



Seasonic Prime Platinum 1200W

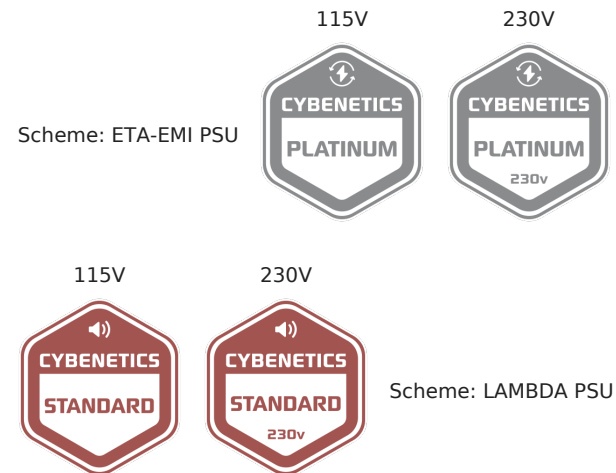
Serial Number R1701TA101450009

Lab ID 195

Certification ID 25195

Test Result Report ID:

Certificate Issue Date: Oct 13, 2018



A handwritten signature in blue ink, appearing to read 'A. Bitziopoulos', is positioned above the name of the Certification Body General Manager.

Aristeidis Bitziopoulos, Certification Body General Manager

General Information

Test Equipment

Electronic Loads	Chroma 63601-5 x2 Chroma 63600-2 Chroma 63640-80-80 x10 Chroma 63610-80-20
AC Sources	Chroma 6530, APM SP300VAC4000W-P, GW Instek ASR-3500
Power Analyzers	Rohde & Schwarz HMC8015 & NPA701
Oscilloscopes	Picoscope 4444, Siglent SDS2104X PLUS
Sound Analyzer	Bruel & Kjaer 2270 G4
Microphone	Bruel & Kjaer Type 4955-A
Temperature Logger	Picoscope TC-08
Tachometer	UNI-T UT372
Multimeters	Keysight 34465A
EMI Analyzer	TekBox TBMR-110M-EU
Isolation Transformer	4kVA
UPS	FSP Champ Tower 3kVA, CyberPower OLS3000E 3kVA
Testing Methodology	Cybenetics PSU Test Protocol

DUT Information(Non-accredited measurements)

Product Identification Details	
Brand	Seasonic
Model	Prime Platinum 1200W
OEM/ODM	Seasonic
Serial Number	R1701TA101450009
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	15-7.5
Rated Frequency (Hz)	50-60

Rated Power (W)	1200
Operating Temperature (Continuous Full Load) (°C)	
Type	ATX12V
Cable Design	Fully Modular
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
Cooling	135mm Fluid Dynamic Bearing Fan (HA13525H12F-Z)
Semi-Passive Operation	✓ (selectable)
Cybenetics Testing Information	
Lab ID	195
Date of receipt	Oct 5, 2018
Testing Date	Oct 9, 2018
Report Issued Date	Oct 13, 2018
Engineer Name	-
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

Cables and Connectors(Non-accredited measurements)

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)	4	8	18AWG
SATA (450mm+110mm+110mm+110mm)	3	12	18AWG
4 pin Molex (450mm+120mm+120mm)	1	3	18AWG
4 pin Molex (350mm+120mm)	1	2	18AWG
FDD Adapter (+110mm)	1	1	22AWG

Power Specifications

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	25	25	100	3	0.3
	Watts	125		1200	15	3.6
Total Max. Power (W)		1200				

Test Results

Temperature & Compliance Info

Temperature Range (°C /°F)	28-32 / 82.4-89.6
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓

Performance Summary

115V

Accredited	
Average Efficiency (>1450 load combinations)	90.304%
Average Noise Output (>1450 Load Combinations)	43.25dBA
Average PF (>1450 Load Combinations)	0.992
Efficiency With 10W (≤500W) or 2% (>500W) Load	-
Standby Power Consumption	0.0583W
Non-Accredited	
12V Ripple (Full Load)	19.23mV
5V Ripple (Full Load)	10.11mV
3.3V Ripple (Full Load)	12.72mV
5VSB Ripple (Full Load)	10.38mV
12V Load Regulation	0.07%
5V Load Regulation	0.16%
3.3V Load Regulation	0.39%

5VSB Load Regulation	1.33%
Inrush Current	27.876A

230V

Accredited		
Average Efficiency (>1450 load combinations)	92.233%	
Average Noise Output (>1450 Load Combinations)	43.08dBA	
Average PF (>1450 Load Combinations)	0.961	
Efficiency With 10W (≤500W) or 2% (>500W) Load	-	
Standby Power Consumption	0.0872W	
Non-Accredited		
12V Ripple (Full Load)	13.96mV	
5V Ripple (Full Load)	8.29mV	
3.3V Ripple (Full Load)	13.22mV	
5VSB Ripple (Full Load)	10.99mV	
12V Load Regulation	0.19%	
5V Load Regulation	0.54%	
3.3V Load Regulation	0.87%	
5VSB Load Regulation	1.71%	
Inrush Current	71.789A	
Hold-Up Time & PWR_OK Signal	22.70ms	
AC Loss to PWR_OK Hold Up Time	18.70ms	
PWR_OK Inactive to DC Loss Delay	4.00ms	
OPP (0.00°C / 0.00°C)	-	-

Hold-Up Time & PWR_OK Signal

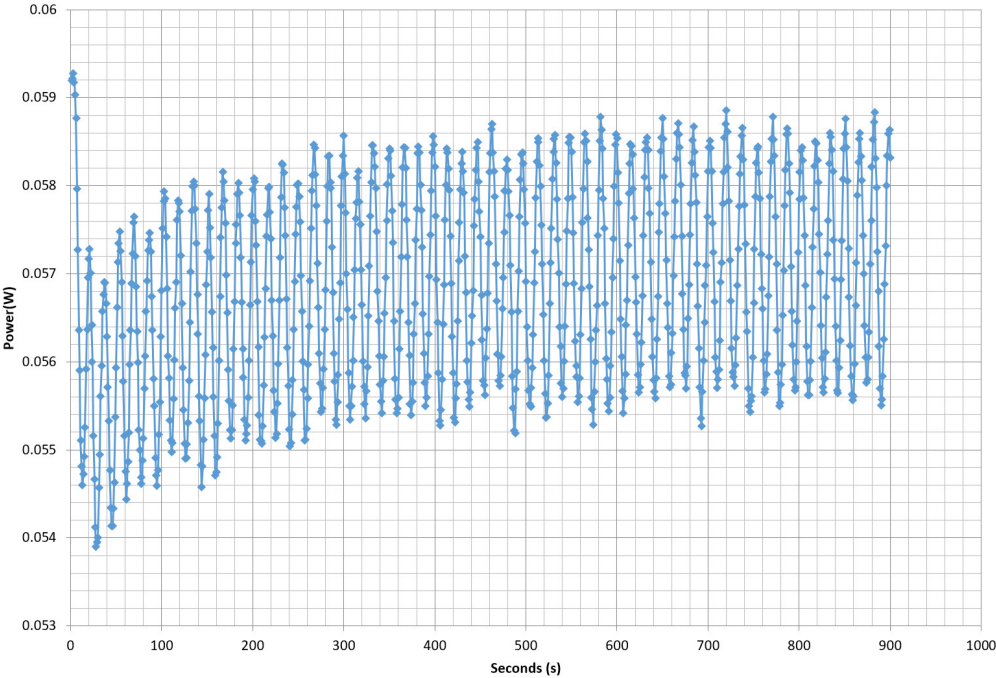
Hold-Up Time (ms)	22.7
AC Loss to PWR_OK Hold Up Time (ms)	18.7
PWR_OK Inactive to DC Loss Delay (ms)	4

Vampire Power

Graphs

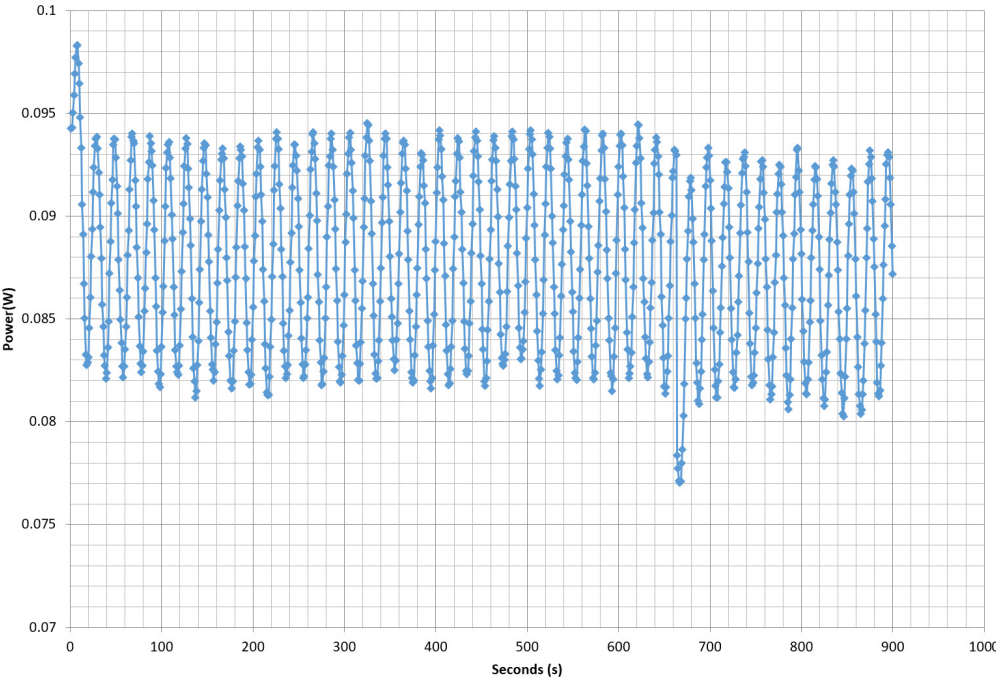
115V

Power - R1701TA101450009 - 12/10/2017 - 16:14



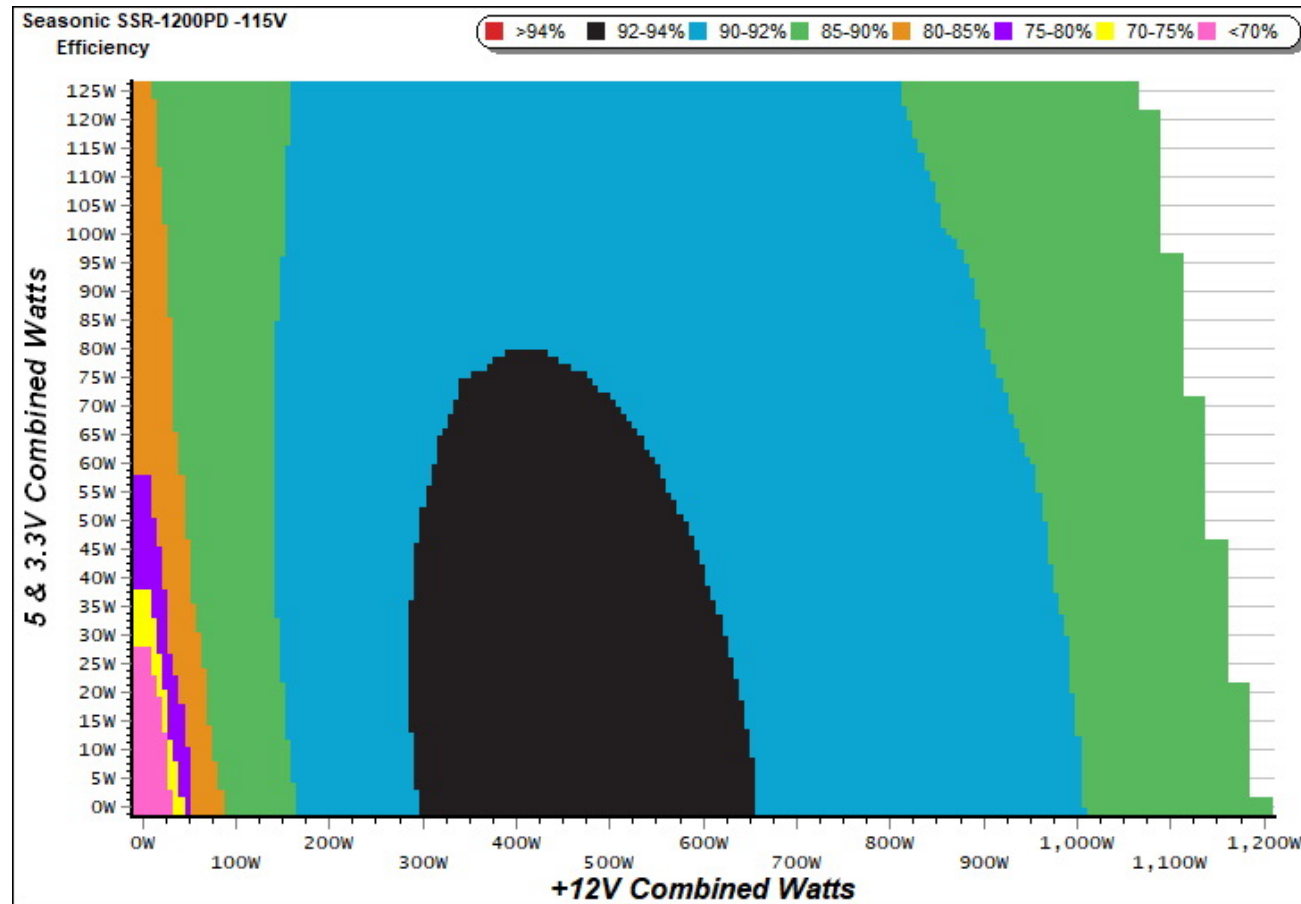
230V

Power - R1701TA101450009 - 12/10/2017 - 16:14



Efficiency Graph

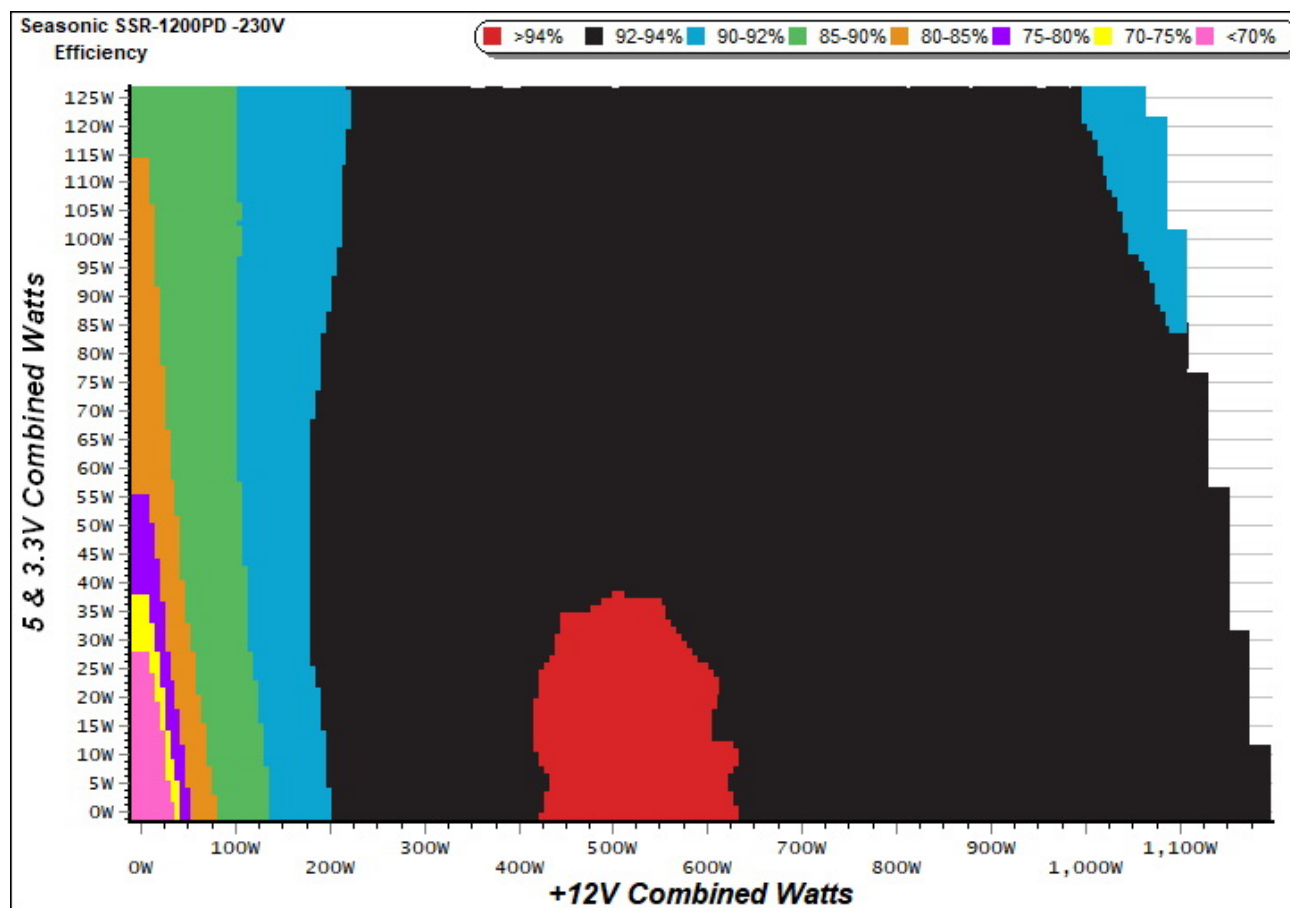
115V



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.

230V

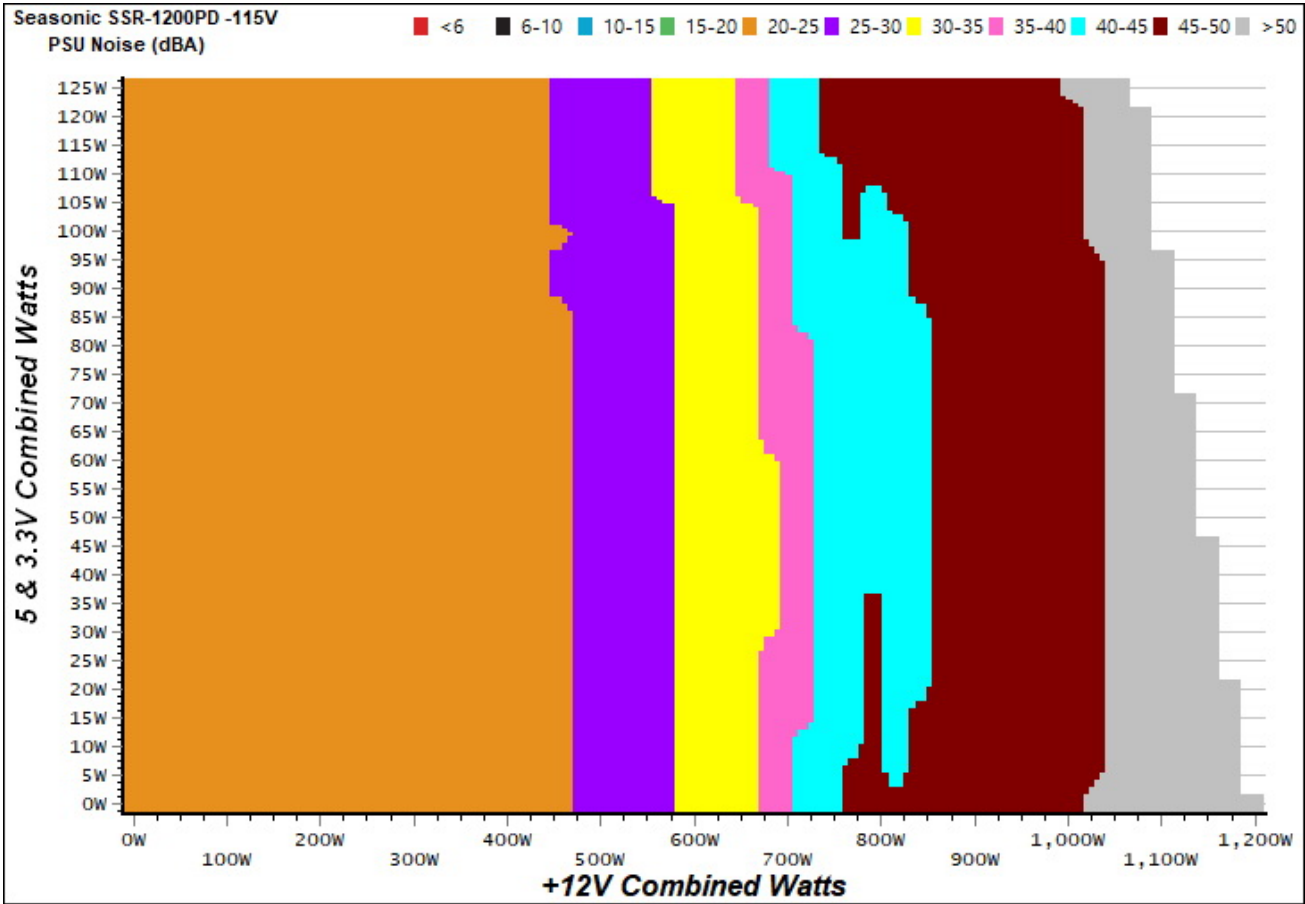


INFO

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Noise Graph

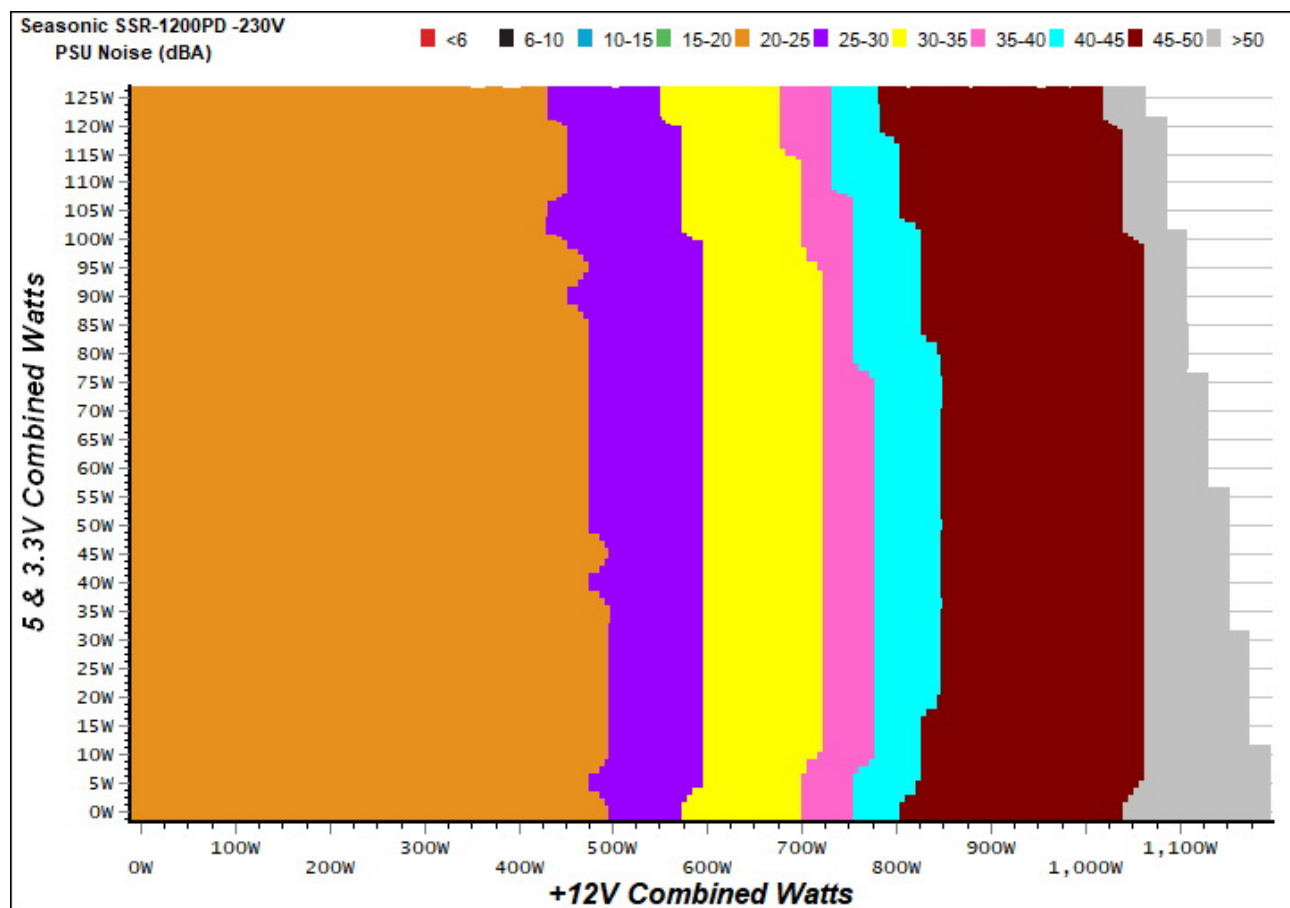
115V



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.

230V



INFO

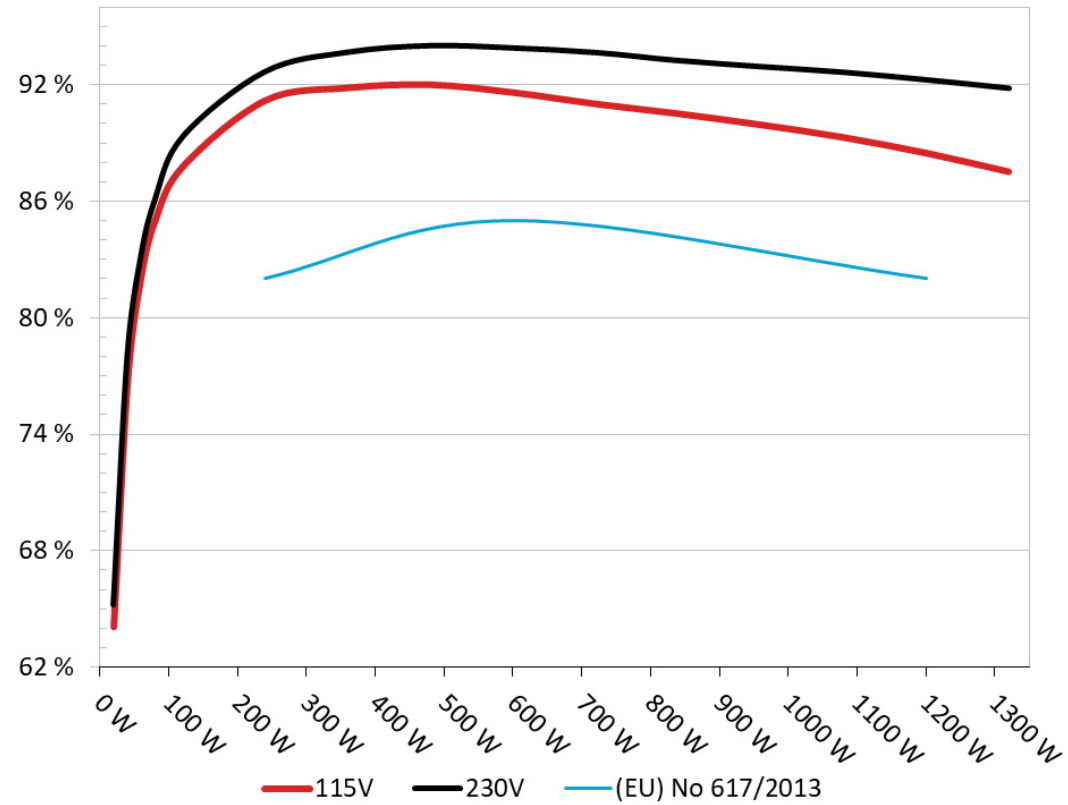
The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails.

Indicative Performance

Efficiency under high ambient temperature

Efficiency: Seasonic SSR-1200PD

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



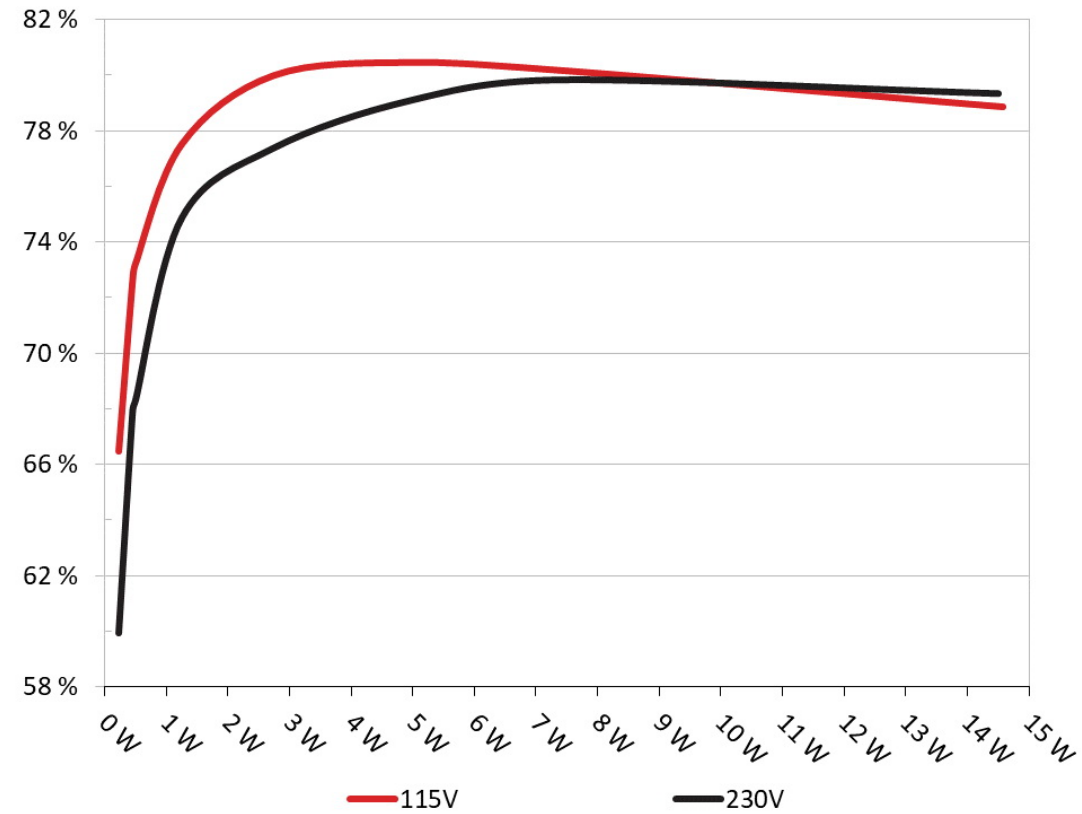
INFO

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-1200PD

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.

5VSB Efficiency (ERP LOT 3/6 & CEC)

115V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.226	66.471%	0.028
	5.008V	0.340		115.39V
2	0.090A	0.451	72.625%	0.051
	5.006V	0.621		115.39V
3	0.550A	2.740	80.000%	0.233
	4.981V	3.425		115.39V
4	1.000A	4.957	80.471%	0.334
	4.957V	6.160		115.39V
5	1.500A	7.396	80.182%	0.397
	4.930V	9.224		115.38V
6	3.000A	14.570	78.872%	0.477
	4.857V	18.473		115.37V

230V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.226	59.947%	0.010
	5.008V	0.377		230.85V
2	0.090A	0.451	67.922%	0.018
	5.005V	0.664		230.85V
3	0.550A	2.739	77.395%	0.092
	4.979V	3.539		230.86V
4	1.000A	4.951	79.102%	0.153
	4.951V	6.259		230.86V
5	1.500A	7.382	79.849%	0.209
	4.921V	9.245		230.86V
6	3.000A	14.497	79.353%	0.318
	4.832V	18.269		230.85V

Supplementary Tests (For Reference)

Typical Load Tests

115V

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
1	8.092A	1.988A	1.982A	1.000A	119.998	87.803%	812	26.7	38.36°C	0.980
	12.161V	5.024V	3.330V	5.003V	136.667				43.62°C	115.22V
2	17.171A	2.985A	2.974A	1.201A	239.694	91.203%	910	28.4	38.47°C	0.984
	12.160V	5.023V	3.328V	4.999V	262.813				45.56°C	115.06V
3	26.582A	3.485A	3.458A	1.402A	359.218	91.852%	1084	35.6	39.31°C	0.989
	12.159V	5.022V	3.327V	4.994V	391.084				47.48°C	115.00V
4	36.063A	3.984A	3.972A	1.604A	479.666	92.013%	1300	38.8	39.60°C	0.993
	12.158V	5.021V	3.325V	4.989V	521.304				48.59°C	114.93V
5	45.180A	4.982A	4.963A	1.806A	599.807	91.614%	1727	44.6	40.07°C	0.995
	12.158V	5.020V	3.324V	4.984V	654.710				49.40°C	114.77V
6	54.301A	5.979A	5.960A	2.009A	719.949	91.026%	2015	48.3	40.72°C	0.997
	12.157V	5.019V	3.322V	4.980V	790.923				50.64°C	114.64V
7	63.390A	6.978A	6.958A	2.211A	839.694	90.523%	2123	51.2	41.57°C	0.997
	12.156V	5.018V	3.321V	4.976V	927.600				52.66°C	114.51V
8	72.538A	7.973A	7.953A	2.414A	960.179	89.946%	2123	51.2	42.88°C	0.997
	12.156V	5.017V	3.320V	4.972V	1067.504				55.74°C	114.43V
9	82.024A	8.474A	8.439A	2.414A	1079.519	89.302%	2123	51.2	44.42°C	0.998
	12.155V	5.017V	3.318V	4.972V	1208.846				59.32°C	114.25V
10	91.339A	8.975A	8.954A	3.027A	1199.949	88.493%	2123	51.2	46.02°C	0.998
	12.155V	5.016V	3.317V	4.957V	1355.984				62.82°C	114.14V
11	101.213A	8.975A	8.956A	3.027A	1319.962	87.534%	2132	51.7	46.85°C	0.998
	12.155V	5.016V	3.316V	4.956V	1507.946				65.54°C	113.93V
CL1	0.742A	15.004A	15.001A	0.000A	134.342	83.538%	2115	50.7	43.49°C	0.990
	12.161V	5.022V	3.331V	5.052V	160.816				49.53°C	115.17V

CL2	100.012A	1.001A	1.001A	1.000A	1228.983	88.555%	2123	51.2	46.96°C	0.998
	12.155V	5.018V	3.317V	4.994V	1387.826				63.79°C	114.11V

The results above are not used in the certification process

230V

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
1	8.073A	1.995A	1.980A	1.000A	119.807	89.286%	769	26.4	38.31°C	0.863
	12.164V	5.021V	3.329V	4.999V	134.184				43.37°C	230.23V
2	17.169A	2.981A	2.976A	1.201A	239.626	92.587%	867	28.3	38.61°C	0.935
	12.160V	5.019V	3.324V	4.993V	258.812				45.21°C	230.24V
3	26.629A	3.489A	3.487A	1.401A	359.822	93.529%	1057	32.2	39.06°C	0.961
	12.158V	5.016V	3.321V	4.986V	384.715				46.09°C	230.22V
4	36.073A	3.992A	3.975A	1.605A	479.660	93.776%	1300	38.8	39.74°C	0.975
	12.155V	5.013V	3.318V	4.980V	511.494				47.47°C	230.24V
5	45.181A	4.989A	4.974A	1.806A	599.546	93.575%	1745	45.5	40.44°C	0.980
	12.153V	5.009V	3.315V	4.974V	640.710				48.51°C	230.22V
6	54.296A	5.992A	5.976A	2.011A	719.484	93.246%	2074	49.6	41.32°C	0.985
	12.150V	5.007V	3.312V	4.969V	771.601				49.65°C	230.23V
7	63.404A	7.002A	6.978A	2.215A	839.353	92.977%	2123	51.2	42.30°C	0.986
	12.148V	5.003V	3.310V	4.963V	902.754				51.66°C	230.23V
8	72.520A	8.005A	7.982A	2.420A	959.243	92.639%	2123	51.2	43.59°C	0.987
	12.146V	5.000V	3.307V	4.956V	1035.462				54.14°C	230.23V
9	82.075A	8.505A	8.505A	2.420A	1079.236	92.259%	2123	51.2	44.96°C	0.988
	12.143V	4.998V	3.304V	4.955V	1169.795				56.85°C	230.24V
10	91.383A	9.017A	8.997A	3.036A	1199.190	91.753%	2132	51.7	46.50°C	0.989
	12.141V	4.994V	3.300V	4.937V	1306.981				60.00°C	230.24V
11	101.279A	9.025A	9.006A	3.038A	1319.154	91.099%	2132	51.7	47.24°C	0.989
	12.139V	4.990V	3.298V	4.935V	1448.039				61.56°C	230.25V
CL1	0.099A	15.021A	15.005A	0.004A	126.475	83.731%	2115	50.7	45.69°C	0.879
	12.162V	5.017V	3.325V	5.055V	151.049				51.39°C	230.27V

CL2	99.940A	1.004A	1.002A	1.002A	1226.686	91.886%	2132	51.7	46.70°C	0.989
	12.141V	4.998V	3.305V	4.975V	1335.005				59.90°C	230.25V

The results above are not used in the certification process

Light Load Tests

115V

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	PF/AC Volts
1	1.179A	0.497A	0.477A	0.199A	19.416	64.062%	660	23.8	0.835
	12.152V	5.028V	3.333V	5.024V	30.308				115.36V
2	2.434A	0.995A	0.990A	0.399A	39.874	76.852%	660	23.8	0.920
	12.152V	5.023V	3.330V	5.015V	51.884				115.33V
3	3.618A	1.492A	1.470A	0.599A	59.359	82.127%	660	23.8	0.950
	12.152V	5.024V	3.330V	5.011V	72.277				115.31V
4	4.867A	1.989A	1.980A	0.799A	79.771	85.025%	685	25.4	0.970
	12.160V	5.024V	3.330V	5.008V	93.821				115.28V

The results above are not used in the certification process

230V

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	PF/AC Volts
1	1.203A	0.490A	0.478A	0.196A	19.666	65.227%	660	23.8	0.538
	12.156V	5.029V	3.333V	5.023V	30.150				230.22V
2	2.428A	0.991A	0.991A	0.396A	39.777	77.930%	660	23.8	0.678
	12.156V	5.023V	3.330V	5.013V	51.042				230.23V
3	3.653A	1.487A	1.501A	0.596A	59.864	83.252%	685	25.4	0.751
	12.158V	5.023V	3.329V	5.009V	71.907				230.23V
4	4.867A	1.995A	1.980A	0.796A	79.799	86.114%	726	26.0	0.798
	12.164V	5.023V	3.329V	5.005V	92.667				230.24V

The results above are not used in the certification process

Ripple Measurements

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	16.2 mV	3.3 mV	3.9 mV	5.9 mV	Pass
20% Load	17.0 mV	3.5 mV	4.8 mV	6.9 mV	Pass
30% Load	12.2 mV	3.7 mV	5.2 mV	7.1 mV	Pass
40% Load	12.1 mV	3.9 mV	5.7 mV	8.8 mV	Pass
50% Load	13.4 mV	4.2 mV	6.5 mV	9.2 mV	Pass
60% Load	15.2 mV	4.5 mV	7.2 mV	10.9 mV	Pass
70% Load	16.4 mV	5.1 mV	7.7 mV	11.1 mV	Pass
80% Load	17.2 mV	6.3 mV	8.6 mV	12.9 mV	Pass
90% Load	18.5 mV	7.2 mV	9.2 mV	14.2 mV	Pass
100% Load	19.2 mV	7.5 mV	10.7 mV	15.4 mV	Pass
110% Load	21.4 mV	8.6 mV	11.8 mV	17.6 mV	Pass
Crossload 1	12.6 mV	4.8 mV	6.3 mV	6.1 mV	Pass
Crossload 2	21.5 mV	6.4 mV	9.0 mV	14.8 mV	Pass

The results above are not used in the certification process

230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	17.5 mV	3.5 mV	6.4 mV	4.0 mV	Pass
20% Load	13.7 mV	3.5 mV	6.7 mV	4.4 mV	Pass
30% Load	9.0 mV	3.5 mV	7.0 mV	4.1 mV	Pass
40% Load	8.7 mV	3.8 mV	7.9 mV	4.7 mV	Pass
50% Load	10.0 mV	4.0 mV	7.7 mV	5.1 mV	Pass
60% Load	11.4 mV	4.9 mV	8.4 mV	5.7 mV	Pass
70% Load	12.7 mV	5.6 mV	10.6 mV	7.7 mV	Pass
80% Load	13.0 mV	7.6 mV	11.7 mV	9.0 mV	Pass

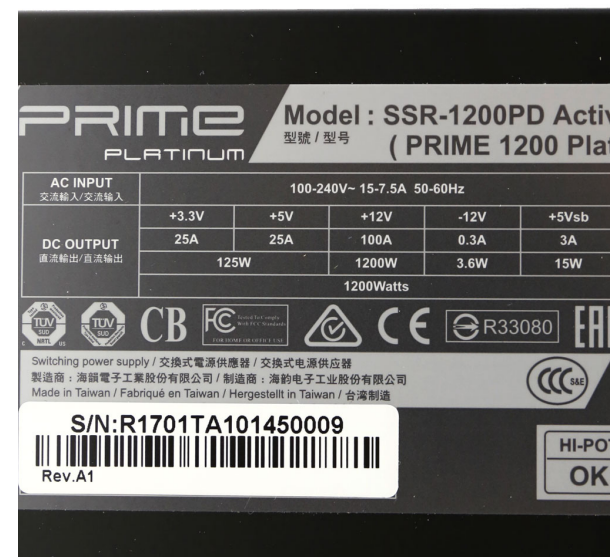
Test	12V	5V	3.3V	5VSB	Pass/Fail
90% Load	12.8 mV	8.3 mV	12.3 mV	9.9 mV	Pass
100% Load	14.0 mV	8.3 mV	13.2 mV	11.0 mV	Pass
110% Load	15.7 mV	10.6 mV	15.0 mV	12.4 mV	Pass
Crossload 1	22.0 mV	4.8 mV	9.4 mV	5.0 mV	Pass
Crossload 2	14.5 mV	8.1 mV	14.0 mV	10.3 mV	Pass

The results above are not used in the certification process

Seasonic Prime Platinum 1200W



Top side



Power specifications label

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

CYBENETICS LTD Syrou 6, Latsia, 2231, Nicosia Cyprus

Cybenetics runs voluntary certification programs for power supplies - ETA for efficiency, LAMBDA for noise and SAFE for safety and correct operation - and for cooling products, with DELTA for chassis soundproofing and PHI for fan airflow and static pressure. THETA rates cooler performance on AMD AM5 and Intel LGA1851 outside ISO 17065 and accreditation scope

www.cybenetics.com - info@cybenetics.com