Seasonic Snow Silent 1050W

Serial Number R1410AA1A1490005

Lab ID 155

Certification ID 25155

Test Result Report ID: 19PS155A

Certificate Issue Date: Jul 8, 2018

115V 230V

Scheme: ETA-EMI PSU

115V 230V

Scheme: LAMBDA PSU

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	Snow Silent 1050W
OEM/ODM	Seasonic
Serial Number	R1410AA1A1490005
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	13-6.5
Rated Frequency (Hz)	50-60

Rated Power (W)	1050
Operating Temperature (Continuous Full Load) (°C)	
Type	ATX12V
Cable Design	Fully Modular
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
Cooling	120mm Double Ball-Bearing Fan (9S1212H403)
Semi-Passive Operation	✓ (selectable)
Cybenetics Testing Information	
Lab ID	155
Date of receipt	Jun 29, 2018
Testing Date	Jul 4, 2018
Report Issued Date	Jul 8, 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)	1	1	18AWG
8 pin EPS12V (650mm)	1	1	18AWG
6+2 pin PCIe (560mm+100mm) / 6+2 pin PCIe (600mm)	2 / 4	4 / 4	18AWG
SATA (400mm+110mm+115mm+120mm)	3	12	18AWG
SATA (310mm+115mm)	1	2	18AWG
4 pin Molex (410mm+125mm+125mm)	1	3	18AWG
4 pin Molex (310mm+125mm)	1	2	18AWG

FDD Adapter (+105mm)	1	1	22AWG

Power Specifications

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	25	25	87	3	0.5
	Watts	125		1044	15	6
Total Max. Power (W)		1050				

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)	89.513%
Average Noise Output (>1450 Load Combinations)	26.13dBA
Average PF (>1450 Load Combinations)	0.990
Efficiency With 10W (≤500W) or 2% (>500W) Load	-
Standby Power Consumption	0.0959W
Non-Accredited	
12V Ripple (Full Load)	45.56mV
5V Ripple (Full Load)	20.06mV
3.3V Ripple (Full Load)	22.28mV
5VSB Ripple (Full Load)	24.34mV
12V Load Regulation	0.33%
5V Load Regulation	0.41%
3.3V Load Regulation	0.39%

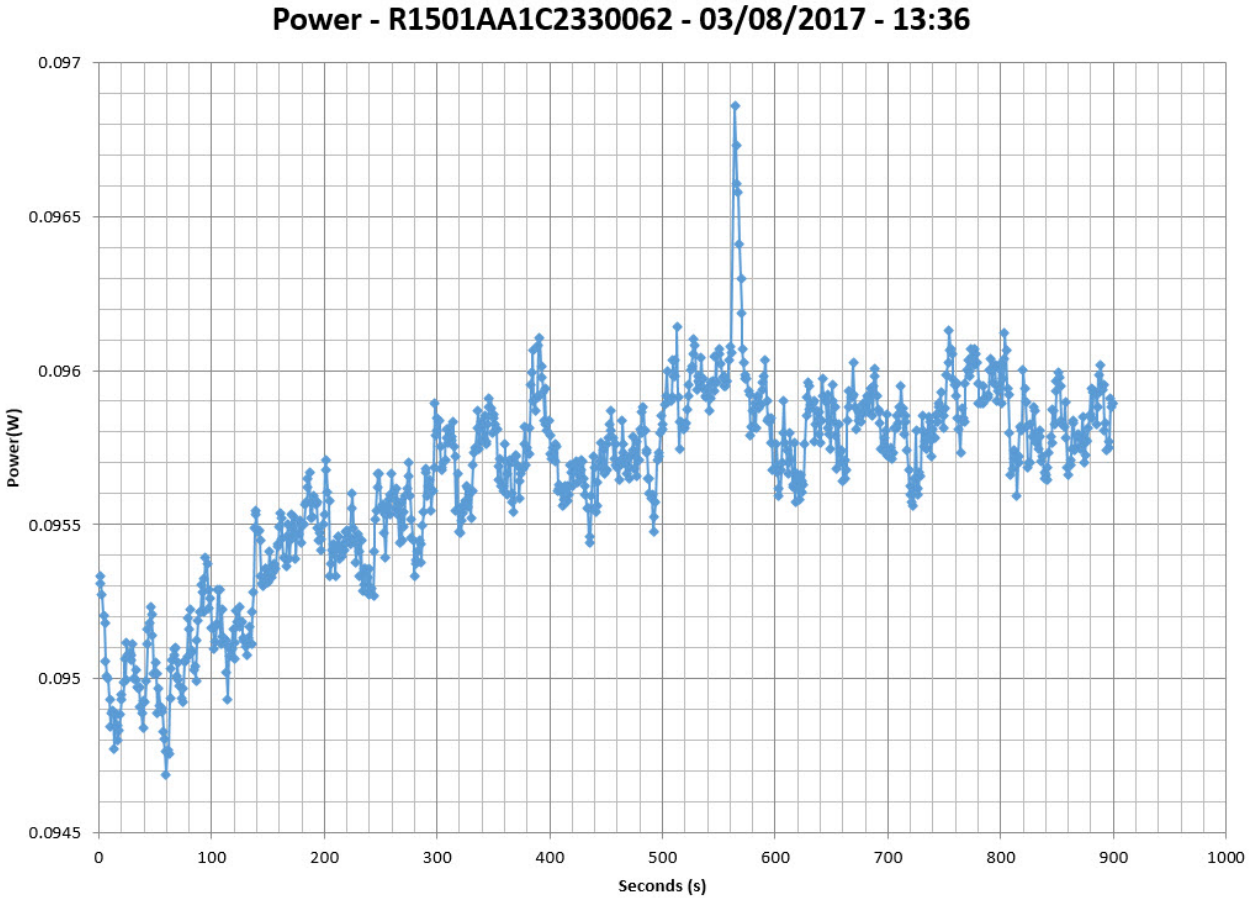
5VSB Load Regulation	2.80%
Inrush Current	25.255A

Hold-Up Time & PWR_OK Signal

Hold-Up Time (ms)	20.5
AC Loss to PWR_OK Hold Up Time (ms)	17.1
PWR_OK Inactive to DC Loss Delay (ms)	3.4

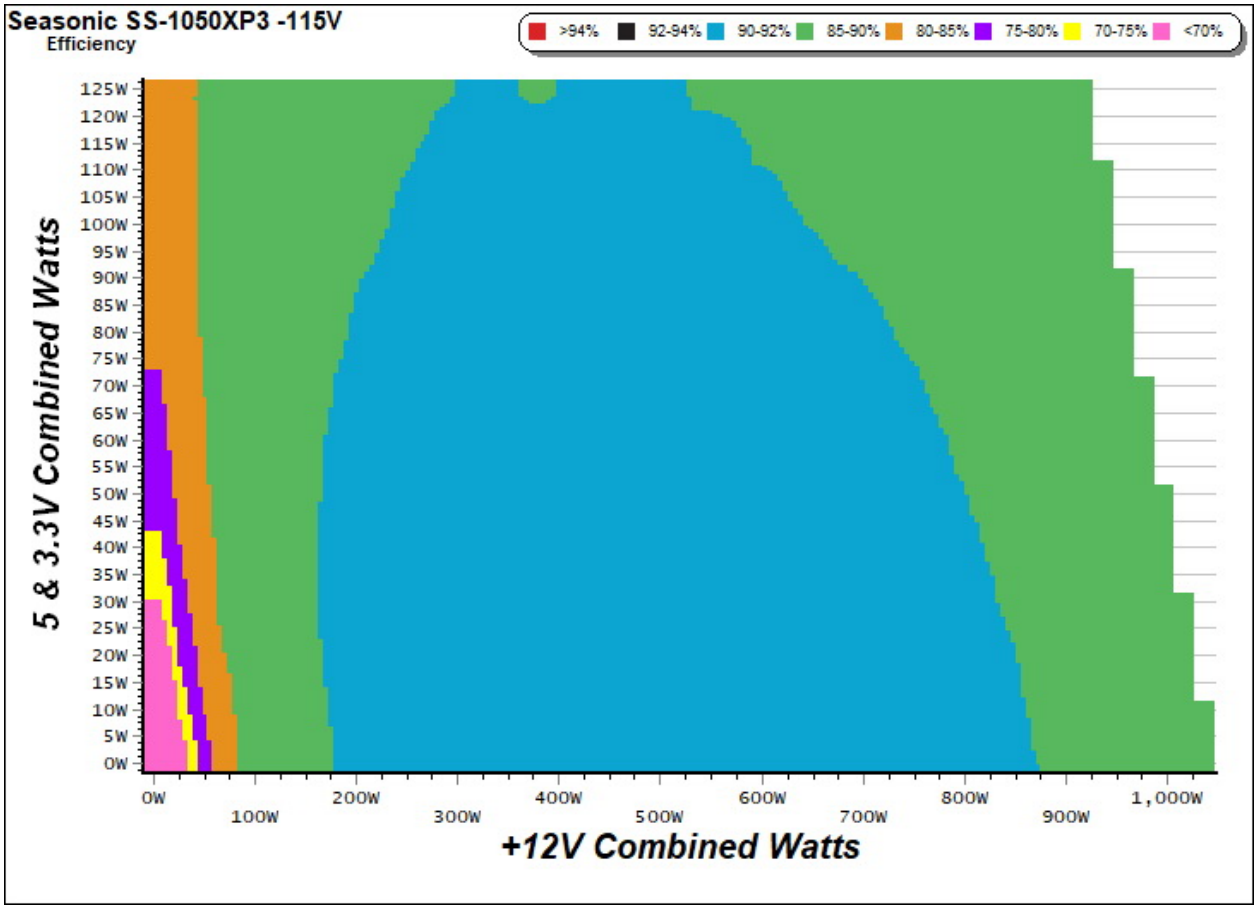
Vampire Power

Graphs 115V



Efficiency Graph

115V

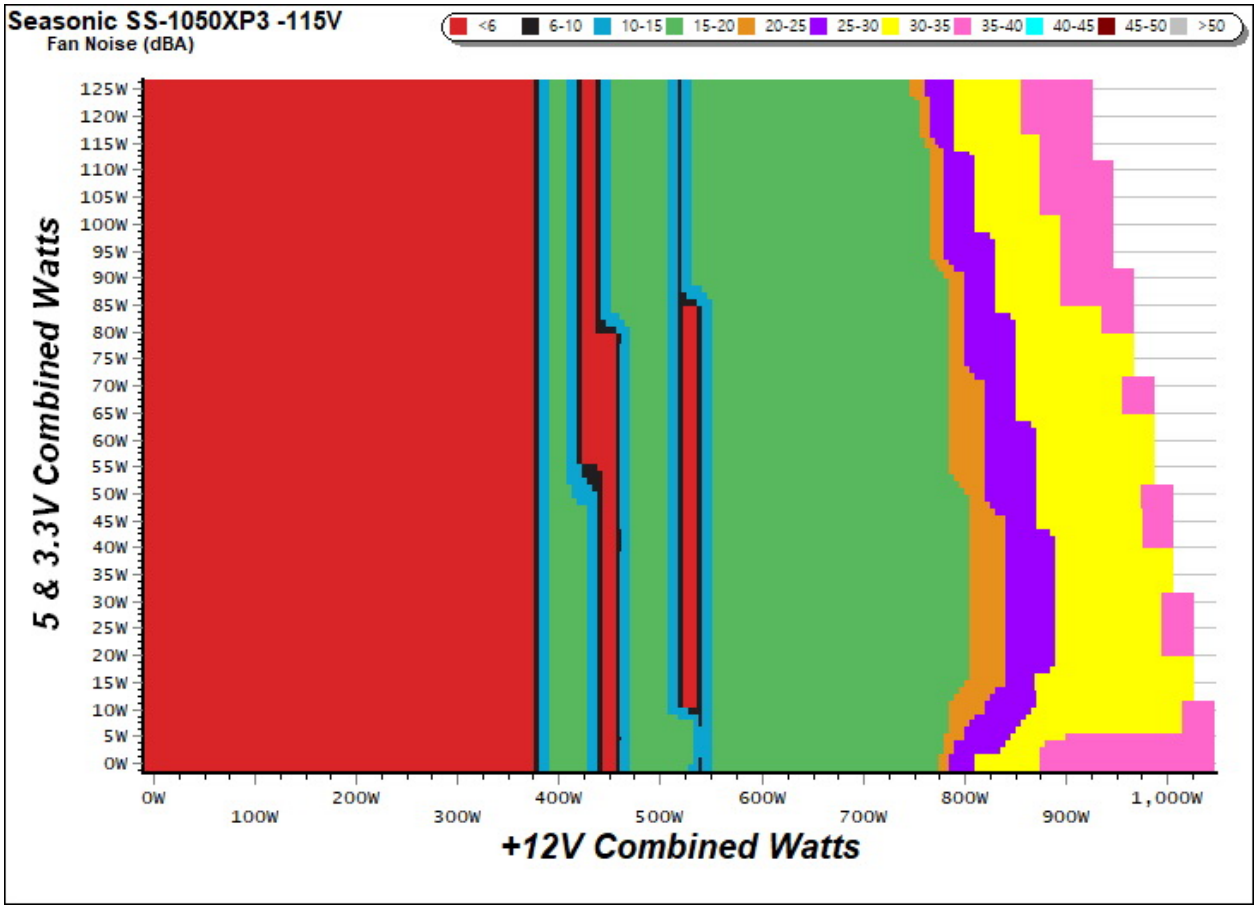


INFO

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

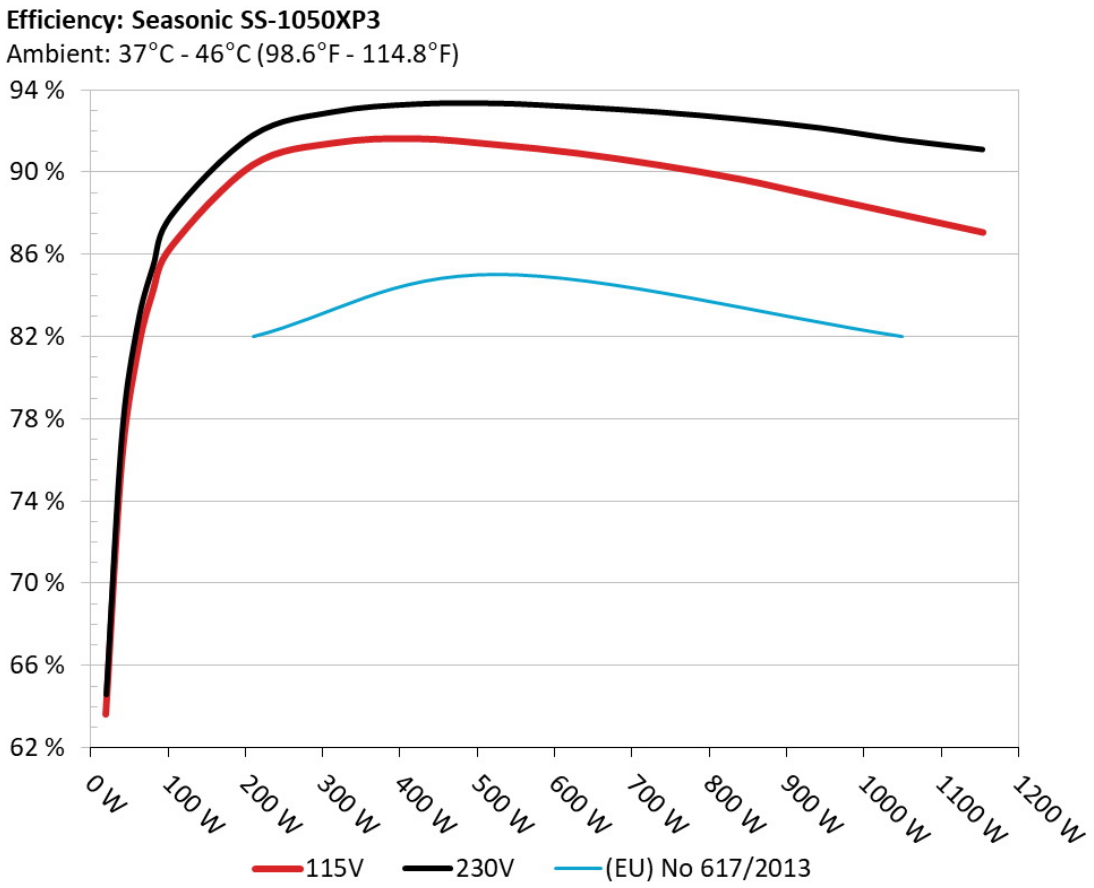


INFO

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

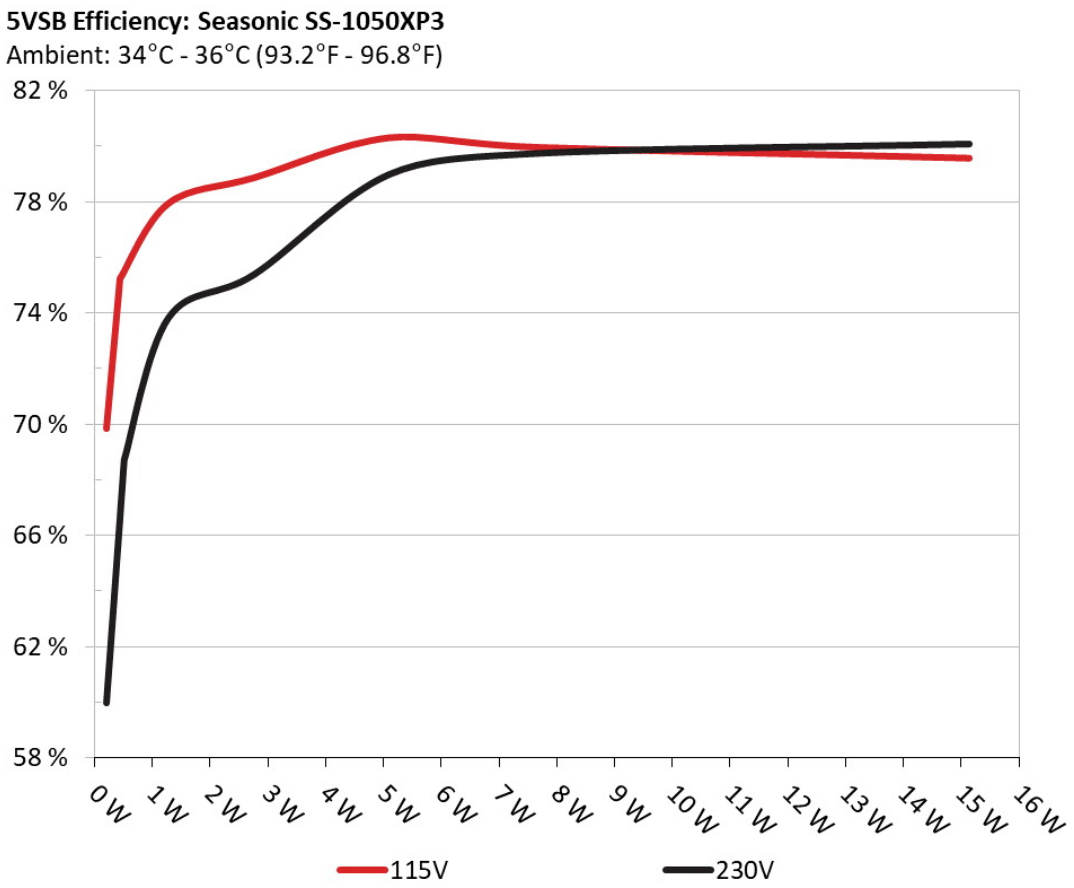
Efficiency under high ambient temperature



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



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	0.042A	0.213	69.836%	0.050
	5.116V	0.305		115.14V

2	0.087A	0.446	75.084%	0.094
	5.115V	0.594		115.16V
3	0.542A	2.766	78.848%	0.336
	5.103V	3.508		115.13V
4	1.002A	5.103	80.286%	0.409
	5.093V	6.356		115.14V
5	1.502A	7.630	79.946%	0.448
	5.081V	9.544		115.14V
6	3.001A	15.142	79.552%	0.499
	5.045V	19.034		115.14V

Supplementary Tests (For Reference)

Typical Load Tests 115V

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	Fan Noise (dB[A])	Temps (In/Out)	PF/AC Volts
1	6.781A	1.976A	1.964A	0.981A	104.789	86.411%	0	| 6	44.03°C	0.980
	12.269V	5.063V	3.360V	5.087V	121.268				38.66°C	115.18V
2	14.574A	2.960A	2.944A	1.181A	209.632	90.366%	0	| 6	45.02°C	0.983
	12.266V	5.062V	3.359V	5.075V	231.982				39.06°C	115.16V
3	22.729A	3.459A	3.454A	1.380A	314.827	91.437%	0	| 6	45.87°C	0.982
	12.264V	5.059V	3.356V	5.064V	344.309				39.52°C	115.15V
4	30.866A	3.957A	3.930A	1.580A	419.630	91.649%	0	| 6	47.57°C	0.987
	12.261V	5.058V	3.355V	5.052V	457.868				40.20°C	115.15V
5	38.680A	4.951A	4.916A	1.784A	524.568	91.353%	745	16.3	41.13°C	0.991
	12.256V	5.055V	3.354V	5.040V	574.220				50.36°C	115.15V
6	46.514A	5.935A	5.905A	1.985A	629.473	90.937%	745	16.3	42.05°C	0.993
	12.248V	5.055V	3.351V	5.028V	692.206				51.83°C	115.16V
7	54.343A	6.932A	6.886A	2.191A	734.407	90.363%	1020	27.5	43.41°C	0.995
	12.243V	5.052V	3.352V	5.013V	812.733				53.43°C	115.15V
8	62.174A	7.924A	7.878A	2.398A	839.283	89.679%	1610	38.5	44.30°C	0.996
	12.238V	5.049V	3.351V	5.000V	935.871				54.52°C	115.15V

9	70.439A	8.432A	8.386A	2.400A	944.304	88.813%	2220	46.1	44.89°C	0.996
	12.233V	5.047V	3.349V	4.993V	1063.254				55.16°C	115.16V
10	78.447A	8.927A	8.868A	3.016A	1049.036	87.947%	2715	49.4	45.42°C	0.997
	12.229V	5.044V	3.348V	4.970V	1192.798				55.79°C	115.16V
11	87.059A	8.932A	8.869A	3.020A	1154.011	87.084%	2745	49.6	46.48°C	0.997
	12.225V	5.042V	3.347V	4.965V	1325.171				57.22°C	115.17V
CL1	0.097A	15.022A	15.004A	0.004A	127.666	83.194%	725	15.9	44.42°C	0.988
	12.272V	5.057V	3.365V	5.095V	153.455				53.73°C	115.20V
CL2	86.937A	1.003A	1.003A	1.002A	1076.179	87.990%	2745	49.6	46.20°C	0.997
	12.224V	5.048V	3.349V	5.029V	1223.074				54.15°C	115.17V

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)	Fan Noise (dB[A])	PF/AC Volts
1	1.188A	0.493A	0.474A	0.196A	19.664	63.633%	0	| 6	0.886
	12.266V	5.065V	3.361V	5.113V	30.902				115.17V
2	2.405A	0.981A	0.979A	0.390A	39.753	75.724%	0	| 6	0.941
	12.267V	5.065V	3.361V	5.105V	52.497				115.17V
3	3.621A	1.474A	1.485A	0.585A	59.860	81.091%	0	| 6	0.957
	12.268V	5.064V	3.360V	5.099V	73.818				115.18V
4	4.825A	1.975A	1.963A	0.784A	79.785	84.121%	0	| 6	0.976
	12.269V	5.063V	3.360V	5.092V	94.845				115.17V

The results above are not used in the certification process

Ripple Measurements 115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	10.4 mV	10.2 mV	8.4 mV	6.9 mV	Pass
20% Load	15.3 mV	11.0 mV	9.7 mV	9.0 mV	Pass
30% Load	18.1 mV	13.3 mV	10.3 mV	10.3 mV	Pass
40% Load	20.7 mV	14.8 mV	12.3 mV	12.8 mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
50% Load	24.0 mV	14.4 mV	13.2 mV	14.5 mV	Pass
60% Load	26.6 mV	14.3 mV	12.7 mV	16.1 mV	Pass
70% Load	30.1 mV	14.7 mV	13.8 mV	18.3 mV	Pass
80% Load	33.4 mV	14.8 mV	14.3 mV	19.0 mV	Pass
90% Load	39.8 mV	17.4 mV	16.6 mV	20.7 mV	Pass
100% Load	45.6 mV	20.1 mV	22.3 mV	24.3 mV	Pass
110% Load	50.2 mV	21.6 mV	23.7 mV	26.0 mV	Pass
Crossload 1	13.8 mV	15.0 mV	12.3 mV	29.3 mV	Pass
Crossload 2	45.3 mV	18.6 mV	17.7 mV	24.1 mV	Pass

The results above are not used in the certification process

Seasonic Snow Silent 1050W

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 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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