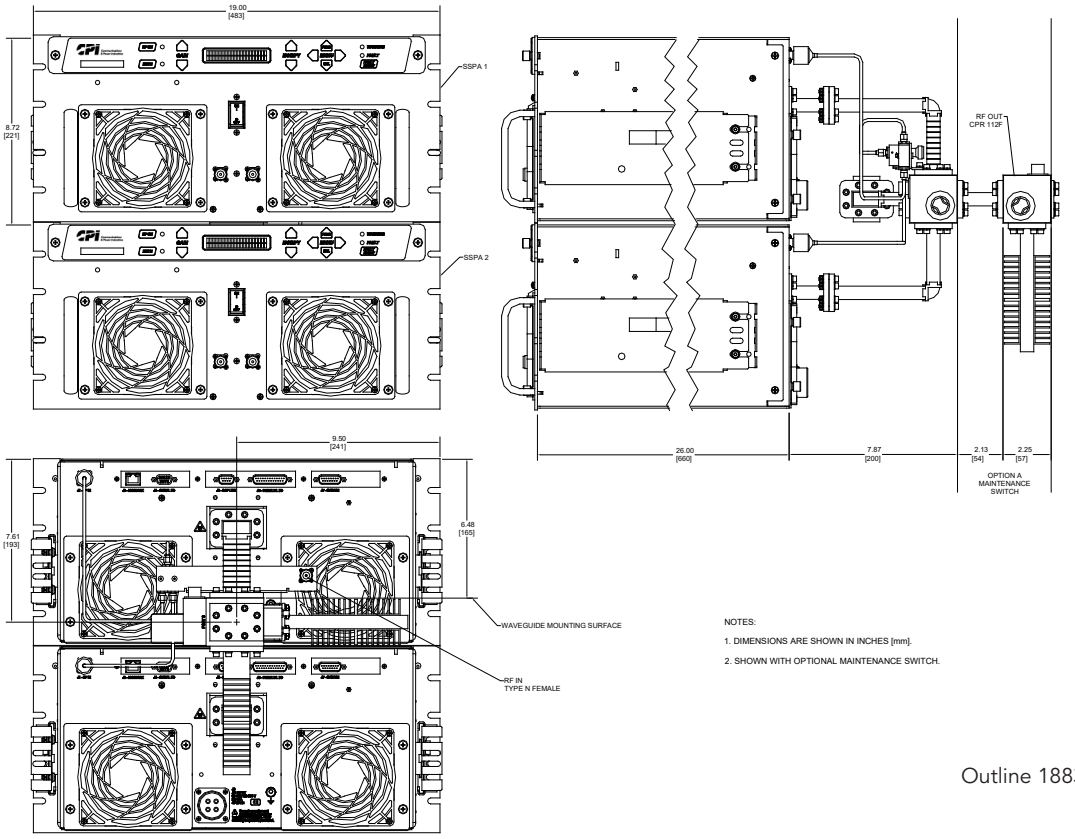


NOTES:

1. DIMENSIONS ARE SHOWN IN INCHES [mm].
2. MAX. AIRFLOW: 285 cfm (480 m^3/hr)
3. NET WEIGHT APPROX. 88 lbs. (40 kg)
4. RACK SLIDES PROVIDED; INSTALLED BY CUSTOMER.

Outline 18446

Outline Drawing, Typical 1:1 System



NOTES:

1. DIMENSIONS ARE SHOWN IN INCHES [mm].
2. SHOWN WITH OPTIONAL MAINTENANCE SWITCH.

Outline 18833

Connector Interface

Ref. Des.	Function	Connector Type	Mating Connector	Comment
J1	RF Input	Type N Female	Type N Male	
J2	RF Output	CPR112G Waveguide	CPR112 Flange	
J3	AC In	4-pos CE05, Male	4-pos MS or CE05, Female	Mate supplied
J4	Serial I/O	9-pos D-sub, Female	9-pos D-sub, Male	Mate supplied
J5	Parallel I/O	25-pos D-sub, Male	25-pos D-sub, Female	Mate supplied
J6	RCP Link O	9-pos D-sub, Male	9-pos D-sub, Female	
J7	System	15-pos D-sub, Male	15-pos D-sub, Female	
J9	Network	RJ-45 Jack	RJ-45 Plug	
J10	Input Sample	Type N Female	Type N Male	Front panel mounted
J11	Output Sample	Type N Female	Type N Male	Front panel mounted

Part Number Ordering Information

SSPA:

Part/Model No. DPXB8350R

7.90–8.40 GHz = B

350 Watts = 350

* 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.

1:1 Redundant System*:

Part/Model No. DPRX1B350R-X

7.90–8.40 GHz = B

350 Watts = 350

Option:

Maintenance Switch.....A

Selects antenna or dummy load at system output

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.

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