

Anex

Seasonic SSR-550PX

Lab ID#: 246

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

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RESULTS

Temperature Range (°C /°F)	30-32 / 86-89.6
Average Efficiency	91.674
Efficiency With 10W ($\leq 500W$) or 2% ($> 500W$) Load -115V	0.000
Average Efficiency 5VSB	77.003
Standby Power Consumption (W) -115V	0.0495356
Standby Power Consumption (W) -230V	0.0825415
Average PF	0.935
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓
Avg Noise Output	14.17
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	A++

TEST EQUIPMENT

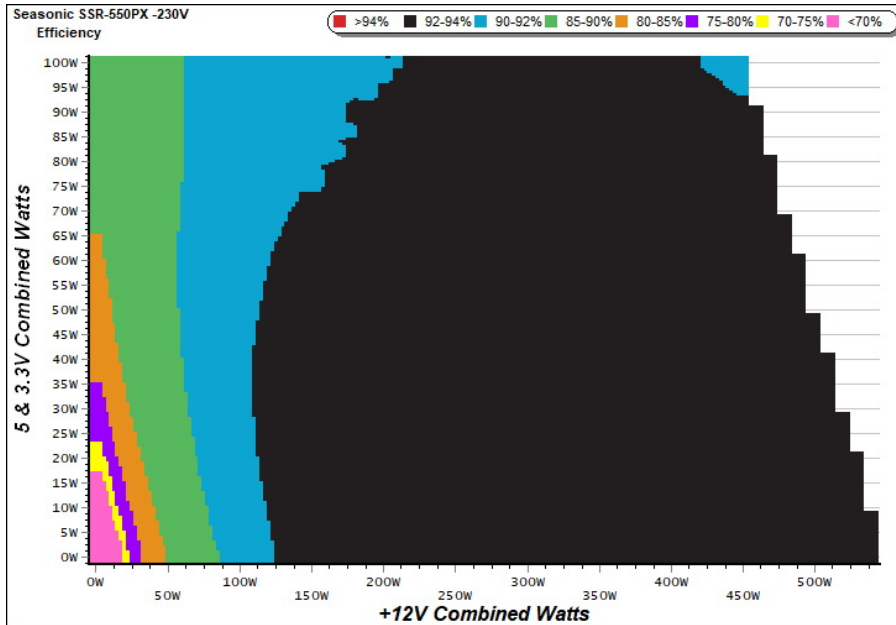
Electronic Loads	Chroma 6314A x2 63123A x6 63102A 63101A	Chroma 63601-5 x2 Chroma 63600-2 63640-80-80 x10 63610-80-20
AC Sources	Chroma 6530, Chroma 61604	
Power Analyzers	N4L PPA1530, N4L PPA5530	
Oscilloscopes	Picoscope 4444 & 3424, Keysight DSOX3024A, Rigol DS2072A	
Voltmeter	Keithley 2015 THD 6.5 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	

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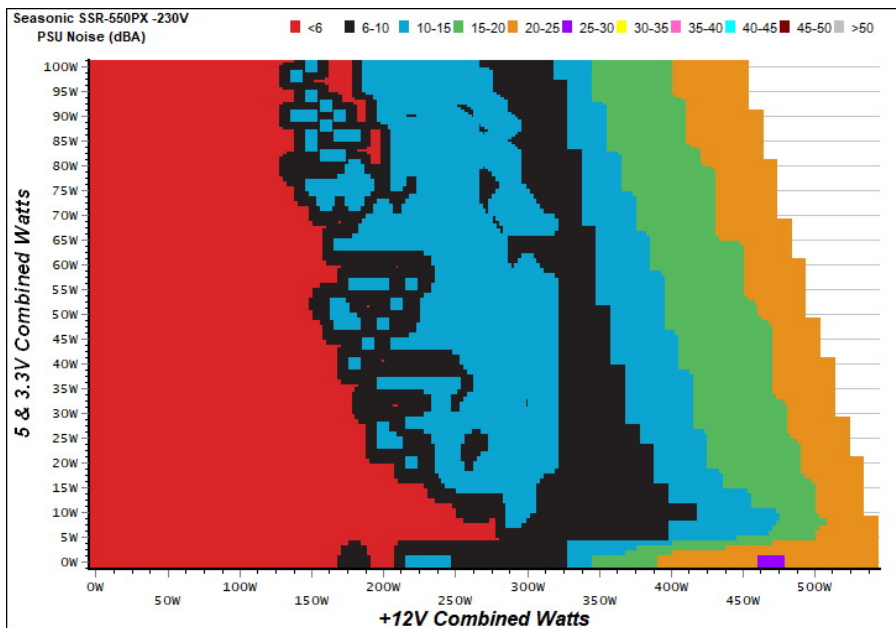
EFFICIENCY GRAPH



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

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

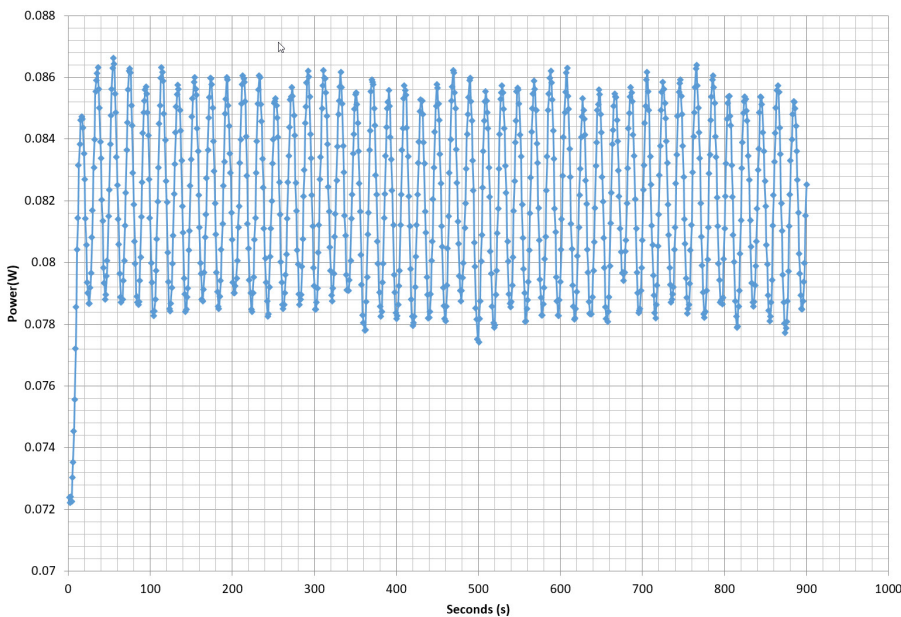
Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.231	68.343%	0.034
	5.136V	0.338		115.27V
2	0.090A	0.462	73.450%	0.062
	5.135V	0.629		115.27V
3	0.550A	2.818	78.234%	0.273
	5.124V	3.602		115.26V
4	1.000A	5.113	78.192%	0.367
	5.114V	6.539		115.25V
5	1.500A	7.653	78.100%	0.418
	5.102V	9.799		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 -230V

Power - R1707AA170390277 - 13/12/2017 - 09:32



INFO

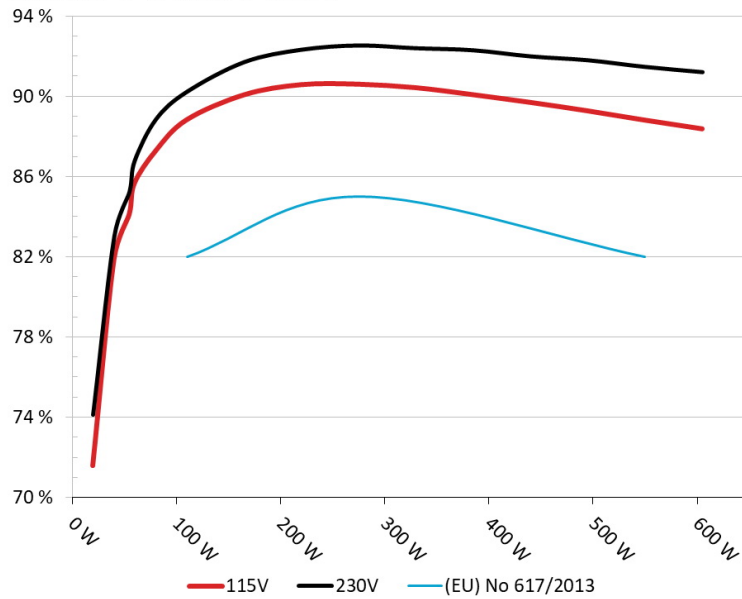
This graph is generated by the PPA Standby Power Analysis software which takes full control of the power analyzer during the whole procedure. This application features all of the EN50564 & IEC62301 test limits for standby power software testing

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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Seasonic SSR-550PX
Ambient: 37°C - 47°C (98.6°F - 116.6°F)

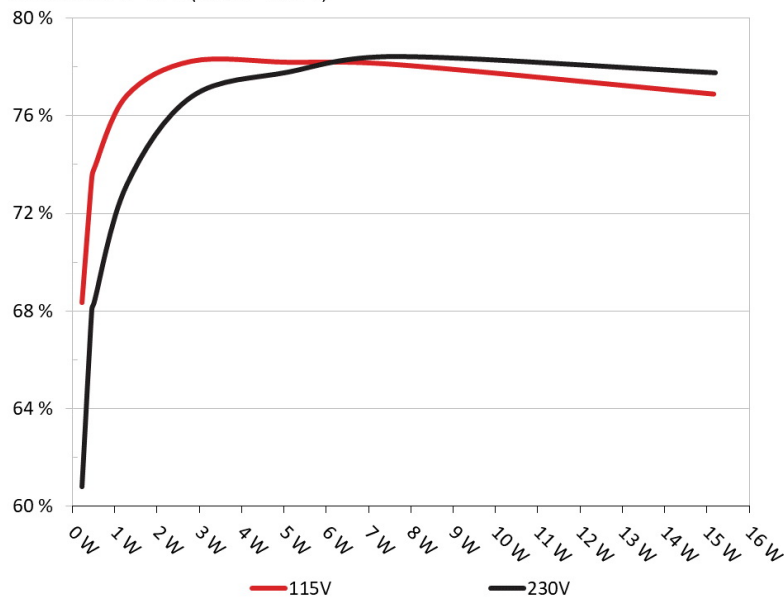


INFO

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

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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	2.708A	1.982A	1.984A	0.979A	54.436	85.232%	0	<6.0	48.02°C	0.682
	12.129V	5.044V	3.323V	5.107V	63.868				38.02°C	230.81V
2	6.466A	2.973A	2.979A	1.177A	109.320	90.205%	450	9.9	38.19°C	0.861
	12.130V	5.044V	3.321V	5.096V	121.191				48.28°C	230.83V
3	10.619A	3.471A	3.464A	1.376A	164.820	91.695%	485	9.3	38.85°C	0.925
	12.131V	5.043V	3.319V	5.086V	179.749				49.09°C	230.84V
4	14.709A	3.965A	3.979A	1.576A	219.626	92.310%	445	9.6	39.08°C	0.951
	12.131V	5.042V	3.317V	5.077V	237.922				48.79°C	230.80V
5	18.466A	4.962A	4.976A	1.777A	274.536	92.521%	465	9.8	39.41°C	0.965
	12.132V	5.040V	3.315V	5.066V	296.727				49.56°C	230.75V
6	22.224A	5.954A	5.976A	1.979A	329.448	92.386%	565	14.1	40.43°C	0.973
	12.133V	5.039V	3.313V	5.055V	356.598				49.12°C	230.70V
7	26.015A	6.949A	6.977A	2.181A	384.753	92.284%	900	21.8	41.31°C	0.978
	12.133V	5.038V	3.311V	5.045V	416.923				48.04°C	230.66V
8	29.806A	7.944A	7.978A	2.385A	440.053	91.978%	1495	32.0	42.42°C	0.980
	12.133V	5.037V	3.309V	5.033V	478.435				48.10°C	230.72V
9	33.963A	8.441A	8.465A	2.387A	494.578	91.789%	1780	38.8	43.27°C	0.983
	12.133V	5.036V	3.307V	5.028V	538.823				48.14°C	230.68V
10	37.920A	8.939A	8.984A	2.996A	549.796	91.457%	2005	41.1	45.23°C	0.985
	12.133V	5.035V	3.306V	5.008V	601.153				49.71°C	230.64V
11	42.466A	8.942A	8.986A	2.999A	605.005	91.195%	2025	41.2	46.18°C	0.986
	12.134V	5.035V	3.305V	5.002V	663.419				50.94°C	230.59V
CL1	0.735A	12.002A	11.998A	0.000A	109.166	87.456%	445	9.6	43.37°C	0.867
	12.130V	5.041V	3.313V	5.111V	124.824				51.93°C	230.97V
CL2	45.003A	1.002A	0.999A	1.000A	559.535	92.123%	2005	41.1	44.87°C	0.985
	12.135V	5.039V	3.314V	5.064V	607.378				49.35°C	230.64V

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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	1.190A	0.494A	0.480A	0.195A	19.526	74.136%	0	<6.0	0.442
	12.130V	5.050V	3.328V	5.129V	26.338				230.84V
2	2.441A	0.990A	0.993A	0.391A	39.905	83.014%	0	<6.0	0.584
	12.129V	5.045V	3.324V	5.122V	48.070				230.83V
3	3.630A	1.486A	1.474A	0.587A	59.429	86.773%	0	<6.0	0.705
	12.130V	5.044V	3.323V	5.116V	68.488				230.81V
4	4.882A	1.981A	1.986A	0.783A	79.809	88.838%	0	<6.0	0.793
	12.130V	5.044V	3.322V	5.109V	89.837				230.80V

RIPPLE MEASUREMENTS

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	6.0 mV	6.0 mV	4.6 mV	3.3 mV	Pass
20% Load	9.6 mV	6.5 mV	5.3 mV	3.4 mV	Pass
30% Load	11.9 mV	7.1 mV	5.7 mV	3.5 mV	Pass
40% Load	14.1 mV	7.4 mV	6.2 mV	3.8 mV	Pass
50% Load	16.0 mV	8.8 mV	6.9 mV	3.9 mV	Pass
60% Load	17.5 mV	9.3 mV	7.4 mV	4.2 mV	Pass
70% Load	19.3 mV	10.1 mV	8.1 mV	4.2 mV	Pass
80% Load	20.3 mV	11.0 mV	9.6 mV	4.8 mV	Pass
90% Load	22.0 mV	11.5 mV	10.1 mV	5.0 mV	Pass
100% Load	22.9 mV	12.1 mV	11.0 mV	6.0 mV	Pass
110% Load	24.8 mV	12.8 mV	11.4 mV	6.1 mV	Pass
Crossload 1	9.9 mV	11.4 mV	10.0 mV	4.0 mV	Pass
Crossload 2	23.1 mV	7.9 mV	6.2 mV	4.4 mV	Pass

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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

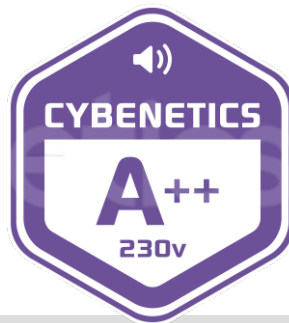


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Power specifications label

CERTIFICATIONS



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