



Seasonic Prime Platinum 750W

Serial Number R1701TA101420009

Lab ID 206

Certification ID 25206

Test Result Report ID: 20PS206A

Certificate Issue Date: Oct 31, 2018

115V

230V

Scheme: ETA-EMI PSU



115V

230V



Scheme: LAMBDA PSU

A handwritten signature in blue ink, appearing to read 'A. Bitziopoulos'.

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 750W
OEM/ODM	Seasonic
Serial Number	R1701TA101420009
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	9.5-4.5
Rated Frequency (Hz)	50-60

Rated Power (W)	750
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	206
Date of receipt	Oct 24, 2018
Testing Date	Oct 29, 2018
Report Issued Date	Oct 31, 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)	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

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				

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)	90.770%
Average Noise Output (>1450 Load Combinations)	35.18dBA
Average PF (>1450 Load Combinations)	0.989
Efficiency With 10W (≤500W) or 2% (>500W) Load	-
Standby Power Consumption	0.0563W
Non-Accredited	
12V Ripple (Full Load)	18.62mV
5V Ripple (Full Load)	5.91mV
3.3V Ripple (Full Load)	8.47mV
5VSB Ripple (Full Load)	12.36mV
12V Load Regulation	0.05%
5V Load Regulation	0.18%
3.3V Load Regulation	0.39%
5VSB Load Regulation	3.23%
Inrush Current	33.102A

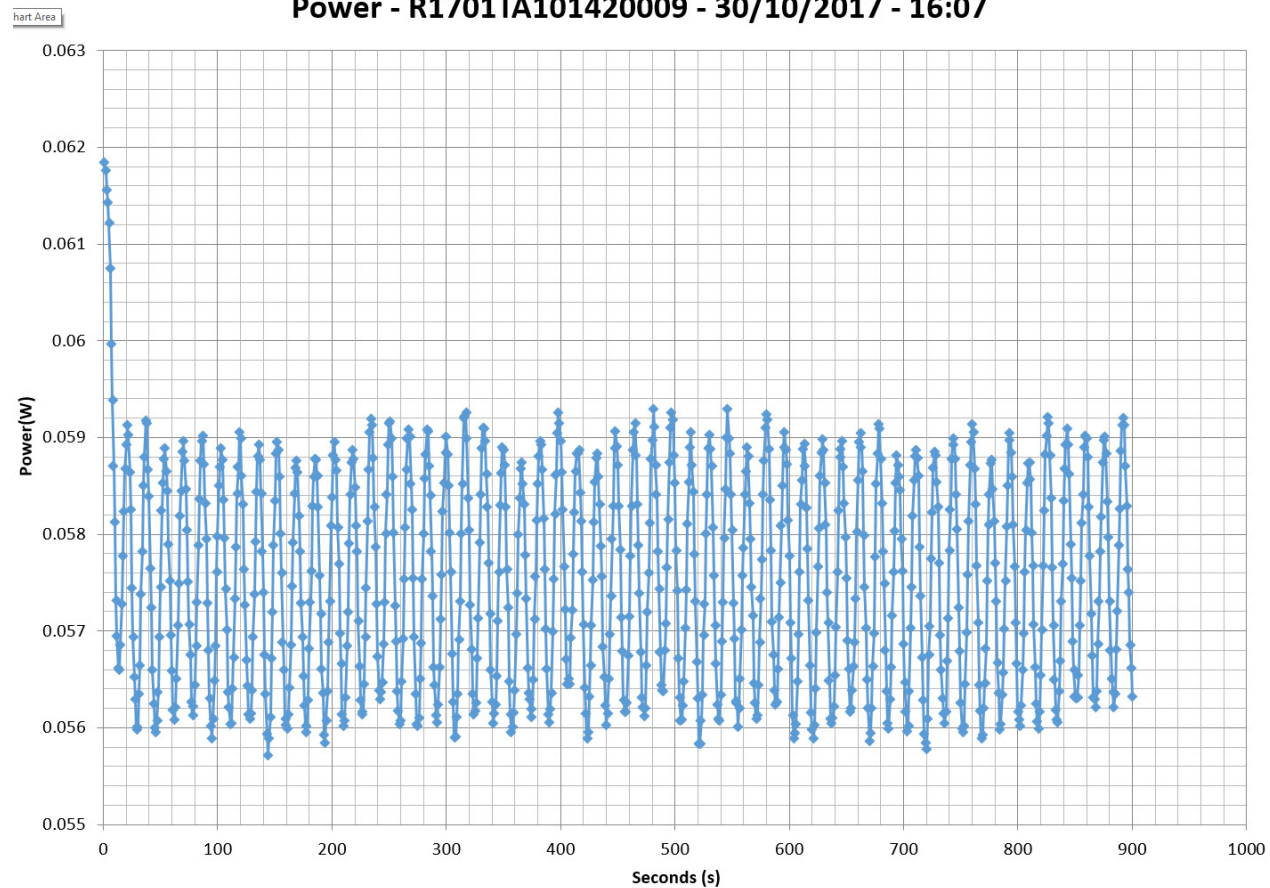
Hold-Up Time & PWR_OK Signal

Hold-Up Time (ms)	22.7
AC Loss to PWR_OK Hold Up Time (ms)	18.2
PWR_OK Inactive to DC Loss Delay (ms)	4.5

Vampire Power

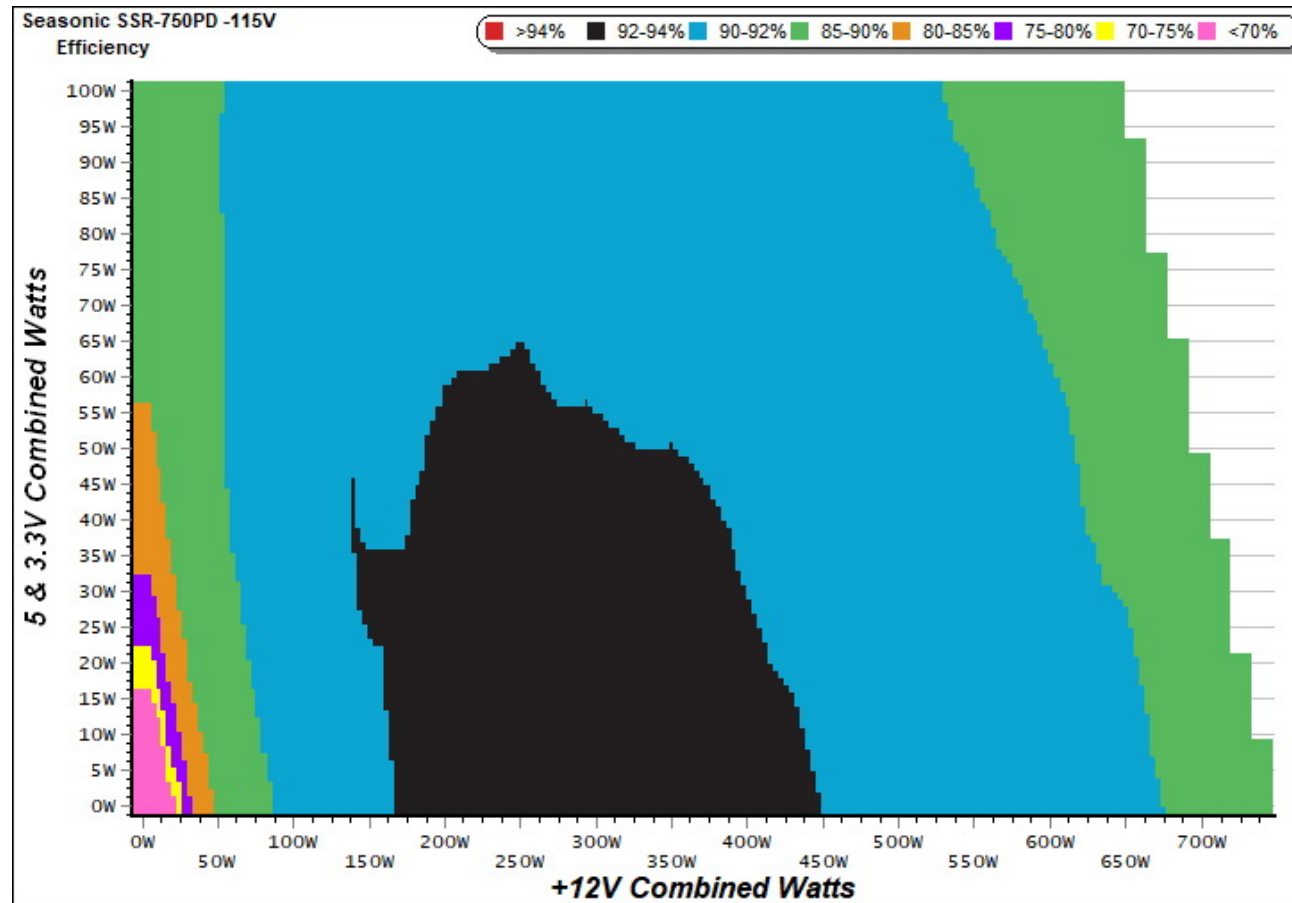
Graphs 115V

Power - R1701TA101420009 - 30/10/2017 - 16:07



Efficiency Graph

115V

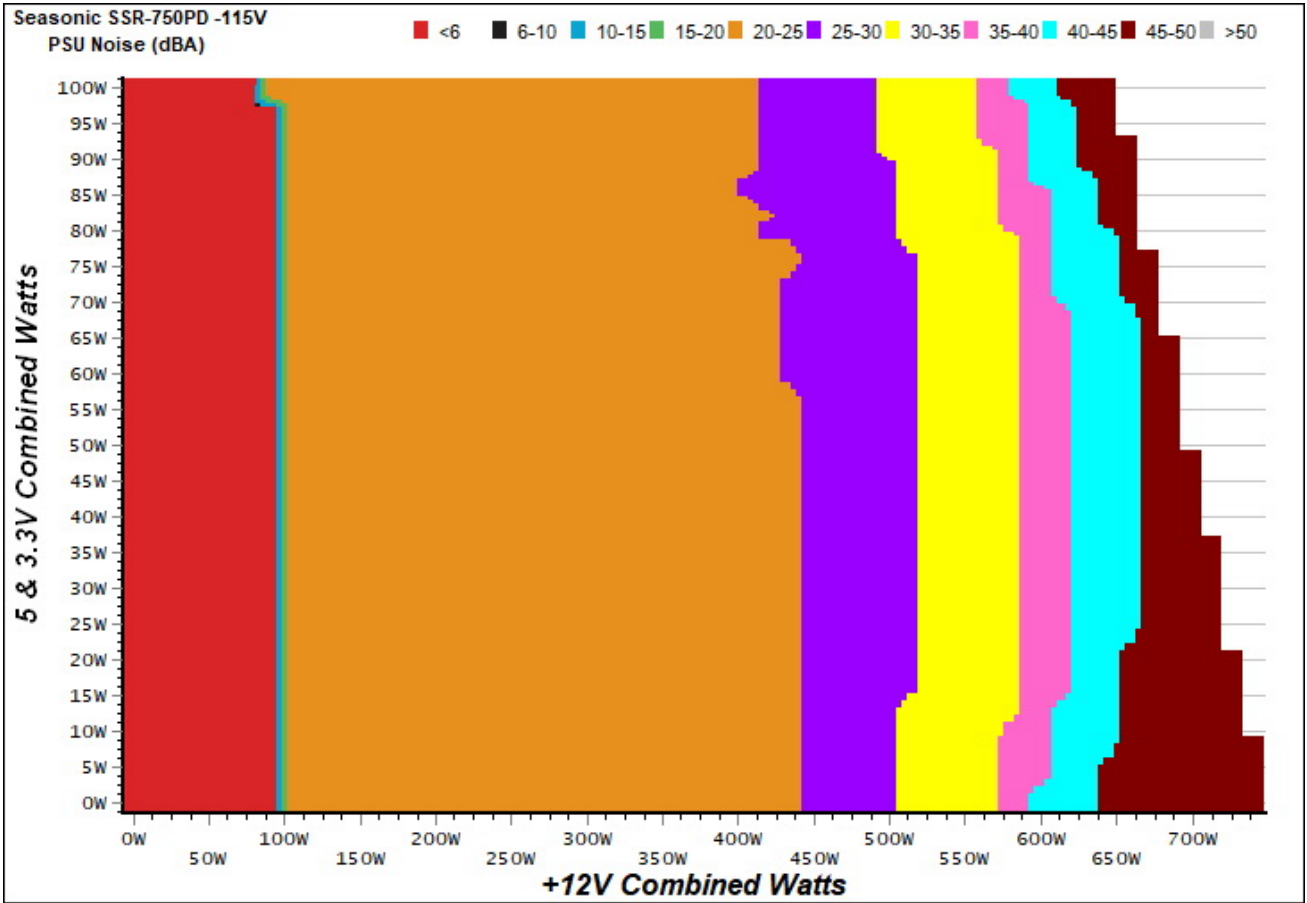


INFO

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.

Noise Graph

115V



INFO

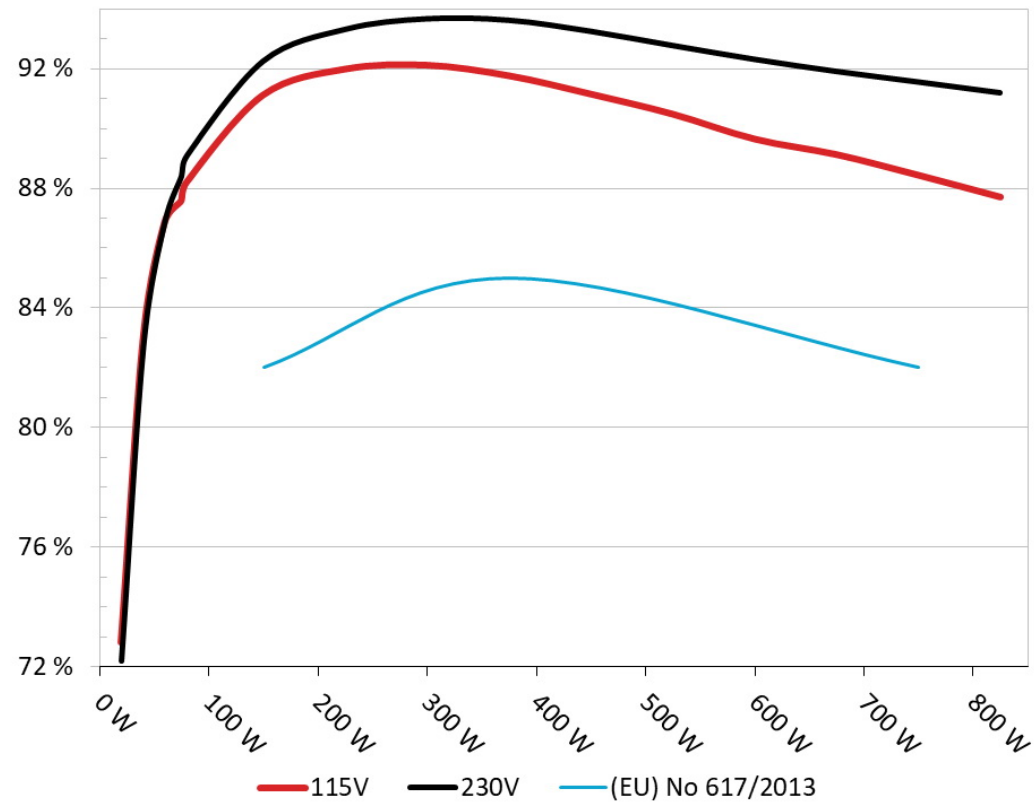
The PSU`s noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails.

Indicative Performance

Efficiency under high ambient temperature

Efficiency: Seasonic SSR-750PD

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



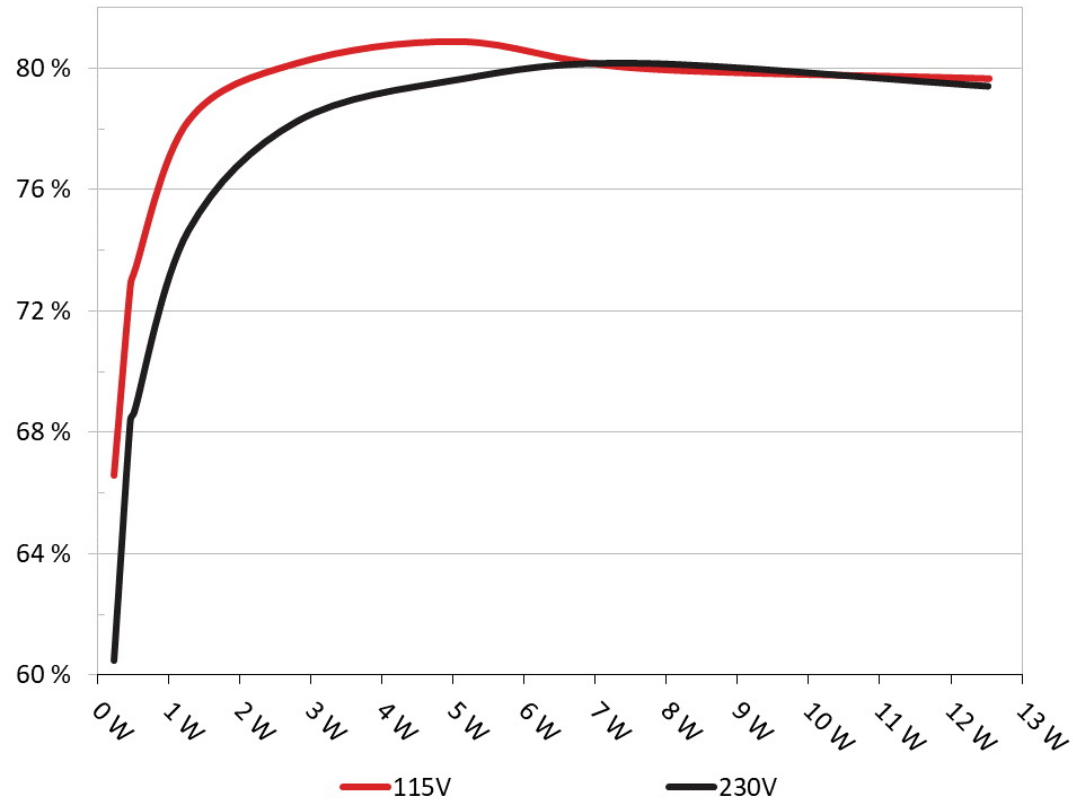
INFO

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.

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

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

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	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

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	1.182A	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

The results above are not used in the certification process

Ripple Measurements 115V

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

Test	12V	5V	3.3V	5VSB	Pass/Fail
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

The results above are not used in the certification process

Seasonic Prime Platinum 750W

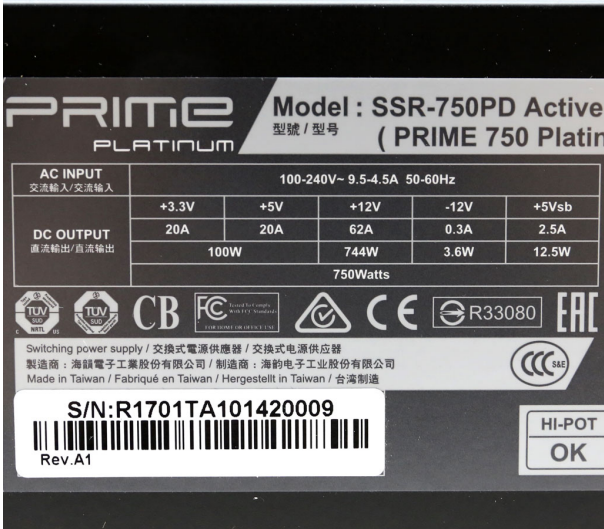


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All data and graphs included in this test report can be used by any individual on the following conditions:

- › 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



Power specifications label

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

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