

## Anex

Aresgame AGS850

Lab ID#: AR85001905  
 Receipt Date: Sep 6, 2021  
 Test Date: Sep 15, 2021

Report: 21PS1905A

Report Date: Sep 20, 2021

### DUT INFORMATION

Brand	Aresgame
Manufacturer (OEM)	Aresgame
Series	AGS
Model Number	
Serial Number	B08SQDJ4LH
DUT Notes	

### DUT SPECIFICATIONS

Rated Voltage (Vrms)	100-240
Rated Current (Arms)	12-6
Rated Frequency (Hz)	50-60
Rated Power (W)	850
Type	ATX12V
Cooling	140mm Sleeve Bearing Fan (PY-14025H12S)
Semi-Passive Operation	X
Cable Design	Semi Modular

### TEST EQUIPMENT

Electronic Loads	Chroma 63601-5 x4 Chroma 63600-2 x2 63640-80-80 x20 63610-80-20 x2
AC Sources	Chroma 6530, Keysight AC6804B
Power Analyzers	N4L PPA1530 x2
Sound Analyzer	Bruel & Kjaer 2270 G4
Microphone	Bruel & Kjaer Type 4955-A
Data Loggers	Picoscope TC-08 x2, Labjack U3-HV x2
Tachometer	UNI-T UT372 x2
Digital Multimeter	Keysight U1273AX, Fluke 289, Keithley 2015 - THD
UPS	CyberPower OLS3000E 3kVA x2
Transformer	3kVA x2

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## Anex

Aresgame AGS850

### RESULTS

Temperature Range (°C /°F)	30-32 / 86-89.6
ErP Lot 3/6 Ready	ErP Lot 6 2010: Partially ErP Lot 6 2013: Partially ErP Lot 3 2014 & CEC: Partially
(EU) No 617/2013 Compliance	✓

### 115V

Average Efficiency	83.900%
Efficiency With 10W (≤500W) or 2% (>500W)	59.704
Average Efficiency 5VSB	73.496%
Standby Power Consumption (W)	0.2394130
Average PF	0.992
Avg Noise Output	42.44 dB(A)
Efficiency Rating (ETA)	BRONZE
Noise Rating (LAMBDA)	Standard

### 230V

Average Efficiency	86.327%
Average Efficiency 5VSB	69.492%
Standby Power Consumption (W)	0.4447140
Average PF	0.958
Avg Noise Output	42.36 dB(A)
Efficiency Rating (ETA)	
Noise Rating (LAMBDA)	Standard

### POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	20	20	70	2.5	0.3
	Watts	100		840	12.5	3.6
Total Max. Power (W)		850				

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

Hold-Up Time (ms)	9
AC Loss to PWR_OK Hold Up Time (ms)	8
PWR_OK Inactive to DC Loss Delay (ms)	1

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### CABLES AND CONNECTORS

#### Captive Cables

Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 20+4 pin (580mm)	1	1	18-22AWG	No
8 pin EPS12V (580mm) / 4+4 pin EPS12V (+120mm)	1	1 / 1	18AWG	No

#### Modular Cables

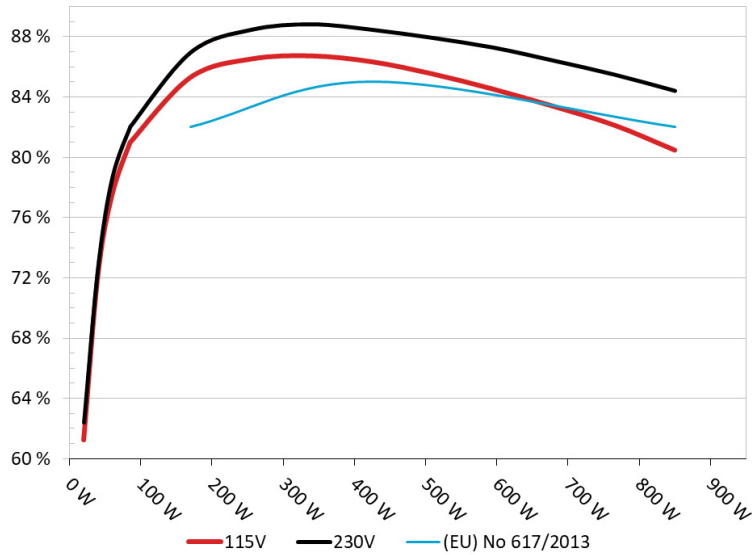
6+2 pin PCIe (600mm+150mm)	1	2	16-18AWG	No
SATA (500mm+150mm+150mm)	1	3	18AWG	No
4-pin Molex (470mm) / SATA (+150mm+150mm)	1	1 / 2	18AWG	No
SATA (500mm) / 4-pin Molex (+150mm+150mm) / FDD (+150mm)	1	1 / 2 / 1	18-22AWG	No
AC Power Cord (1380mm) - C13 coupler	1	1	18AWG	-

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### EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

**Efficiency: ARESGAME AGS850**  
Ambient: 34°C - 41°C (93.2°F - 105.8°F)

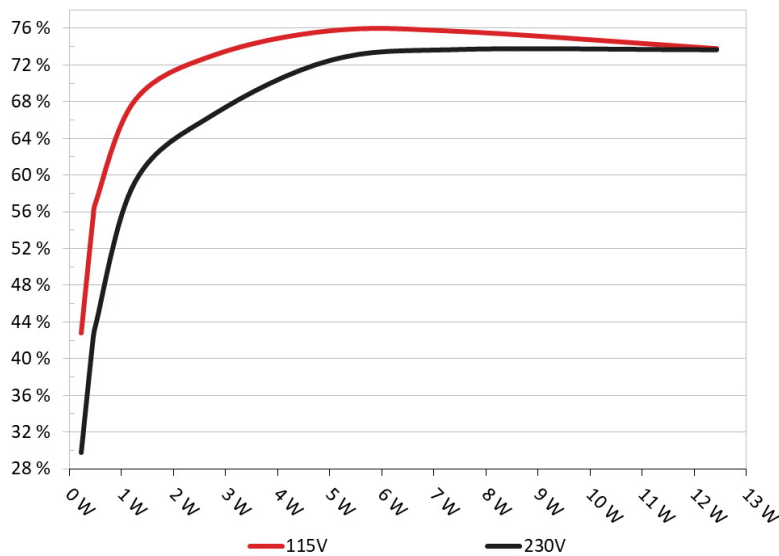


#### INFO

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: ARESGAME AGS850**  
Ambient: 28°C - 32°C (82.4°F - 89.6°F)



#### INFO

This graph depicts the efficiency levels of the 5VSB rail with 115V and 230V input

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.228W	42.771%	0.062
	5.054V	0.533W		115.18V
2	0.09A	0.455W	55.35%	0.093
	5.053V	0.822W		115.18V
3	0.55A	2.771W	73.076%	0.293
	5.037V	3.792W		115.18V
4	1A	5.024W	75.754%	0.364
	5.022V	6.632W		115.18V
5	1.5A	7.51W	75.667%	0.404
	5.006V	9.925W		115.18V
6	2.501A	12.437W	73.802%	0.446
	4.974V	16.852W		115.18V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.228W	29.785%	0.027
	5.054V	0.765W		230.41V
2	0.09A	0.455W	42.168%	0.038
	5.052V	1.079W		230.4V
3	0.55A	2.771W	66.629%	0.135
	5.036V	4.159W		230.41V
4	1A	5.023W	72.529%	0.201
	5.022V	6.925W		230.41V
5	1.5A	7.509W	73.703%	0.255
	5.005V	10.188W		230.41V
6	2.501A	12.432W	73.672%	0.321
	4.971V	16.875W		230.41V

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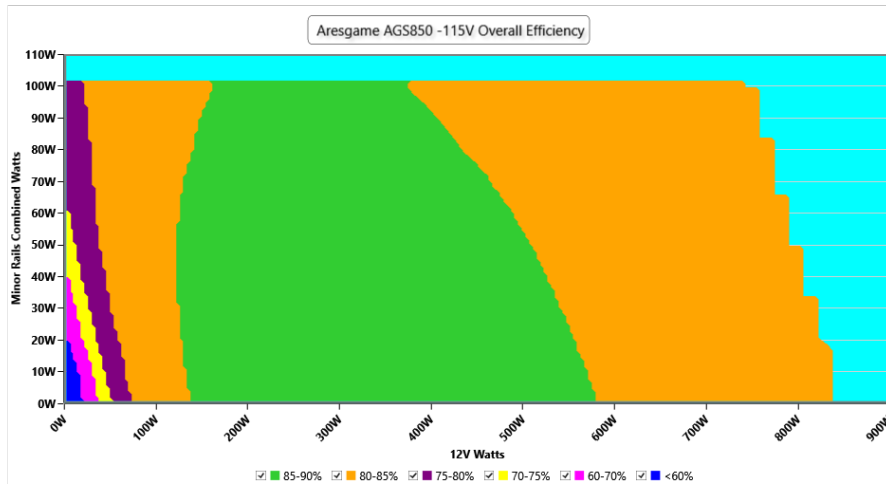
# 115V

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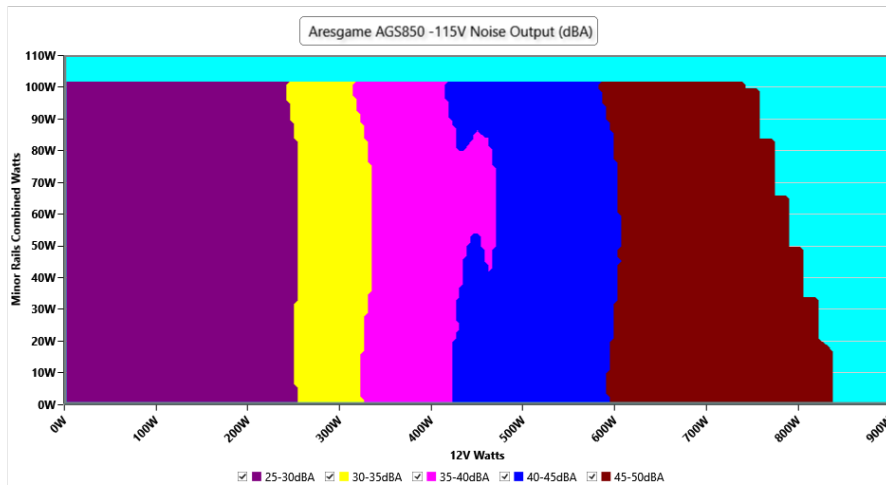
### EFFICIENCY GRAPH 115V



#### 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

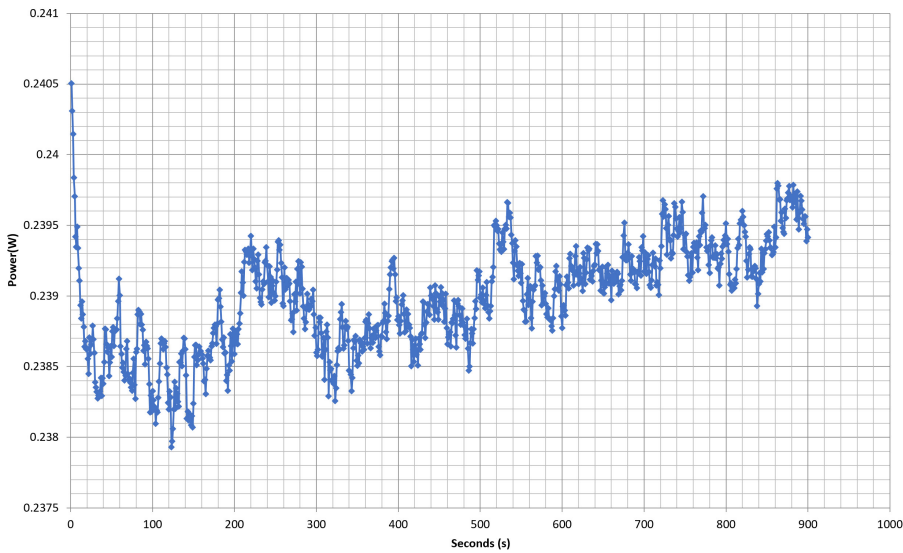
The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

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### VAMPIRE POWER -115V

Power - B08SQDJ4LH - 09/09/2021 - 12:46



#### 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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### 10-110% 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
10%	5.164A	1.956A	1.942A	0.999A	85.005	80.817%	796	27.8	35.52°C	0.981
	12.278V	5.114V	3.399V	5.004V	105.183				39.28°C	115.19V
20%	11.348A	2.947A	2.921A	1.205A	169.97	85.282%	801	28.2	35.83°C	0.98
	12.255V	5.091V	3.389V	4.98V	199.303				40.13°C	115.18V
30%	17.899A	3.45A	3.418A	1.412A	254.984	86.501%	896	31.5	36.68°C	0.989
	12.231V	5.073V	3.379V	4.957V	294.776				41.47°C	115.18V
40%	24.481A	3.958A	3.919A	1.622A	340.076	86.71%	1055	36.5	37.17°C	0.993
	12.208V	5.055V	3.368V	4.934V	392.201				42.38°C	115.18V
50%	30.743A	4.971A	4.913A	1.834A	425.099	86.316%	1164	39.8	37.72°C	0.995
	12.185V	5.031V	3.359V	4.909V	492.491				43.58°C	115.19V
60%	36.999A	5.993A	5.913A	2A	509.413	85.519%	1332	43.6	38.19°C	0.997
	12.158V	5.007V	3.349V	4.885V	595.676				44.34°C	115.19V
70%	43.365A	7.028A	6.921A	2.266A	595.026	84.505%	1454	46.2	38.41°C	0.998
	12.128V	4.981V	3.338V	4.856V	704.13				45.24°C	115.19V
80%	49.781A	8.003A	7.932A	2.381A	679.533	83.367%	1562	48.1	38.67°C	0.998
	12.092V	4.957V	3.328V	4.831V	815.116				46.23°C	115.2V
90%	56.615A	8.612A	8.441A	2.497A	765.318	82.111%	1635	50.2	39.02°C	0.999
	12.061V	4.936V	3.317V	4.807V	932.06				47.12°C	115.21V
100%	63.377A	9.156A	8.985A	2.613A	850.043	80.458%	1688	49	39.46°C	0.999
	12.036V	4.916V	3.306V	4.784V	1056.51				48.06°C	115.21V
CL1	0.114A	12.029A	11.606A	0.001A	101.311	78.891%	800	28.1	37.97°C	0.975
	12.260V	5.005V	3.421V	5.007V	128.418				43.29°C	115.2V
CL2	0.114A	20.204A	0A	0.001A	101.402	77.046%	805	28.4	38.72°C	0.974
	12.267V	4.95V	3.358V	5.019V	131.612				45.76°C	115.2V
CL3	0.114A	0A	18.981A	0.001A	67.403	72.812%	804	28.3	39.51°C	0.985
	12.267V	5.112V	3.477V	5.011V	92.571				47.59°C	115.2V
CL4	70.424A	0.001A	0.001A	0.003A	849.849	81.228%	1671	48.7	40.94°C	0.999
	12.068V	5.023V	3.293V	4.902V	1046.262				49.86°C	115.21V

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### 20-80W 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
20W	1.208A	0.487A	0.485A	0.198A	20.006	61.233%	790	27.4	33.3°C	0.919
	12.299V	5.138V	3.404V	5.045V	32.672				35.41°C	115.19V
40W	2.660A	0.682A	0.679A	0.298A	40.004	72.195%	790	27.4	33.93°C	0.96
	12.292V	5.133V	3.402V	5.038V	55.411				36.43°C	115.19V
60W	4.113A	0.878A	0.874A	0.398A	60.003	77.521%	793	27.6	34.59°C	0.969
	12.287V	5.129V	3.4V	5.03V	77.402				37.54°C	115.19V
80W	5.564A	1.074A	1.068A	0.498A	79.965	80.954%	793	27.6	34.63°C	0.984
	12.281V	5.124V	3.398V	5.023V	98.779				38.07°C	115.19V

### RIPPLE MEASUREMENTS 115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	11.39mV	18.05mV	8.29mV	10.40mV	Pass
20% Load	13.23mV	18.92mV	8.65mV	11.93mV	Pass
30% Load	19.97mV	19.53mV	8.65mV	12.19mV	Pass
40% Load	24.67mV	20.51mV	9.73mV	13.61mV	Pass
50% Load	27.68mV	22.19mV	11.82mV	16.21mV	Pass
60% Load	31.82mV	23.98mV	13.72mV	19.02mV	Pass
70% Load	36.11mV	28.18mV	16.68mV	23.04mV	Pass
80% Load	44.74mV	31.86mV	25.08mV	26.61mV	Pass
90% Load	53.89mV	33.49mV	29.79mV	30.54mV	Pass
100% Load	64.65mV	37.93mV	33.94mV	36.03mV	Pass
110% Load	0.00mV	0.00mV	0.00mV	0.00mV	Pass
Crossload1	14.33mV	29.95mV	29.44mV	14.95mV	Pass
Crossload2	14.04mV	31.65mV	22.67mV	14.12mV	Pass
Crossload3	11.95mV	15.24mV	26.46mV	13.41mV	Pass
Crossload4	65.95mV	26.09mV	19.81mV	29.87mV	Pass

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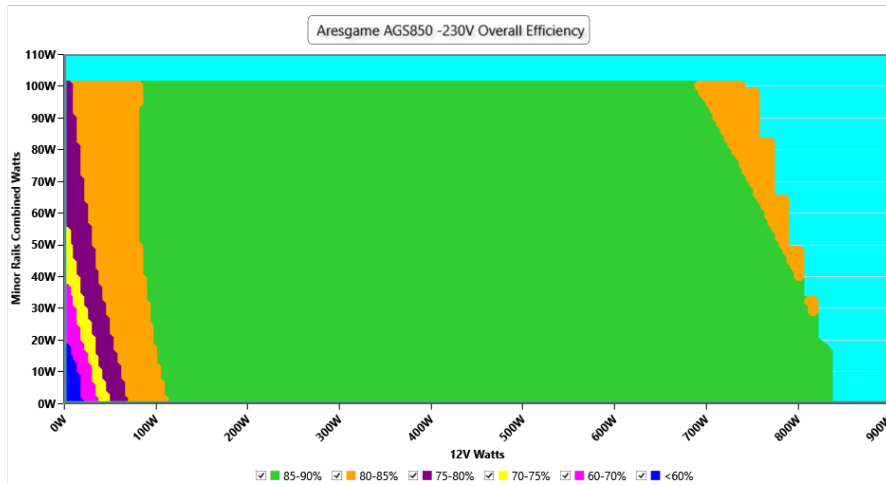
# 230V

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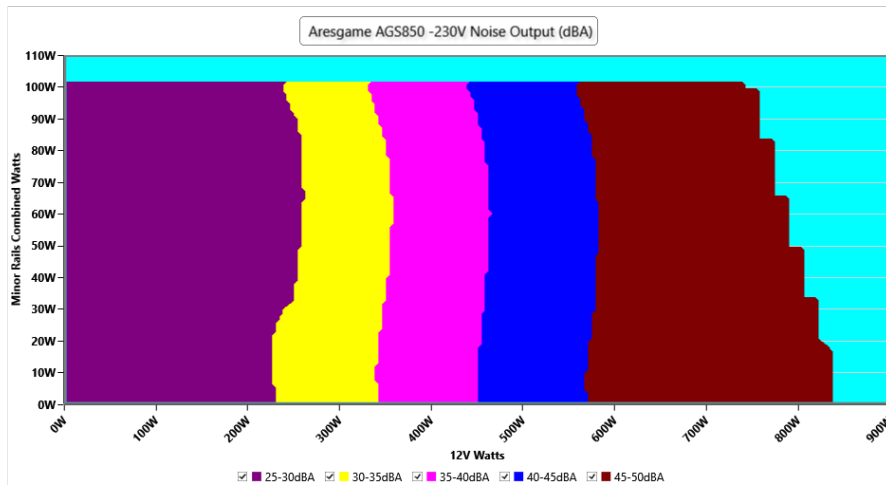
### EFFICIENCY GRAPH 230V



#### INFO

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### NOISE GRAPH 230V



#### INFO

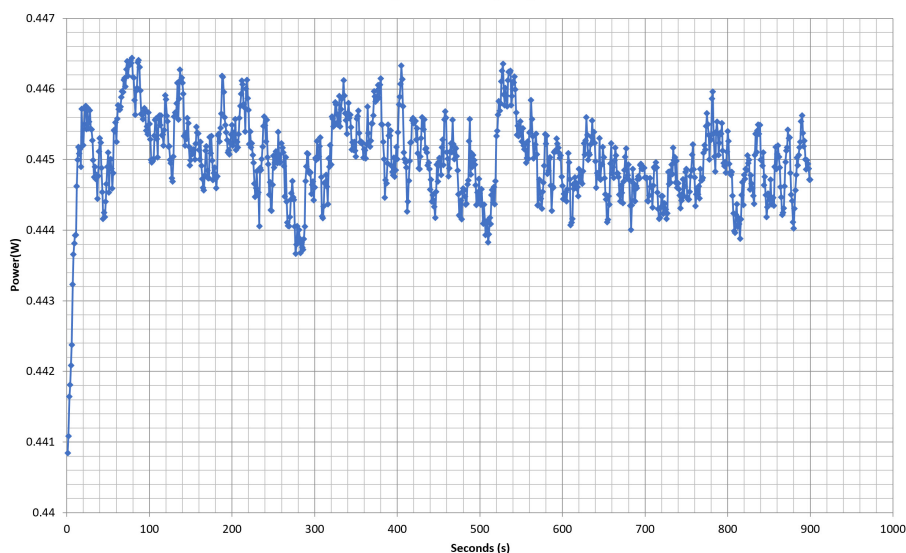
The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

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### VAMPIRE POWER -230V

Power - B08SQDJ4LH - 09/09/2021 - 12:46



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### 10-110% LOAD TESTS 230V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
10%	5.164A	1.956A	1.943A	1A	85.006	81.975%	796	27.8	35.11°C	0.863
	12.277V	5.114V	3.397V	5.004V	103.698				39.15°C	230.41V
20%	11.346A	2.949A	2.925A	1.205A	169.965	86.991%	786	27.2	35.68°C	0.931
	12.256V	5.088V	3.384V	4.98V	195.383				40.28°C	230.42V
30%	17.898A	3.451A	3.423A	1.413A	254.98	88.491%	837	30.1	36.57°C	0.955
	12.232V	5.072V	3.375V	4.957V	288.142				41.59°C	230.43V
40%	24.480A	3.959A	3.925A	1.622A	340.069	88.852%	965	33.6	36.96°C	0.965
	12.209V	5.053V	3.363V	4.934V	382.738				42.58°C	230.43V
50%	30.752A	4.973A	4.923A	1.834A	425.16	88.485%	1166	40.0	37.26°C	0.974
	12.183V	5.028V	3.352V	4.908V	480.487				43.26°C	230.43V
60%	37.009A	5.997A	5.927A	2.001A	509.476	87.952%	1322	43.6	37.71°C	0.977
	12.156V	5.004V	3.341V	4.883V	579.264				44.23°C	230.43V
70%	43.367A	7.033A	6.939A	2.267A	595.053	87.305%	1422	45.4	38.24°C	0.98
	12.128V	4.978V	3.329V	4.854V	681.581				45.24°C	230.43V
80%	49.785A	8.003A	7.956A	2.382A	679.552	86.439%	1550	48.2	39.29°C	0.983
	12.092V	4.953V	3.319V	4.829V	786.165				46.88°C	230.44V
90%	56.614A	8.618A	8.468A	2.498A	765.342	85.507%	1619	49.9	40.1°C	0.986
	12.061V	4.933V	3.307V	4.805V	895.067				48.14°C	230.44V
100%	63.378A	9.164A	9.017A	2.614A	850.073	84.436%	1676	48.7	40.61°C	0.988
	12.037V	4.912V	3.294V	4.782V	1006.767				49.49°C	230.44V
CL1	0.115A	12.041A	11.653A	0.001A	101.327	78.848%	1057	36.5	37.12°C	0.892
	12.255V	5V	3.407V	5.005V	128.511				43.28°C	230.44V
CL2	0.114A	20.219A	0A	0.001A	101.412	77.995%	918	32.0	37.81°C	0.895
	12.264V	4.946V	3.358V	5.018V	130.024				44.93°C	230.43V
CL3	0.114A	0A	19.089A	0.001A	67.407	73.275%	823	29.7	39.28°C	0.843
	12.264V	5.112V	3.457V	5.01V	91.993				47.45°C	230.43V
CL4	70.438A	0.001A	0.001A	0.003A	849.927	85.06%	1664	48.8	40.49°C	0.988
	12.066V	5.021V	3.291V	4.899V	999.208				50.24°C	230.44V

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### 20-80W LOAD TESTS 230V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
20W	1.208A	0.487A	0.485A	0.198A	20.004	62.421%	789	27.4	33.29°C	0.595
	12.298V	5.138V	3.404V	5.045V	32.047				35.54°C	230.4V
40W	2.660A	0.682A	0.679A	0.298A	40.003	72.801%	792	27.6	33.72°C	0.74
	12.291V	5.134V	3.402V	5.038V	54.948				36.32°C	230.4V
60W	4.112A	0.878A	0.874A	0.398A	60.002	78.702%	787	27.2	34.54°C	0.814
	12.287V	5.126V	3.398V	5.03V	76.239				37.55°C	230.4V
80W	5.564A	1.074A	1.069A	0.498A	79.96	82.061%	793	27.6	34.88°C	0.854
	12.281V	5.124V	3.397V	5.023V	97.441				38.4°C	230.41V

### RIPPLE MEASUREMENTS 230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	12.87mV	17.59mV	8.04mV	9.84mV	Pass
20% Load	12.62mV	19.33mV	9.11mV	11.83mV	Pass
30% Load	16.39mV	19.59mV	9.11mV	13.00mV	Pass
40% Load	19.51mV	20.20mV	9.88mV	13.46mV	Pass
50% Load	24.92mV	21.78mV	11.87mV	15.50mV	Pass
60% Load	32.48mV	25.01mV	13.92mV	18.35mV	Pass
70% Load	38.36mV	27.67mV	16.58mV	23.04mV	Pass
80% Load	45.56mV	31.71mV	24.11mV	25.64mV	Pass
90% Load	56.85mV	33.19mV	26.66mV	28.50mV	Pass
100% Load	74.00mV	38.63mV	33.37mV	34.94mV	Pass
110% Load	0.00mV	0.00mV	0.00mV	0.00mV	Pass
Crossload1	16.07mV	30.21mV	30.95mV	15.03mV	Pass
Crossload2	16.19mV	31.55mV	22.72mV	14.17mV	Pass
Crossload3	13.38mV	24.95mV	26.26mV	13.82mV	Pass
Crossload4	72.05mV	26.99mV	18.84mV	28.66mV	Pass

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

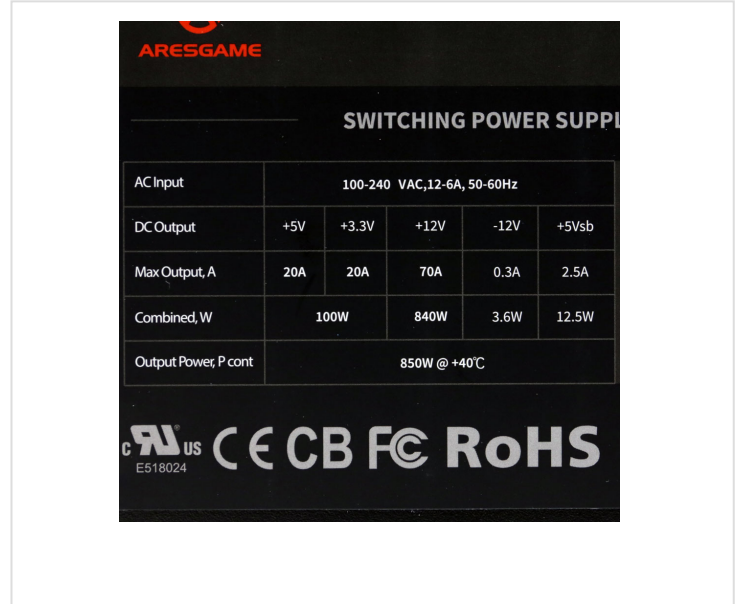
- > It should be mentioned that the test results are provided by Cybenetics
- > The link to the original test results document should be provided in any case

**Anex**

**Aresgame AGS850**

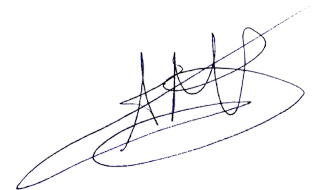


Top side



Power specifications label

**CERTIFICATIONS 115V**

**Aristeidis Bitziopoulos**  
Lab Director

**CERTIFICATIONS 230V**



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