

Anex

Seasonic SSR-750PD

Lab ID#: 206

Receipt Date: -

Test Date: -

Report: 20PS206A

Report Date: Oct 31, 2000

DUT INFORMATION		DUT SPECIFICATIONS	
Brand	Seasonic	Rated Voltage (Vrms)	100-240
Manufacturer (OEM)	Seasonic	Rated Current (Arms)	9.5-4.5
Series	Prime Platinum	Rated Frequency (Hz)	50-60
Model Number	SSR-750PD	Rated Power (W)	750
Serial Number	R1701TA101420009	Type	ATX12V
DUT Notes		Cooling	135mm Fluid Dynamic Bearing Fan (HA13525H12F-Z)
		Semi-Passive Operation	✓ (selectable)
		Cable Design	Fully Modular

POWER SPECIFICATIONS						
Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	20	20	62	2.5	0.3
	Watts	100		744	12.5	3.6
Total Max. Power (W)		750				

CABLES AND CONNECTORS			
Modular Cables			
Description	Cable Count	Connector Count (Total)	Gauge
ATX connector 20+4 pin (610mm)	1	1	18-22AWG
4+4 pin EPS12V (650mm)	2	2	18AWG
6+2 pin PCIe (680mm+80mm)	2	4	18AWG
SATA (460mm+110mm+110mm+110mm)	2	8	18AWG
4 pin Molex (460mm+130mm+130mm)	1	3	18AWG
FDD Adapter (+110mm)	1	1	22AWG

All data and graphs included in this test report can be used by any individual on the following conditions:

- > It should be mentioned that the test results are provided by Cybenetics
- > The link to the original test results document should be provided in any case

PAGE 1/8

Anex

Seasonic SSR-750PD

RESULTS	
Temperature Range (°C /°F)	30-32 / 86-89.6
Average Efficiency	90.770
Efficiency With 10W ($\leq 500W$) or 2% ($> 500W$) Load -115V	0.000
Average Efficiency 5VSB	79.711
Standby Power Consumption (W) -115V	0.0563214
Standby Power Consumption (W) -230V	0.0915038
Average PF	0.989
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓
Avg Noise Output	35.18
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	Standard+

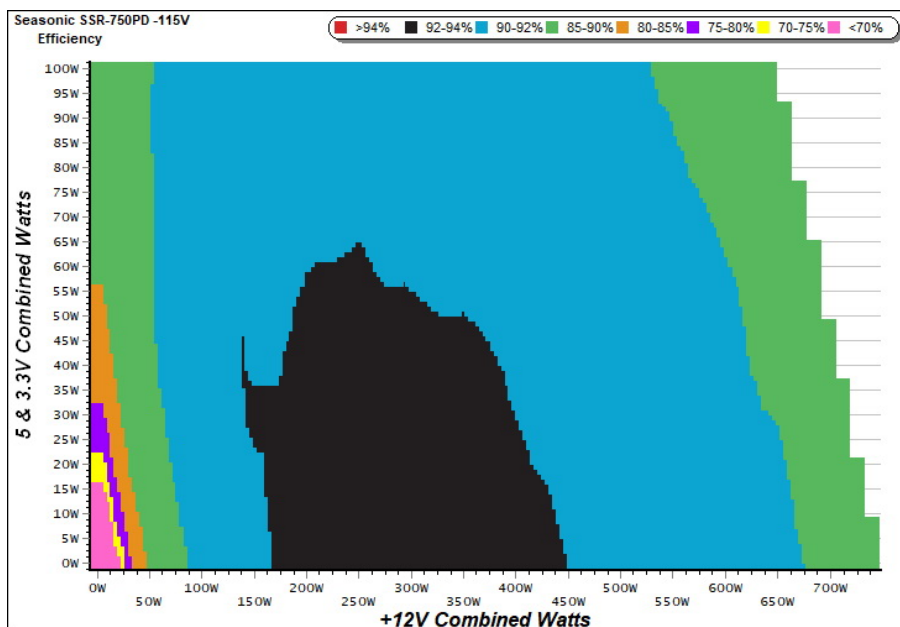
TEST EQUIPMENT		
Electronic Loads	Chroma 6314A x2 63123A x6 63102A 63101A	Chroma 63601-5 x2 Chroma 63600-2 63640-80-80 x10 63610-80-20
AC Sources	Chroma 6530, Chroma 61604	
Power Analyzers	N4L PPA1530, N4L PPA5530	
Oscilloscopes	Picoscope 4444 & 3424, Keysight DSOX3024A, Rigol DS2072A	
Voltmeter	Keithley 2015 THD 6.5 Digit	
Sound Analyzer	Bruel & Kjaer 2250-L G4	
Microphone	Bruel & Kjaer Type 4955-A, Bruel & Kjaer Type 4189	
Data Loggers	Picoscope TC-08 x2, Labjack U3-HV x2	

All data and graphs included in this test report can be used by any individual on the following conditions:

- › It should be mentioned that the test results are provided by Cybenetics
- › The link to the original test results document should be provided in any case

PAGE 2/8

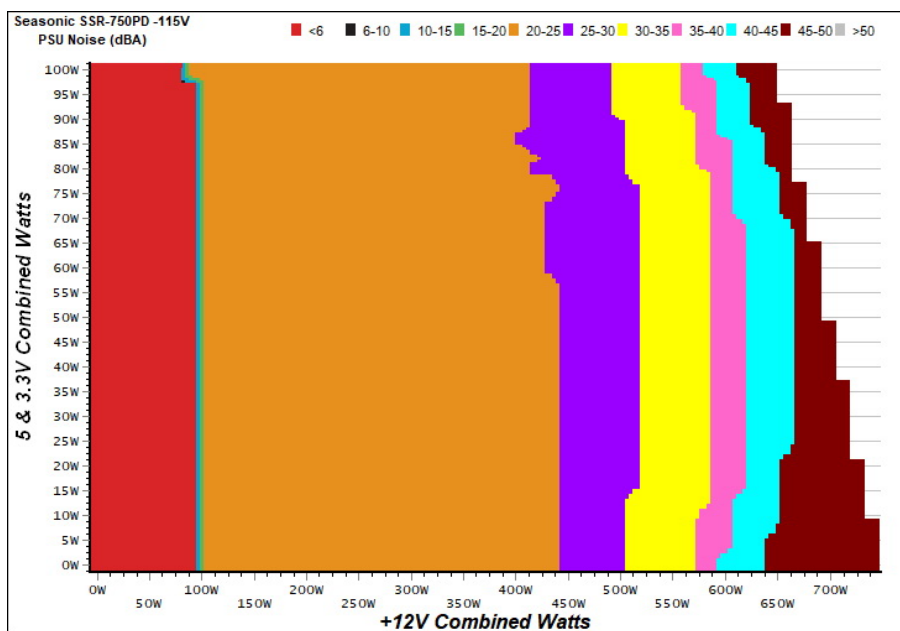
EFFICIENCY GRAPH



INFO

This graph depicts the PSU's efficiency throughout its entire operational range. For the generation of the efficiency and noise graphs we set our loaders to auto mode through our custom-made software before trying thousands of possible load combinations

NOISE GRAPH



INFO

The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

All data and graphs included in this test report can be used by any individual on the following conditions:

- > It should be mentioned that the test results are provided by Cybenetics
- > The link to the original test results document should be provided in any case

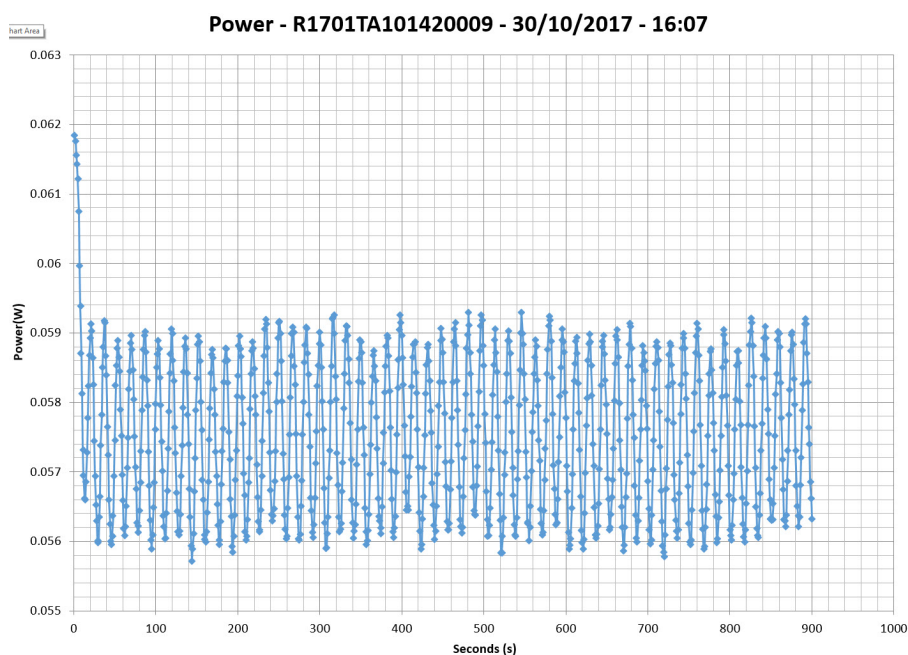
5VSB EFFICIENCY -115V (ERP LOT 3/6 & CEC)

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.231	66.571%	0.031
	5.117V	0.347		115.38V
2	0.090A	0.461	72.828%	0.055
	5.115V	0.633		115.39V
3	0.550A	2.804	80.160%	0.247
	5.096V	3.498		115.37V
4	1.000A	5.078	80.873%	0.348
	5.077V	6.279		115.37V
5	1.500A	7.582	79.996%	0.410
	5.054V	9.478		115.37V
6	2.500A	12.537	79.651%	0.466
	5.014V	15.740		115.36V

5VSB EFFICIENCY -230V (ERP LOT 3/6 & CEC)

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.041A	0.212	63.473%	0.010
	5.108V	0.334		230.40V
2	0.087A	0.444	71.268%	0.019
	5.107V	0.623		230.40V
3	0.542A	2.760	76.731%	0.102
	5.096V	3.597		230.43V
4	1.002A	5.093	78.294%	0.172
	5.085V	6.505		230.43V
5	1.501A	7.614	78.301%	0.232
	5.071V	9.724		230.42V
6	2.501A	12.620	78.186%	0.314
	5.046V	16.141		230.41V

VAMPIRE POWER -115V



INFO

This graph is generated by the PPA Standby Power Analysis software which takes full control of the power analyzer during the whole procedure. This application features all of the EN50564 & IEC62301 test limits for standby power software testing

All data and graphs included in this test report can be used by any individual on the following conditions:

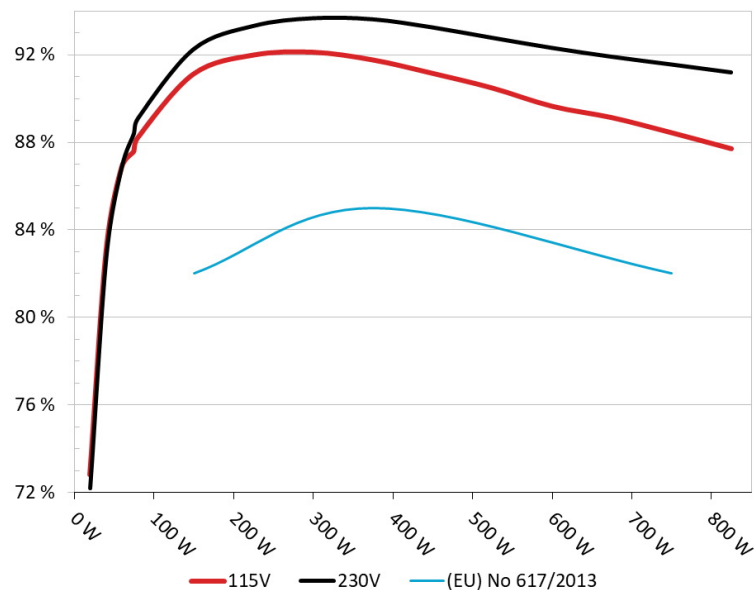
- > It should be mentioned that the test results are provided by Cybenetics
- > The link to the original test results document should be provided in any case

PAGE 4/8

EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Seasonic SSR-750PD

Ambient: 37°C - 47°C (98.6°F - 116.6°F)



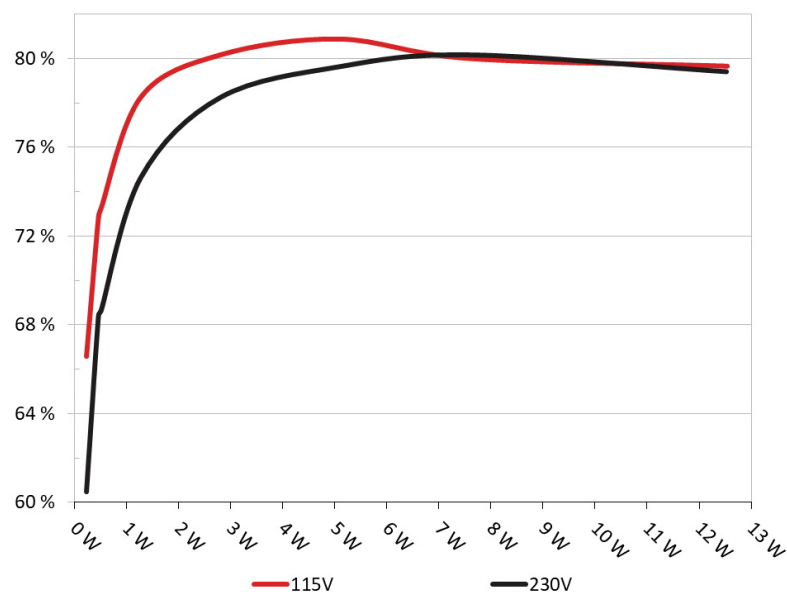
INFO

The PSU's efficiency under high ambient temperatures with 115V and 230V input. For this graph the results of the 10-110% load regulation table are used

5VSB EFFICIENCY

5VSB Efficiency: Seasonic SSR-750PD

Ambient: 34°C - 36°C (93.2°F - 96.8°F)



INFO

This graph depicts the efficiency levels of the 5VSB rail with 115V and 230V input

All data and graphs included in this test report can be used by any individual on the following conditions:

- > It should be mentioned that the test results are provided by Cybenetics
- > The link to the original test results document should be provided in any case

10-110% LOAD TESTS

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
1	4.348A	1.986A	1.981A	0.987A	74.453	87.589%	660	23.8	37.95°C	0.962
	12.158V	5.034V	3.327V	5.068V	85.003				42.15°C	115.27V
2	9.744A	2.980A	2.976A	1.188A	149.358	91.130%	660	23.8	37.99°C	0.985
	12.157V	5.033V	3.326V	5.053V	163.896				42.85°C	115.16V
3	15.536A	3.479A	3.456A	1.390A	224.870	92.004%	685	25.4	38.66°C	0.990
	12.157V	5.032V	3.325V	5.037V	244.413				43.87°C	115.14V
4	21.260A	3.976A	3.972A	1.593A	299.665	92.134%	910	28.4	38.80°C	0.994
	12.157V	5.032V	3.323V	5.023V	325.248				44.44°C	115.03V
5	26.658A	4.971A	4.967A	1.798A	374.593	91.782%	1108	34.0	39.30°C	0.992
	12.157V	5.031V	3.322V	5.007V	408.132				45.23°C	114.96V
6	32.058A	5.966A	5.963A	2.004A	449.506	91.171%	1650	46.1	40.13°C	0.993
	12.156V	5.030V	3.320V	4.991V	493.037				46.51°C	114.94V
7	37.489A	6.962A	6.962A	2.212A	524.842	90.496%	1808	48.6	40.99°C	0.994
	12.156V	5.029V	3.319V	4.976V	579.961				47.63°C	114.83V
8	42.913A	7.957A	7.958A	2.420A	600.152	89.659%	2123	51.2	42.34°C	0.995
	12.158V	5.028V	3.318V	4.960V	669.370				49.22°C	114.71V
9	48.708A	8.456A	8.442A	2.423A	674.705	89.143%	2123	51.2	43.33°C	0.996
	12.158V	5.027V	3.317V	4.954V	756.882				50.64°C	114.69V
10	54.497A	8.954A	8.957A	2.530A	749.846	88.452%	2123	51.2	44.71°C	0.996
	12.159V	5.027V	3.316V	4.942V	847.739				52.63°C	114.57V
11	60.668A	8.954A	8.960A	2.534A	825.070	87.718%	2123	51.2	47.20°C	0.996
	12.162V	5.027V	3.316V	4.934V	940.591				55.38°C	114.45V
CL1	0.741A	12.003A	12.002A	0.000A	109.355	85.669%	2115	50.7	43.77°C	0.980
	12.164V	5.033V	3.327V	5.097V	127.649				49.21°C	115.22V
CL2	62.018A	1.002A	1.000A	1.000A	767.327	88.740%	2123	51.2	44.28°C	0.996
	12.157V	5.031V	3.318V	5.016V	864.692				51.08°C	114.56V

All data and graphs included in this test report can be used by any individual on the following conditions:

- > It should be mentioned that the test results are provided by Cybenetics
- > The link to the original test results document should be provided in any case

PAGE 6/8

20-80W LOAD TESTS

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	PF/AC Volts
1	1.182A	0.495A	0.480A	0.196A	19.454	72.804%	0	<6.0	0.798
	12.151V	5.037V	3.329V	5.107V	26.721				115.35V
2	2.437A	0.992A	0.992A	0.393A	39.917	83.058%	0	<6.0	0.907
	12.153V	5.036V	3.329V	5.096V	48.059				115.33V
3	3.621A	1.488A	1.472A	0.590A	59.406	86.875%	0	<6.0	0.949
	12.156V	5.034V	3.327V	5.086V	68.381				115.30V
4	4.870A	1.985A	1.982A	0.788A	79.791	88.228%	660	23.8	0.966
	12.157V	5.034V	3.327V	5.076V	90.437				115.27V

RIPPLE MEASUREMENTS

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	6.6 mV	3.4 mV	4.0 mV	6.8 mV	Pass
20% Load	10.0 mV	5.1 mV	6.0 mV	7.1 mV	Pass
30% Load	13.1 mV	5.1 mV	6.2 mV	7.3 mV	Pass
40% Load	16.1 mV	5.1 mV	6.2 mV	8.4 mV	Pass
50% Load	15.3 mV	4.5 mV	5.2 mV	8.8 mV	Pass
60% Load	11.4 mV	4.7 mV	5.7 mV	9.4 mV	Pass
70% Load	11.6 mV	5.3 mV	6.2 mV	9.4 mV	Pass
80% Load	12.9 mV	5.4 mV	7.9 mV	12.0 mV	Pass
90% Load	14.2 mV	5.7 mV	8.3 mV	13.6 mV	Pass
100% Load	18.6 mV	5.9 mV	8.5 mV	12.4 mV	Pass
110% Load	24.3 mV	5.9 mV	8.8 mV	13.2 mV	Pass
Crossload 1	9.6 mV	7.4 mV	9.8 mV	7.2 mV	Pass
Crossload 2	19.1 mV	3.0 mV	5.2 mV	11.4 mV	Pass

All data and graphs included in this test report can be used by any individual on the following conditions:

- > It should be mentioned that the test results are provided by Cybenetics
- > The link to the original test results document should be provided in any case

PAGE 7/8

Anex

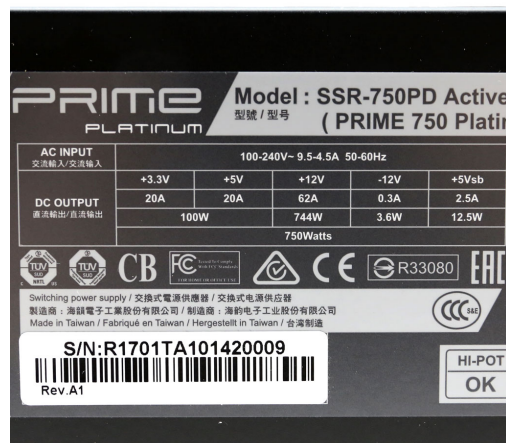
Seasonic SSR-750PD

HOLD-UP TIME & POWER OK SIGNAL (230V)

Hold-Up Time (ms)	22.70
AC Loss to PWR_OK Hold Up Time (ms)	18.20
PWR_OK Inactive to DC Loss Delay (ms)	4.50



Top side



Power specifications label

CERTIFICATIONS



All data and graphs included in this test report can be used by any individual on the following conditions:

- > It should be mentioned that the test results are provided by Cybenetics
- > The link to the original test results document should be provided in any case

PAGE 8/8