Rack-Mount Solid State Power Amplifiers

CPI Solid Inside and Out

C-Band

High Power SSPAs

Model S5CI Series 125 and 225 Watt C-band Solid State Power Amplifiers—Efficient and Compact With CPI Brick Inside.

CPI-Built RF Brick Inside

With CPI-built RF brick inside and plenty of thermal margin, SSPA is rock-solid, highly efficient and easy to maintain. Provides up to 125 or 225 watts of power in a 5.25" rack-mountable unit covering the 5.850 - 6.425 GHz frequency band.

Multi-Carrier Digital Operation

Highly linear: excellent AM/PM, phase noise and spectral regrowth performance.

Simple to Operate

User-friendly microprocessor-controlled logic with integrated RS422/485 computer interface, digitally controlled attenuator, and optional Ethernet interface.

Global Applications

Meets International Safety Standards EN-60950 and EN-60215, Electromagnetic Compatibility 2004/108/EC and Harmonic Standard EN-61000-3-2 to satisfy worldwide requirements.

Worldwide Support

Backed by over three decades of satellite communications experience, and CPI's worldwide 24-hour customer support network that includes sixteen regional factory service centers.

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C-Band

OPTIONS:

- *1 RU Remote Control Panel*
- *Redundant and Power Combined Subsystems*
- *L-Band BUC*
- *Extended Frequency Range (to 6.725 GHz)*
- *RF Input and Output Monitors*
- *Ethernet Interface*
- *DC Power Supply Redundancy Module*
- *External Receive Band Reject Filter*
- *High Power Transient Voltage Surge Suppressor (TVSS)*

SPECIFICATIONS, S5CI Rack-Mount SSPA

Electrical

Frequency Range	5.850 to 6.425 GHz (to 6.725 GHz optional)
RF Output	
Saturated, min.	125 W (50.97 dBm) or 225 W (53.50 dBm)[1]
P1dB, min.	100 W (50.0 dBm) or 200 W (53.0 dBm)[1]
Small Signal Gain (at max.	70 dB min. (at max. gain setting)
Gain Adjustment Range	23 dB
Gain Setting Resolution	0.1 dB
Gain Stability	
Over -10°C to +50°C	±1.5 dB
At constant temp. and drive	±0.25 dB
Small Signal Gain Slope	±0.04 dB/MHz max.
Small Signal Gain Variation	±0.3 dB pk-pk across any 40 MHz band; ±1.5 dB pk-pk across 575 MHz
Input VSWR	1.3:1 max.
Output VSWR	1.3:1 max.
3rd Order Intermod	-25 dBc max. at 3dB total backoff from P1dB
Harmonic Output	-60 dBc max. at P1dB
Spurious	-60 dBc max. at P1 dB (-55 dBc w/ BUC option
Residual AM	-50 dBc below 10 kHz -20 [1 +log F(kHz)] dBc, 10 kHz to 500 kHz -85 dBc above 500 kHz
Noise Power Density	-80 dBW/4 kHz in transmit band, -135 dBW/4 kHz from 3.7 to 4.2 GHz
Phase Noise	10 dB below IESS phase noise profile, max.
AM/PM Conversion	1.0°/dB max. at 3dB backoff from P1dB

Electrical (continued)

Group Delay (in any 80 MHz band)	0.03 ns/MHz linear max. 0.003 ns/MHz^2 parabolic max. 1.0 ns pk-pk ripple max.
Primary Power	100-240 VAC ±10%, single phase; 47-63 Hz
Power Consumption	800 W typ. for 125 W SSPA; 1500 W typ. for 225 W SSPA
Power Factor	0.95 min.
RF Output Monitor	-55 dB ±3 nom. wrt output

Environmental (Operating)

Ambient Temperature	0°C to +50°C operating
Relative Humidity	95% non-condensing
Altitude	10,000 ft. with standard adiabatic derating of 2°C/1000 ft., operating; 50,000 ft., non-operating
High Power TVSS Option	
Clamp Voltage	440 VDC (line to line protection); 560 VDC (line to ground protection)
Energy Absorption	2 ms/250 J (line to line protection)
Peak Current Shunt	10,000 A repetitive

Mechanical

Cooling	Forced air with integral blower
RF Input Connection	Type N female
RF Output Connection	CPR-137 waveguide flange, grooved
RF Output Monitor	Type N female
Dimensions (W x H x D)	19.0 x 5.25 x 26 in. (483 x 134 x 661 mm); 19.0 x 7.00 x 26 in. (483 x 178 x 661 mm) with DC Power Supply Redundancy Option
Weight	76 lbs (34.6 kg) typ., no options

SSPA with optional redundant hot-swappable power supplies

Note 1: For 5.850 to 6.725 GHz option, output power is lower. Check technical description or contact your CPI representative for details.

ISO 9001 Certificate Number: 30515

NASDAQ GLOBAL SELECT

For more detailed information, please refer to the corresponding CPI Technical Description.

Note: *Specifications may change without notice as a result of additional data or product refinement.*

Please contact CPI before using this information for system design.

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