

Anex

Seasonic SSR-550PX

Lab ID#: 245

Receipt Date: -

Test Date: -

Report:

Report Date: Dec 13, 2018

DUT INFORMATION	
Brand	Seasonic
Manufacturer (OEM)	Seasonic
Series	FOCUS Plus Platinum
Model Number	SSR-550PX
Serial Number	R1707AA170390277
DUT Notes	Retested on 04/10/2018

DUT SPECIFICATIONS	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	8-4
Rated Frequency (Hz)	50-60
Rated Power (W)	550
Type	ATX12V
Cooling	120mm Fluid Dynamic Bearing Fan (HA1225M12F-Z)
Semi-Passive Operation	✓ (selectable)
Cable Design	Fully Modular

POWER SPECIFICATIONS						
Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	20	20	45	3	0.3
	Watts	100		540	15	3.6
Total Max. Power (W)		550				

CABLES AND CONNECTORS				
Modular Cables				
Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 20+4 pin (600mm)	1	1	18-22AWG	Yes
4+4 pin EPS12V (650mm)	1	1	18AWG	Yes
6+2 pin PCIe (680mm+80mm)	1	2	18AWG	Yes
SATA (450mm+110mm+110mm+110mm)	1	4	18AWG	No
SATA (450mm+110mm)	1	2	18AWG	No
4 pin Molex (450mm+120mm+120mm)	1	3	18AWG	No
FDD Adapter (+105mm)	1	1	22AWG	No
AC Power Cord (1370mm) - C13 coupler	1	1	18AWG	No

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

RESULTS	
Temperature Range (°C /°F)	30-32 / 86-89.6
Average Efficiency	90.023
Efficiency With 10W (≤500W) or 2% (>500W) Load -115V	0.000
Average Efficiency 5VSB	77.630
Standby Power Consumption (W) -115V	0.0495356
Standby Power Consumption (W) -230V	0.0825415
Average PF	0.985
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓
Avg Noise Output	14.83
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	A++

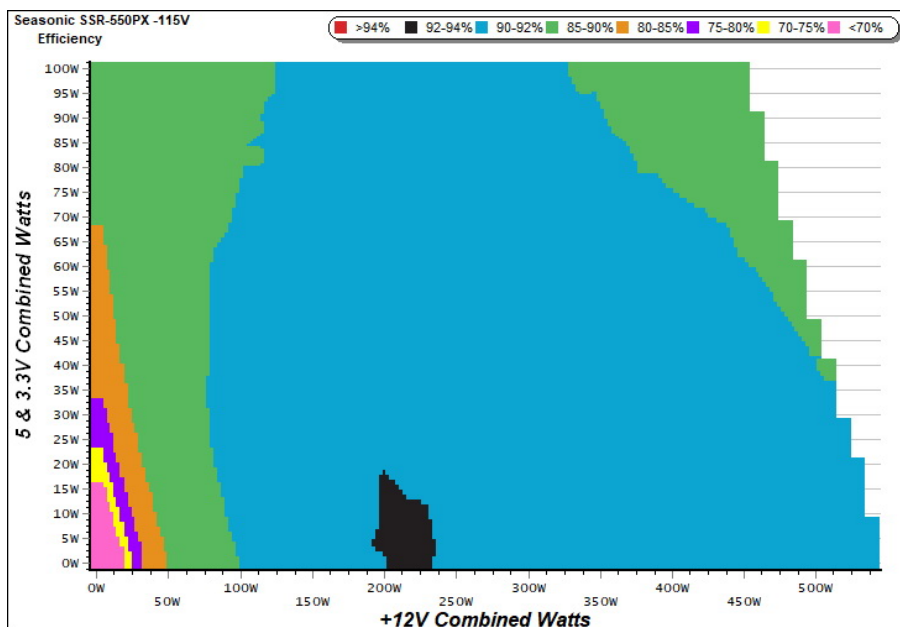
TEST EQUIPMENT		
Electronic Loads	Chroma 6314A x2 63123A x6 63102A 63101A	Chroma 63601-5 x2 Chroma 63600-2 63640-80-80 x10 63610-80-20
AC Sources	Chroma 6530, Chroma 61604	
Power Analyzers	N4L PPA1530, N4L PPA5530	
Oscilloscopes	Picoscope 4444 & 3424, Keysight DSOX3024A, Rigol DS2072A	
Voltmeter	Keithley 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

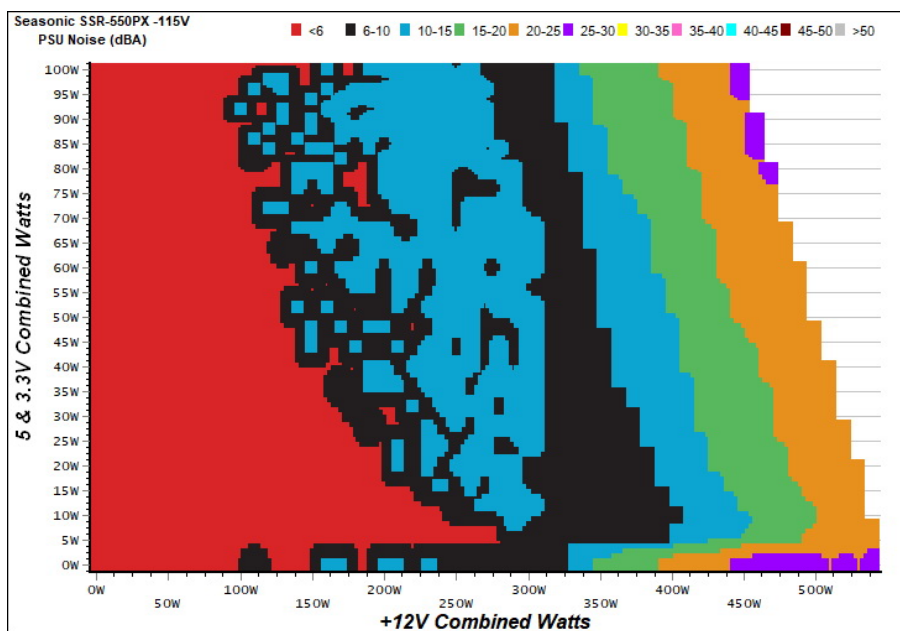
EFFICIENCY GRAPH



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

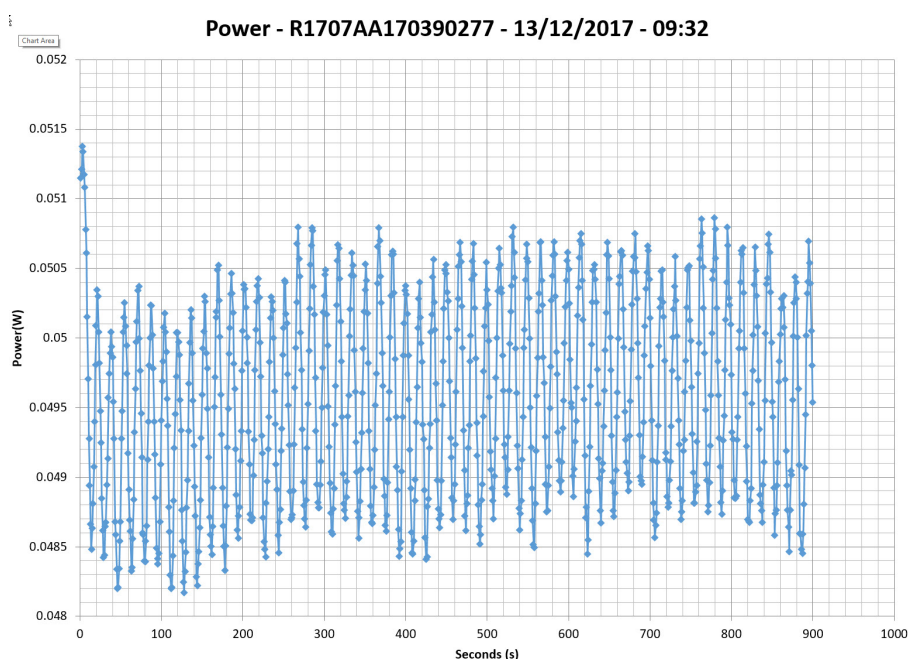
5VSB EFFICIENCY -115V (ERP LOT 3/6 & CEC)

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.231	68.343%	0.034
	5.136V	0.338		115.27V
2	0.090A	0.462	73.450%	0.062
	5.135V	0.629		115.27V
3	0.550A	2.818	78.234%	0.273
	5.124V	3.602		115.26V
4	1.000A	5.113	78.192%	0.367
	5.114V	6.539		115.25V
5	1.500A	7.653	78.100%	0.418
	5.102V	9.799		115.25V
6	3.000A	15.167	76.888%	0.479
	5.056V	19.726		115.24V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.231	60.789%	0.013
	5.136V	0.380		230.83V
2	0.090A	0.462	68.041%	0.023
	5.135V	0.679		230.82V
3	0.550A	2.818	76.764%	0.117
	5.124V	3.671		230.71V
4	1.000A	5.114	77.779%	0.191
	5.114V	6.575		230.76V
5	1.500A	7.654	78.414%	0.251
	5.103V	9.761		230.81V
6	3.000A	15.203	77.753%	0.351
	5.068V	19.553		230.81V

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

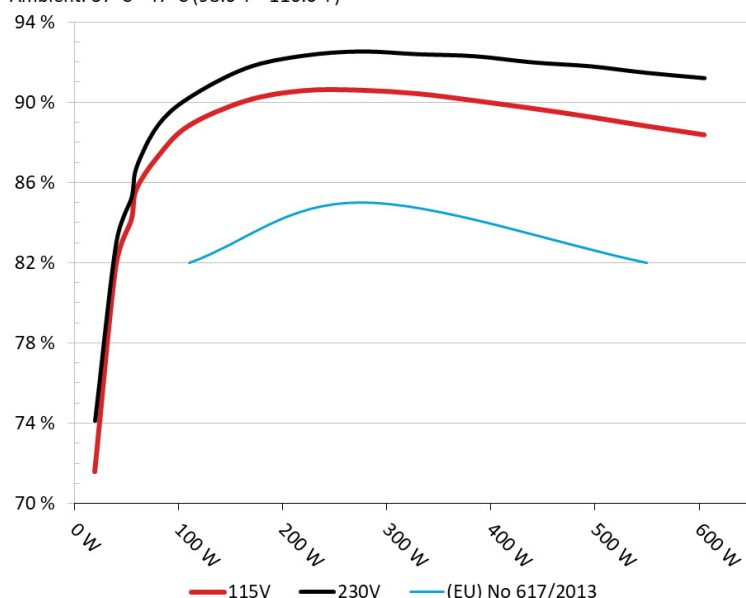
All data and graphs included in this test report can be used by any individual on the following conditions:

- > 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

EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Seasonic SSR-550PX

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



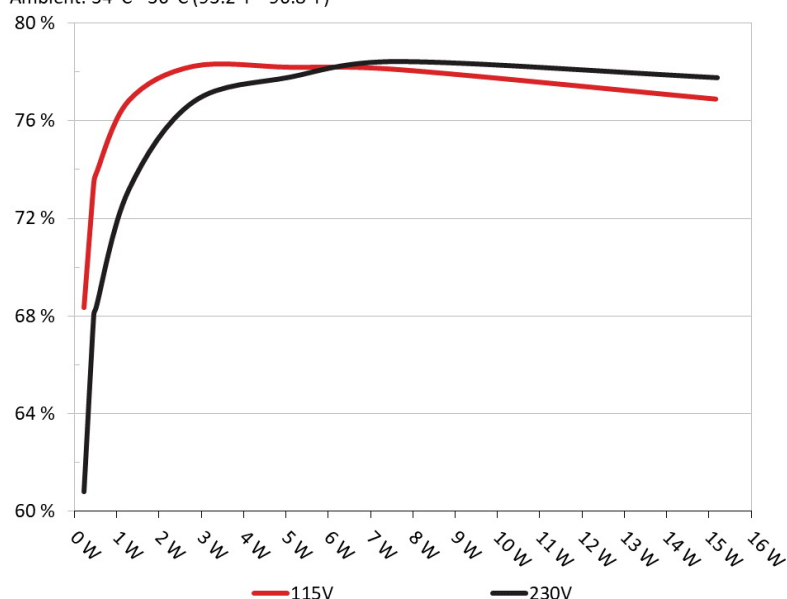
INFO

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-550PX

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	2.697A	1.979A	1.984A	0.979A	54.289	84.099%	0	<6.0	44.57°C	0.938
	12.130V	5.044V	3.323V	5.107V	64.554				38.04°C	115.30V
2	6.456A	2.972A	2.981A	1.177A	109.204	88.804%	0	<6.0	45.26°C	0.982
	12.131V	5.043V	3.321V	5.097V	122.972				38.54°C	115.23V
3	10.611A	3.470A	3.465A	1.376A	164.724	90.060%	450	9.9	38.69°C	0.989
	12.131V	5.043V	3.320V	5.087V	182.905				45.85°C	115.15V
4	14.700A	3.966A	3.977A	1.576A	219.534	90.566%	450	9.9	38.78°C	0.992
	12.132V	5.042V	3.318V	5.077V	242.403				46.65°C	115.07V
5	18.460A	4.960A	4.976A	1.776A	274.460	90.587%	445	9.6	39.42°C	0.993
	12.132V	5.041V	3.316V	5.067V	302.979				47.47°C	115.09V
6	22.220A	5.953A	5.976A	1.978A	329.397	90.416%	590	15.2	40.38°C	0.993
	12.133V	5.040V	3.313V	5.056V	364.312				49.24°C	115.01V
7	26.012A	6.947A	6.975A	2.181A	384.707	90.065%	985	23.9	41.40°C	0.992
	12.133V	5.039V	3.311V	5.045V	427.144				50.96°C	114.93V
8	29.804A	7.942A	7.977A	2.384A	440.014	89.679%	1495	32.0	42.16°C	0.992
	12.133V	5.037V	3.309V	5.034V	490.656				52.40°C	114.85V
9	33.960A	8.440A	8.463A	2.387A	494.538	89.261%	1915	40.7	44.94°C	0.993
	12.133V	5.036V	3.308V	5.028V	554.036				55.29°C	114.87V
10	37.918A	8.937A	8.984A	2.996A	549.762	88.798%	2005	41.1	45.22°C	0.993
	12.133V	5.035V	3.306V	5.008V	619.114				56.13°C	114.79V
11	42.466A	8.938A	8.985A	2.999A	604.982	88.363%	2025	41.2	46.67°C	0.993
	12.134V	5.035V	3.305V	5.002V	684.654				58.40°C	114.71V
CL1	0.733A	12.002A	11.999A	0.000A	109.145	86.395%	445	9.6	43.66°C	0.982
	12.130V	5.041V	3.313V	5.111V	126.332				51.72°C	115.22V
CL2	45.001A	1.001A	0.999A	1.000A	559.507	89.426%	2025	41.2	45.60°C	0.993
	12.135V	5.039V	3.315V	5.064V	625.668				56.45°C	114.79V

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

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	1.171A	0.492A	0.478A	0.195A	19.278	71.575%	0	<6.0	0.730
	12.128V	5.049V	3.327V	5.130V	26.934				115.25V
2	2.425A	0.990A	0.991A	0.390A	39.695	81.872%	0	<6.0	0.890
	12.128V	5.043V	3.323V	5.123V	48.484				115.23V
3	3.616A	1.485A	1.472A	0.586A	59.236	85.644%	0	<6.0	0.943
	12.129V	5.043V	3.323V	5.117V	69.165				115.19V
4	4.869A	1.981A	1.986A	0.783A	79.650	87.263%	0	<6.0	0.967
	12.130V	5.043V	3.322V	5.110V	91.276				115.27V

RIPPLE MEASUREMENTS

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	6.6 mV	6.2 mV	4.8 mV	3.4 mV	Pass
20% Load	9.9 mV	7.0 mV	5.6 mV	3.5 mV	Pass
30% Load	12.7 mV	7.1 mV	5.9 mV	3.6 mV	Pass
40% Load	14.3 mV	7.6 mV	6.1 mV	4.1 mV	Pass
50% Load	16.4 mV	8.4 mV	7.1 mV	4.8 mV	Pass
60% Load	17.9 mV	9.9 mV	7.4 mV	5.0 mV	Pass
70% Load	19.5 mV	10.4 mV	8.5 mV	6.0 mV	Pass
80% Load	20.4 mV	11.0 mV	9.8 mV	7.5 mV	Pass
90% Load	22.3 mV	11.2 mV	10.3 mV	7.5 mV	Pass
100% Load	23.2 mV	12.5 mV	10.9 mV	8.2 mV	Pass
110% Load	23.9 mV	12.5 mV	11.3 mV	10.0 mV	Pass
Crossload 1	10.7 mV	11.2 mV	9.7 mV	4.4 mV	Pass
Crossload 2	23.0 mV	7.8 mV	6.0 mV	6.9 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

Anex

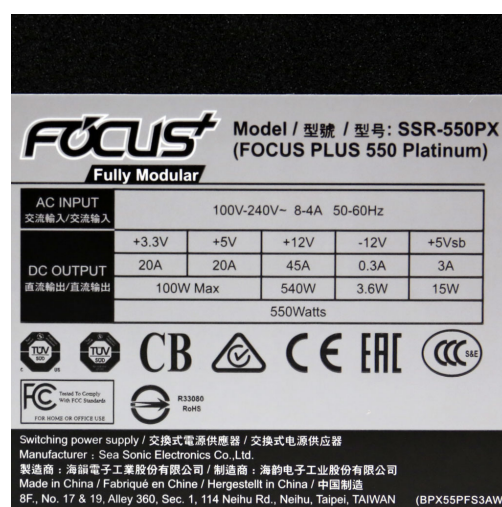
Seasonic SSR-550PX

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

Hold-Up Time (ms)	24.20
AC Loss to PWR_OK Hold Up Time (ms)	19.50
PWR_OK Inactive to DC Loss Delay (ms)	4.70



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