

100W Outdoor Solid State Power Amplifier

CPI Solid Inside and Out

Ku-Band

High Power SSPAs

*Model S4UO 100 watt
Ku-band Solid State
Power Amplifier—
Environmentally sealed
compact design for
outdoor operation*



CPI-Built RF Brick Inside

With CPI-built RF brick inside and plenty of thermal margin, this SSPA is rock-solid, highly efficient and easy to maintain.

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 RS-232 or RS422/485 computer interface and digitally controlled attenuator.

Modular for Easy Maintenance

Highly modular design enables fan, power supply and SSPA brick replacements in less than 30 minutes. RF Module can be replaced with C- or X-band module in minutes.

Global Applications

Meets International Safety Standard 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.

satcom  **division**

811 Hansen Way
P.O. Box 51625, Palo Alto, CA 94303

tel: +1 (650) 846-3803
fax: +1 (650) 424-1744

e-mail: satcommarketing@cpil.com
www.cpii.com/satcom

Ku-Band

High Power Outdoor Solid State Power Amplifier

SPECIFICATIONS, S4UO Outdoor-Mount SSPA Electrical

Frequency Range	13.75 - 14.50 GHz
RF Output	
Saturated, min.	100 W (50.00 dBm)
P1dB, min.	80 W (49.03 dBm)
Small Signal Gain	70 dB min. (at max. gain setting)
Gain Adjustment Range	23 dB
Gain Setting Resolution	±0.1 dB
Gain Stability	
Over -30°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 frequency band
Input VSWR	1.3:1 max.
Output VSWR	1.3:1 max.
3rd Order Intermod	-25 dBc max. at 3 dB total backoff from P1dB
Harmonic Output	-60 dBc max. at P1dB
Spurious	-60 dBc max. at P1dB
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	-70 dBW/4 kHz in transmit band
Phase Noise	12 dB below IESS phase noise profile, max.
AM/PM Conversion	2.5°/dB max. at 3dB backoff from P1dB

OPTIONS :

- *Remote Control Panel*
- *Integrated 1:1 Switch Control*
- *Redundant Switch Subsystems*
- *Integral Block Upconverter (BUC). This data sheet does not provide amplifier specifications for when the BUC is included. Consult CPI for details.*
- *Advanced Ethernet Interface*
- *Dry Contact M&C Interface*

Electrical (continued)

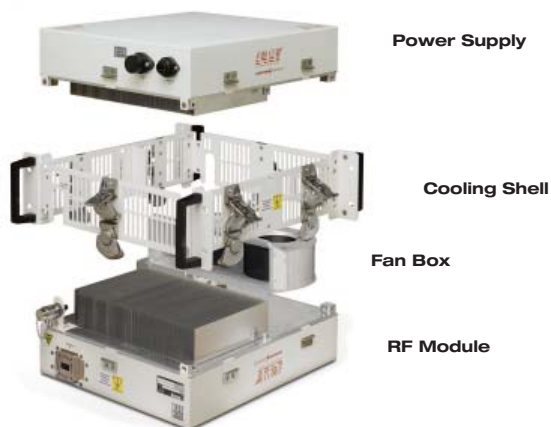
Group Delay	0.03 ns/MHz linear max. (in any 80 MHz band) 0.003 ns/MHz ² parabolic max. 1.0 ns pk-pk ripple max.
Primary Power	100-240 VAC ±10%, single phase; 47-63 Hz
Power Consumption	950 W typ.
Power Factor	0.95 min.
RF Output Monitor	-30 dB ±2 nom. wrt output

Environmental (Operating)

Ambient Temperature	-40°C to +60°C operating
Relative Humidity	100% condensing
Altitude	10,000 ft. max. operating

Mechanical

Cooling	Forced air with integral blower
RF Input Connection	Type N female
RF Output Connection	WR-75 waveguide flange, grooved
RF Output Monitor	Type N female
M&C Interface	Serial and Basic Ethernet
Dimensions (W x H x D)	12.0 x 9.1 x 14.0 in. (305 x 232 x 356 mm)
Weight	43 lbs (19.5 kg) typ, no options



Field Replaceable Modules (FRMs)
Enable Easy Maintenance and
Frequency Flexibility

Mounting hardware is provided with each amplifier.



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.



Communications & Power Industries

satcom division