These high power solid-state amplifiers offer output powers of 50, 100, 125, 200 or 250 watts accross the standard 5.850-6.425 GHz (“D”)or extended 5.850-6.725 GHz (“M”) satellite uplink bands

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.

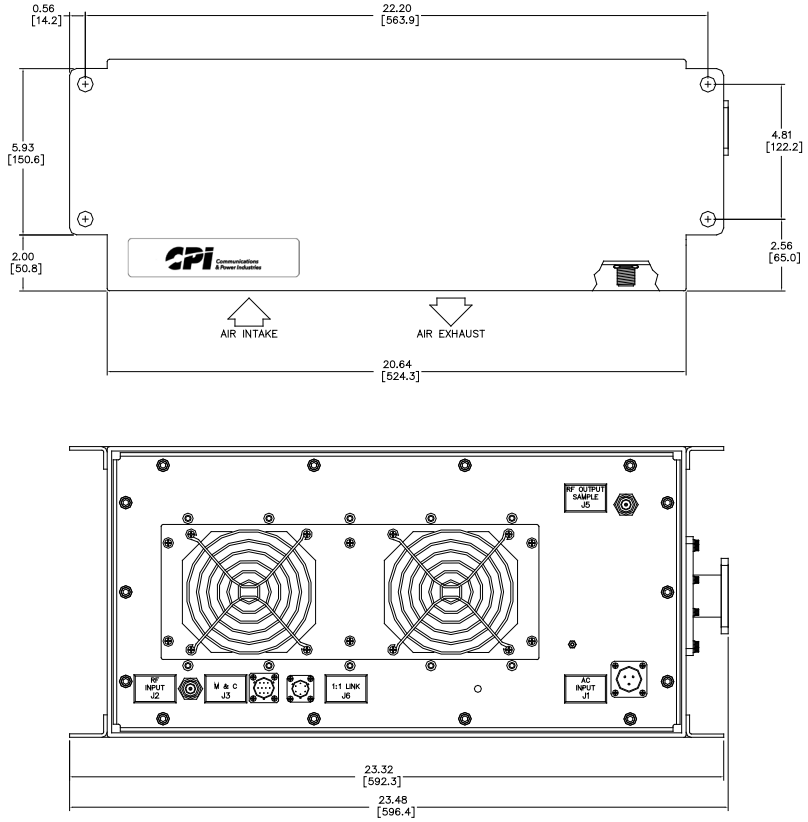
FEATURES:

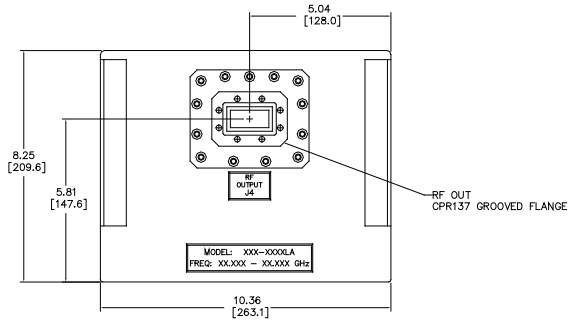
- 50, 100, 125, 200 or 250 W saturated output power
- 75 dB gain
- Built-in monitor and control
- Temperature-compensated gain from -40 to +50°C
- Serial interface (RS-232/-422/-485) standard
- Output isolator for high load VSWR protection
- 20 dB range digital gain adjustment
- RF output sample port (-40 dBc)
- Output power monitor
- Extremely light weight, nominally 36 lb (16 kg)
- Mounts on small antennas

OPTIONS:

- Redundant systems (1:1, 1:2)
- Integrated block upconverter with L-band input

Outline Drawing, SSPA





M&C (J3) Pinout

Serial I/O Tx +	A
Serial I/O Tx -	B
Serial I/O Rx -	C
Serial I/O Rx +	D
Serial I/O Rx Termination	J
Ground	E
Service Request (Form ‘C’ Output)	F - Closed on Svc Req G - Common H - Open on Svc Req
No connection/Ext. Fault (Opt.)	K

NOTES:

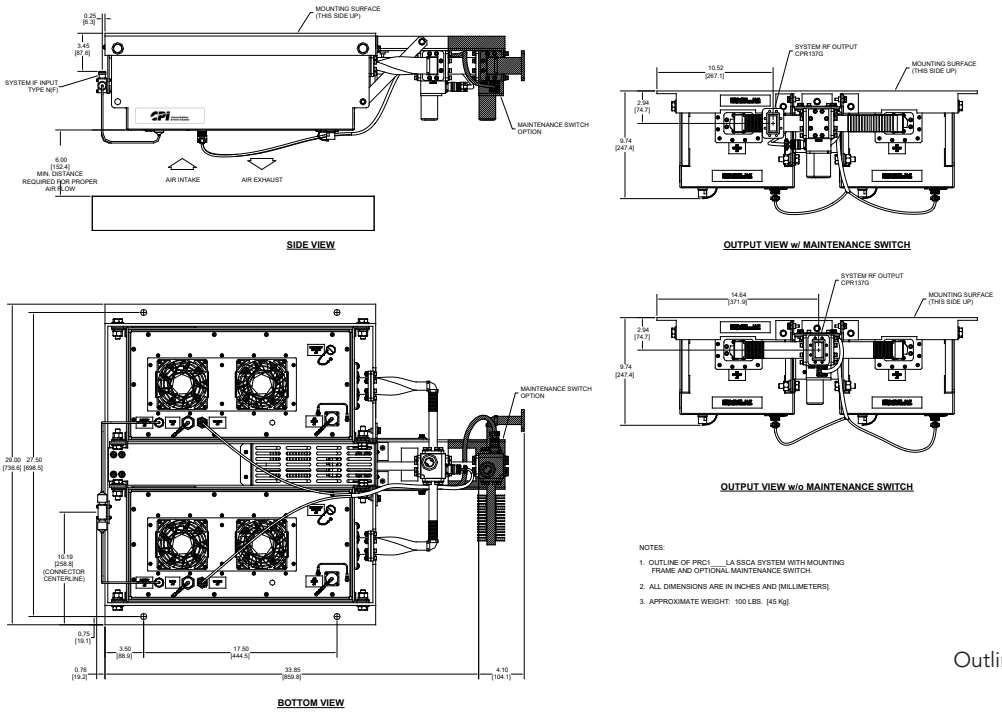
1. DIMENSIONS ARE IN INCHES [MM].
2. AIR INTAKE AND EXHAUST MUST NOT BE OBSTRUCTED.
3. APPROXIMATE WEIGHT IS 30 LB. (13 KG).

Outline 16328-1

Parameter	Notes	Specification
Frequency Range	Band "D" Band "M"	5.850 to 6.425 GHz 5.850 to 6.725 GHz
Input Frequency Range with Option 7, Block Upconverter	Band "D" Band "M"	950 MHz min., 1525 MHz max. 950 MHz min., 1825 MHz max.
Gain, at Maximum Setting		75 dB min.
Gain Adjustment Range		20 dB min.
Gain Flatness		±1.0 dB over the full band, standard; ±1.5 dB full band, with Option 7 ±0.3 dB per 40 MHz, standard, ±0.5 dB per 40 MHz, with Option 7
Gain Stability vs. Temperature	-40 to +50°C, standard -40 to +50°C, with Option 7	±1.0 dB typical, ±1.5 dB max. ±2.0 dB typical, ±2.5 dB max.
Saturated Power Output	50 W 100 W 125 W 200 W 250 W	+47 dBm typ. (50 W) +50 dBm typ. (100 W) +51 dBm typ. (125 W) +53 dBm typ. (200 W) +54 dBm typ. (250 W)
Power Output at 1dB compression ($P_{1\ dB}$)	50 W 100 W 125 W 200 W 250 W	+46.5 dBm min. (45 W) +49.5 dBm min. (89 W) +50.5 dBm min. (112 W) +52.0 dBm min. (158 W) +53.0 dBm min. (200 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 ($P_{1\ dB}$)
Noise Figure		8 dB typical at maximum gain, standard 20 dB typical at maximum gain, with Option 7
VSWR	Input Input, with Option 7 Output	1.20:1 typical, 1.30:1 max. 1.35:1 typical, 1.50:1 max. 1.20:1 typical, 1.30:1 max.
Output Sample Port		-40 dBc typical
Connectors	Input Output Sample Port I/O Power	Type N Female CPR137G Waveguide Type N Female 10-pin MS, mate supplied 3-pin MS, mate supplied
Power Requirements	Voltage, 50/100/125 W Voltage, 200/250 W Frequency Power, 50 W Power, 100 W Power, 125 W Power 200 W Power 250 W Power factor corrected	100 to 242 VAC 180 to 242 VAC 63 Hz max., 47 Hz min. 450 W typical, 500 W max. 650 W typical, 900 W max. 750 W typical, 1000 W max. 950 W typical, 1400 W max. (1) 1000 W typical, 1500 W max .97 typical
Cooling System		Forced Air
Operating Temperature Range	Ambient air temperature	-40°C to +50°C
Dimensions	See outline drawing	8.25" H x 23.48" W x 10.36" D; 210 mm H x 596 mm W x 263 mm D
Weight		36 lb, 16 kg)

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

Outline Drawing, Typical 1:1 Redundant System



Outline 21185-1

Part Number Ordering Information

SSPA:

Part/Model No. PC□6S□□LA-XX

5.850–6.425 GHz = D
5.850–6.725 GHz = M

50 Watts = 050
100 Watts = 100
125 Watts = 125
200 Watts = 200
250 Watts = 250 (1)

Options:

1:1 Redundancy.....4
Redundant Capability
(required for units in 1:1 systems)
Block Upconverter.....7
L-Band IF Input

(1) Consult factory for 250 W extended band
(2) 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 (2) : (Consists of 1:1 switching assembly, two SSPAs, and interconnecting cables)

Part/Model No. PRC1□□□LA-XX

5.850–6.425 GHz = D
5.850–6.725 GHz = M

50 Watts = 050
100 Watts = 100
125 Watts = 125
200 Watts = 200
250 Watts = 250 (1)

Options:

Block Upconverter.....7
L-Band IF Input
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.

Communications & Power Industries

SMP Division
Satcom Products
tel: +1 (669) 275-2744
email: satcommarketing@cpii.com
web: www.cpii.com/satcom

For more detailed information, please refer to the corresponding CPI technical description if one has been published, or contact CPI. Specifications may change without notice as a result of additional data or product refinement. Please contact CPI before using this information for system design.