



Corsair AX1000

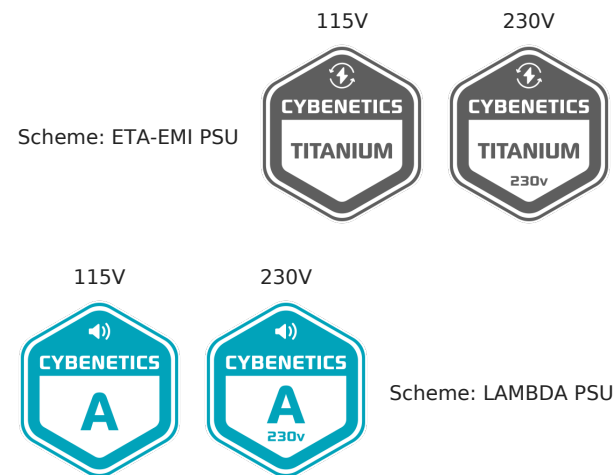
Serial Number 18437002000059610001

Lab ID 546

Certification ID 25546

Test Result Report ID:

Certificate Issue Date: Nov 22, 2018

A handwritten signature in blue ink, appearing to read "A. Bitziopoulos", is written over a faint circular stamp.

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	Corsair
Model	AX1000
OEM/ODM	Seasonic
Serial Number	18437002000059610001
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	13-6.5
Rated Frequency (Hz)	50-60

Rated Power (W)	1000
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 (HA13525M12F-Z)
Semi-Passive Operation	✓ (selectable)
Cybenetics Testing Information	
Lab ID	546
Date of receipt	Nov 12, 2018
Testing Date	Nov 20, 2018
Report Issued Date	Nov 22, 2018
DUT Notes	CP-9020152
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	In Cable Capacitors
ATX connector 20+4 pin (610mm)	1	1	16-20AWG	Yes
4+4 pin EPS12V (650mm)	2	2	18AWG	Yes
6+2 pin PCIe (670mm+100mm)	4	8	16-18AWG	Yes
SATA (460mm+110mm+110mm+110mm)	4	16	18AWG	No
4 pin Molex (450mm+100mm+100mm+100mm)	2	8	18AWG	No
FDD Adapter (110mm)	1	1	22AWG	No
AC Power Cord (1400mm)	1	1	14AWG	-

Power Specifications

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	25	25	83	3	0.3
	Watts	125		996	15	3.6
Total Max. Power (W)		1000				

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)	92.107%
Average Noise Output (>1450 Load Combinations)	22.85dBA
Average PF (>1450 Load Combinations)	0.990
Efficiency With 10W (≤500W) or 2% (>500W) Load	77.269%
Standby Power Consumption	0.0471W
Non-Accredited	
12V Ripple (Full Load)	15.18mV
5V Ripple (Full Load)	6.46mV
3.3V Ripple (Full Load)	10.74mV
5VSB Ripple (Full Load)	9.55mV
12V Load Regulation	0.17%
5V Load Regulation	0.51%
3.3V Load Regulation	0.42%

5VSB Load Regulation	1.24%
Inrush Current	34.230A

230V

Accredited		
Average Efficiency (>1450 load combinations)	94.040%	
Average Noise Output (>1450 Load Combinations)	21.16dBA	
Average PF (>1450 Load Combinations)	0.951	
Efficiency With 10W (≤500W) or 2% (>500W) Load	-	
Standby Power Consumption	0.0801W	
Non-Accredited		
12V Ripple (Full Load)	15.90mV	
5V Ripple (Full Load)	5.46mV	
3.3V Ripple (Full Load)	9.51mV	
5VSB Ripple (Full Load)	9.39mV	
12V Load Regulation	0.18%	
5V Load Regulation	0.47%	
3.3V Load Regulation	0.36%	
5VSB Load Regulation	1.21%	
Inrush Current	65.413A	
Hold-Up Time & PWR_OK Signal	20.40ms	
AC Loss to PWR_OK Hold Up Time	18.70ms	
PWR_OK Inactive to DC Loss Delay	1.70ms	
OPP (0.00°C / 0.00°C)	-	-

Hold-Up Time & PWR_OK Signal

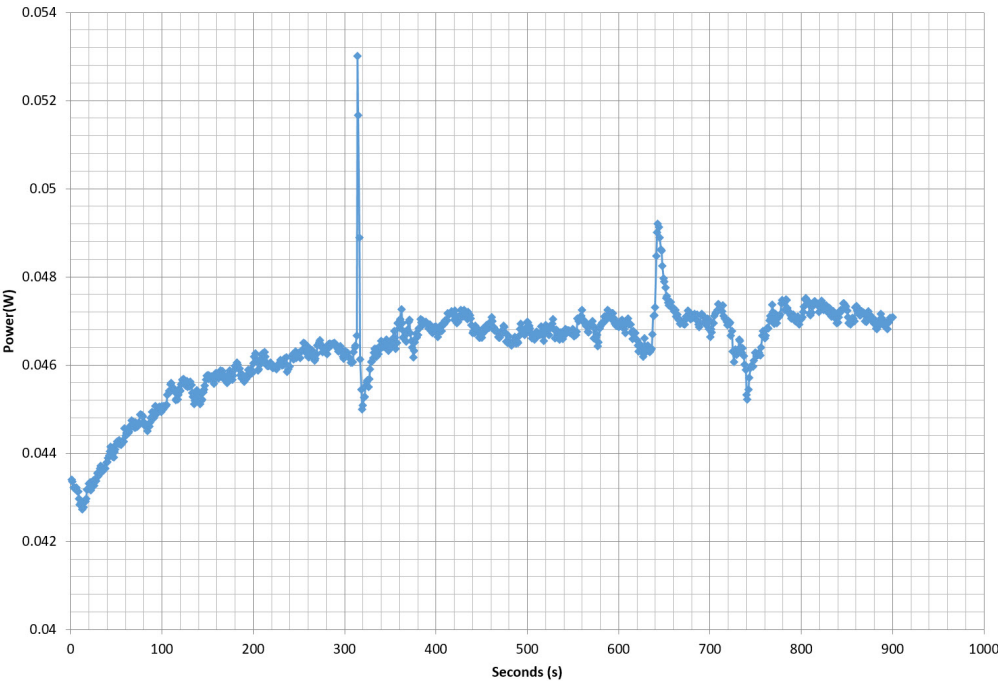
Hold-Up Time (ms)	20.4
AC Loss to PWR_OK Hold Up Time (ms)	18.7
PWR_OK Inactive to DC Loss Delay (ms)	1.7

Vampire Power

Graphs

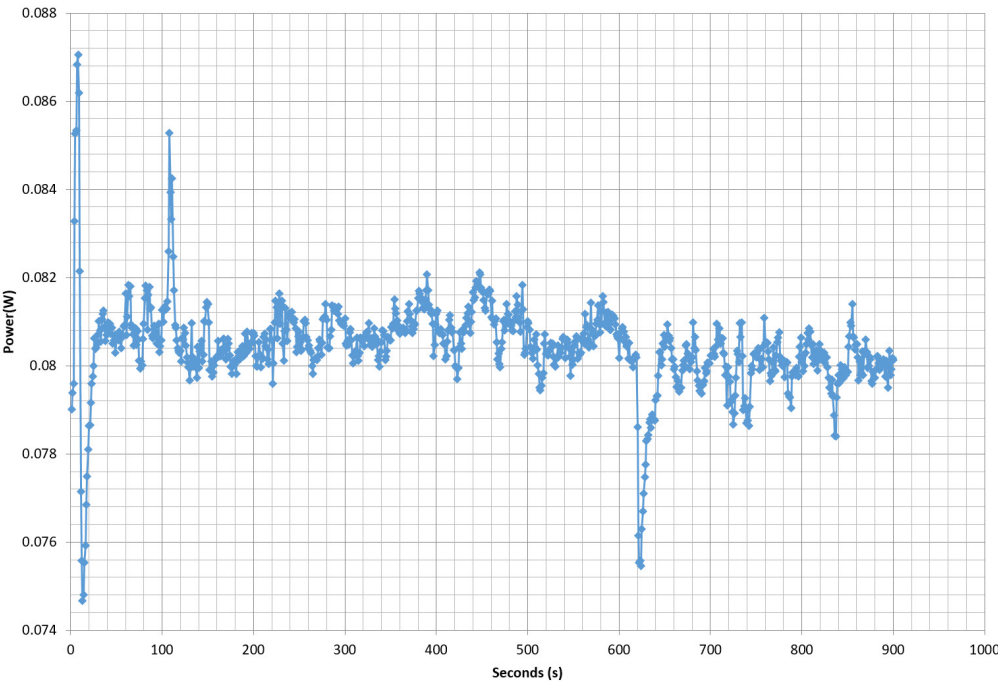
115V

Power - 18437002000059610001 - 15/11/2018 - 11:44



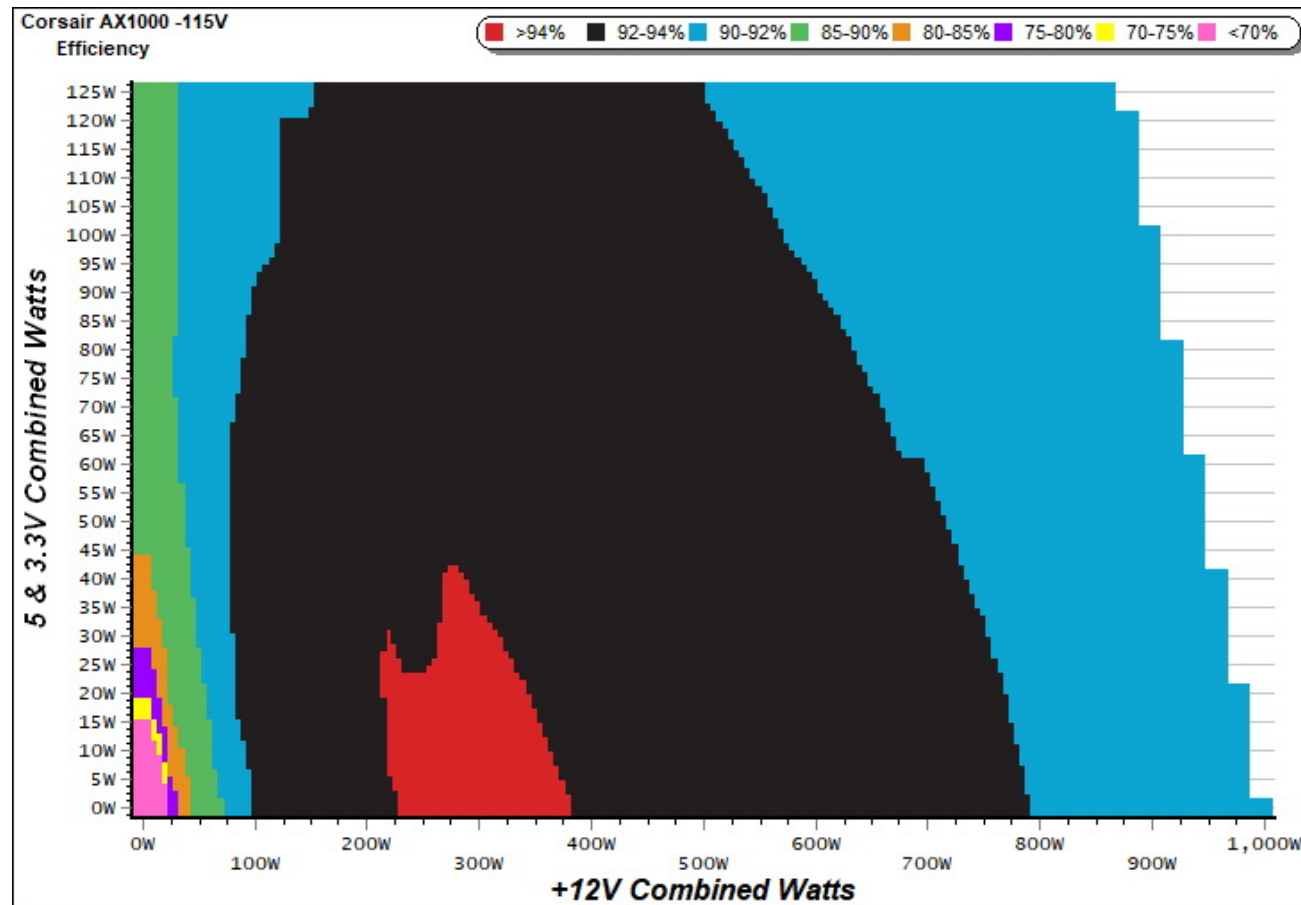
230V

Power - 18437002000059610001 - 15/11/2018 - 11:44



Efficiency Graph

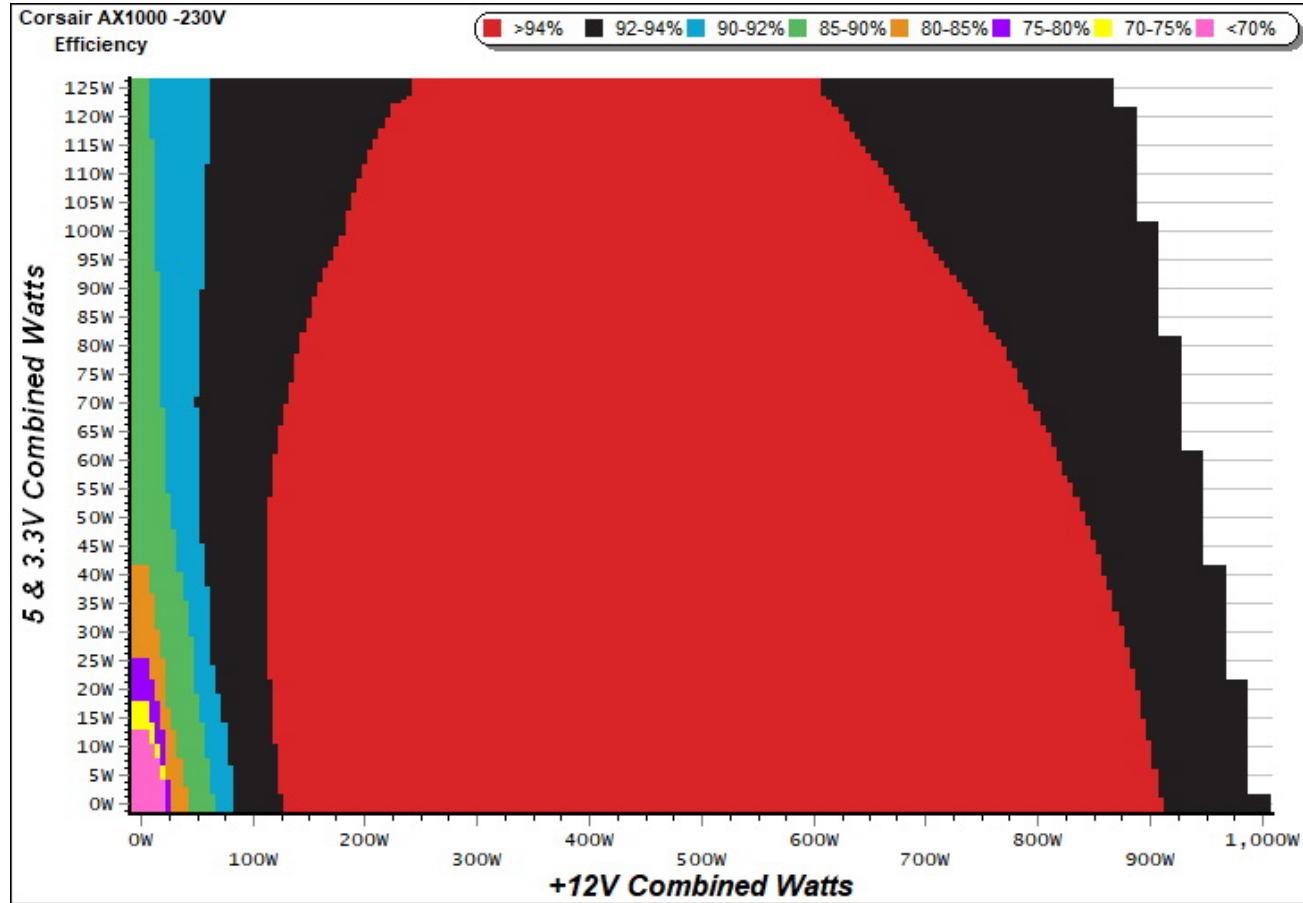
115V



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

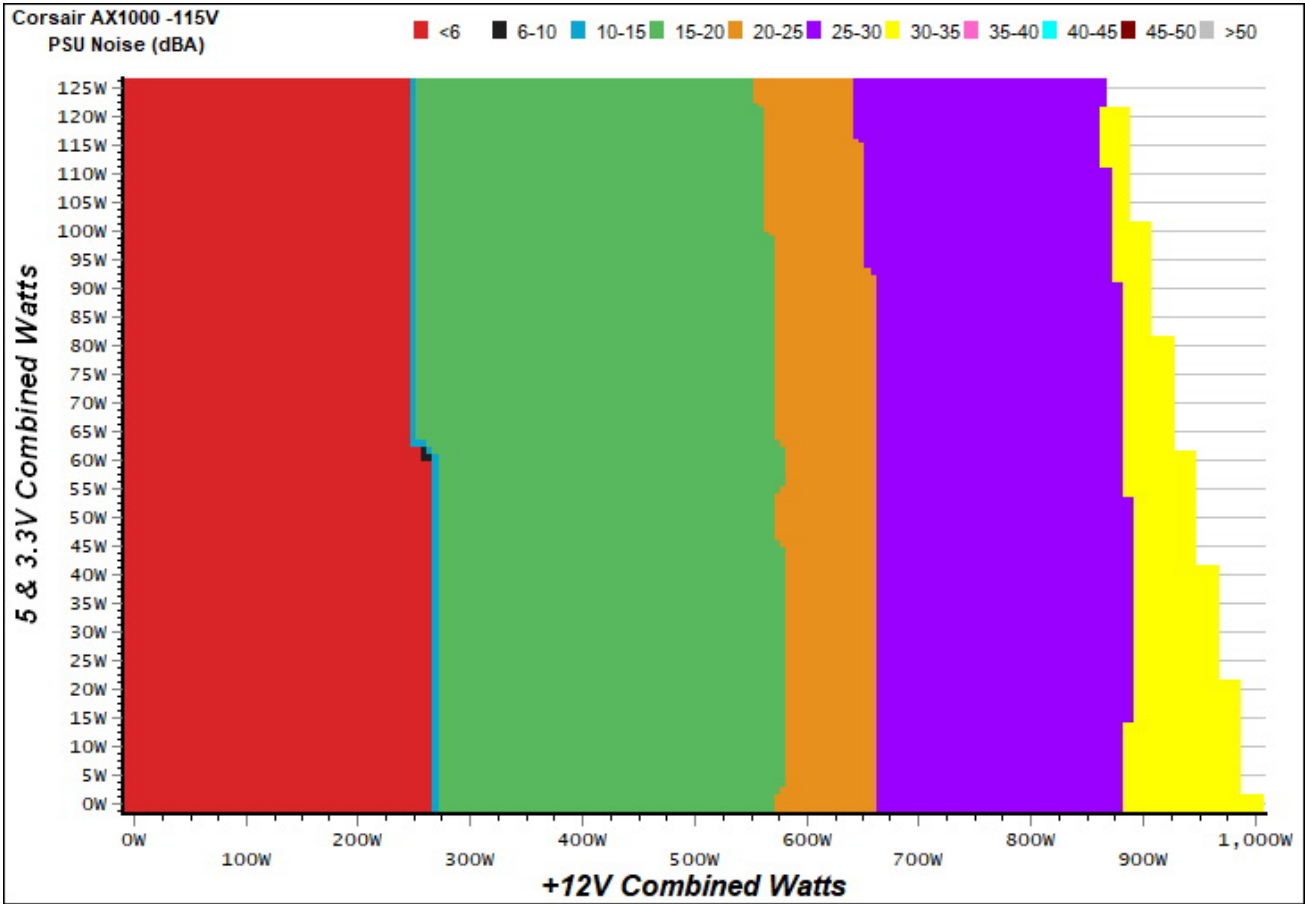


INFO

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Noise Graph

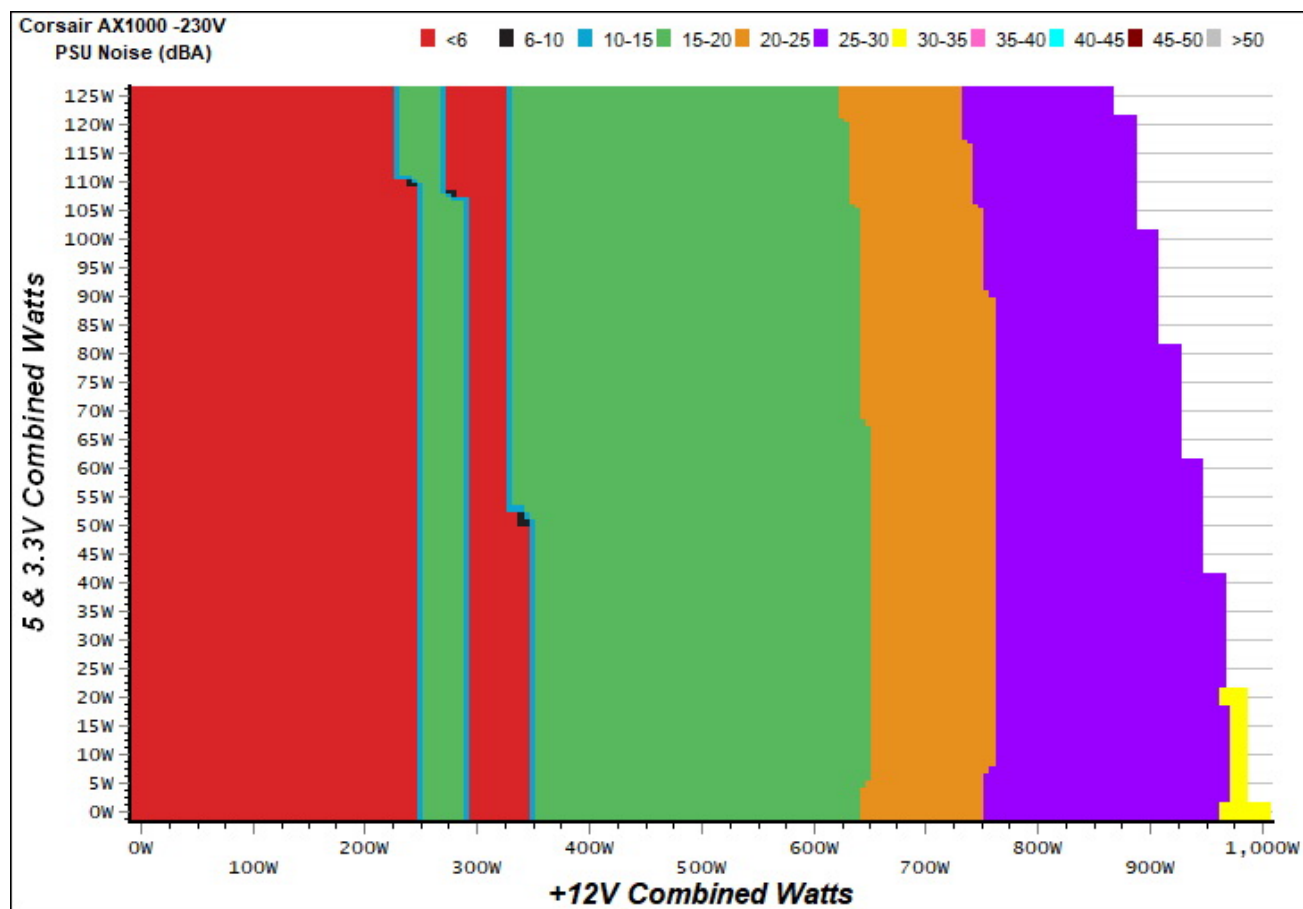
115V



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

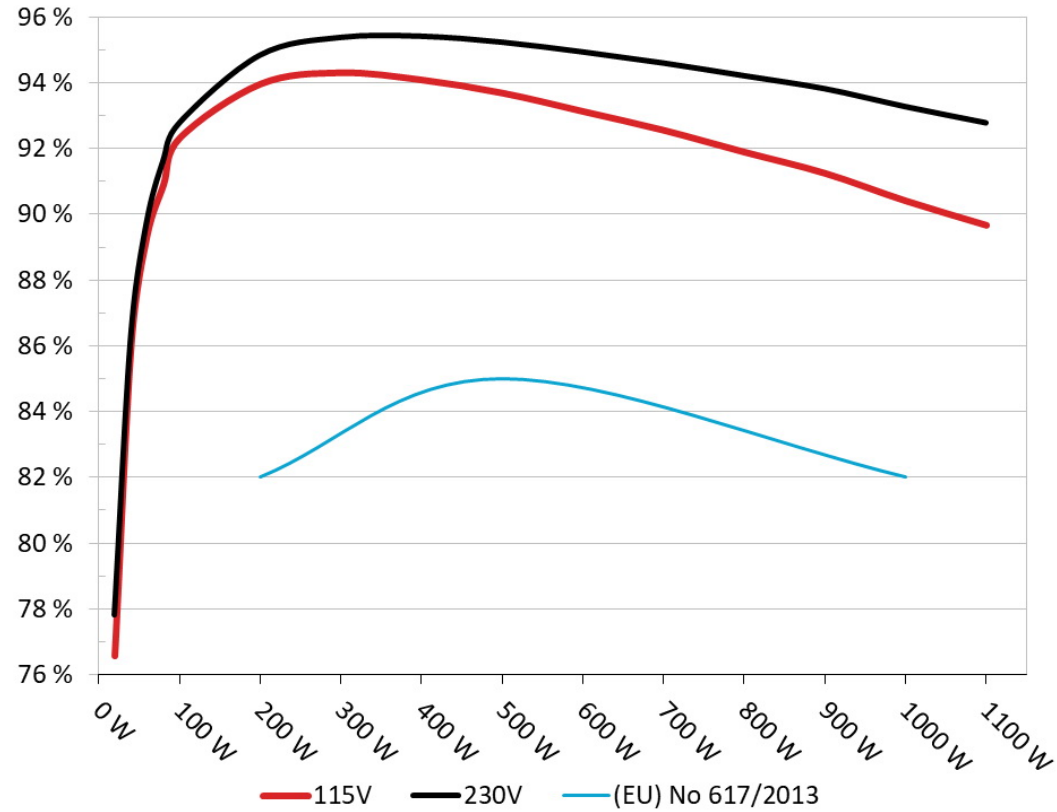
The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails.

Indicative Performance

Efficiency under high ambient temperature

Efficiency: Corsair AX1000

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

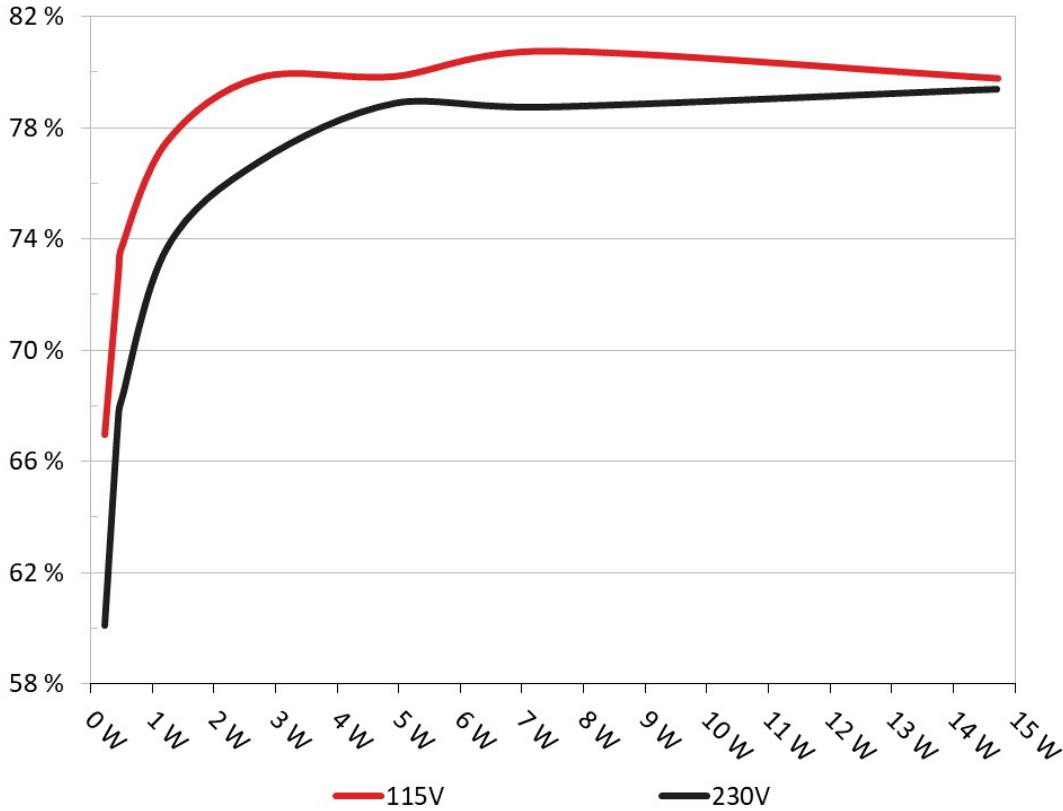


INFO

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: Corsair AX1000
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	0.223	66.967%	0.032
	4.961V	0.333		115.10V
2	0.090A	0.447	72.801%	0.059
	4.960V	0.614		115.10V
3	0.550A	2.724	79.812%	0.256
	4.952V	3.413		115.08V
4	1.000A	4.944	79.858%	0.354
	4.943V	6.191		115.08V
5	1.500A	7.404	80.768%	0.409
	4.935V	9.167		115.08V
6	3.000A	14.725	79.789%	0.484
	4.908V	18.455		115.08V

230V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.223	60.108%	0.011
	4.962V	0.371		230.24V
2	0.090A	0.446	67.678%	0.019
	4.961V	0.659		230.24V
3	0.550A	2.723	76.769%	0.098
	4.950V	3.547		230.38V
4	1.000A	4.943	78.886%	0.162
	4.942V	6.266		230.38V
5	1.500A	7.399	78.746%	0.220
	4.933V	9.396		230.27V
6	3.000A	14.715	79.386%	0.326
	4.905V	18.536		230.27V

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	6.431A	1.977A	1.960A	0.992A	99.851	92.324%	0	<6.0	42.98°C	0.963
	12.171V	5.055V	3.359V	5.042V	108.153				40.31°C	115.09V
2	13.863A	2.968A	2.946A	1.191A	199.572	93.965%	0	<6.0	44.83°C	0.981
	12.168V	5.052V	3.358V	5.038V	212.389				41.30°C	115.10V
3	21.617A	3.462A	3.423A	1.391A	298.969	94.309%	0	<6.0	41.58°C	0.990
	12.166V	5.050V	3.357V	5.034V	317.010				45.87°C	115.05V
4	29.459A	3.960A	3.931A	1.591A	399.486	94.092%	733	20.2	41.76°C	0.993
	12.163V	5.047V	3.355V	5.029V	424.570				46.67°C	115.05V
5	36.928A	4.955A	4.917A	1.792A	499.576	93.694%	782	22.4	41.97°C	0.993
	12.161V	5.045V	3.354V	5.025V	533.198				47.60°C	115.05V
6	44.407A	5.947A	5.904A	1.992A	599.720	93.133%	848	25.7	42.62°C	0.995
	12.159V	5.042V	3.352V	5.020V	643.938				48.48°C	115.07V
7	51.854A	6.945A	6.892A	2.193A	699.488	92.563%	923	27.0	43.17°C	0.996
	12.157V	5.040V	3.351V	5.016V	755.687				50.19°C	115.07V
8	59.374A	7.940A	7.881A	2.394A	800.026	91.894%	993	29.6	43.64°C	0.997
	12.154V	5.037V	3.350V	5.012V	870.601				52.43°C	115.07V
9	67.217A	8.442A	8.359A	2.395A	899.322	91.255%	1072	32.1	44.55°C	0.997
	12.152V	5.035V	3.349V	5.011V	985.505				54.82°C	115.08V
10	74.903A	8.943A	8.872A	3.002A	999.772	90.413%	1422	40.5	45.22°C	0.998
	12.150V	5.032V	3.347V	4.998V	1105.782				56.46°C	115.08V
11	83.152A	8.944A	8.873A	3.003A	1099.823	89.670%	1815	47.8	46.55°C	0.998
	12.148V	5.030V	3.347V	4.997V	1226.522				58.64°C	115.10V
CL1	0.138A	15.001A	14.999A	0.000A	127.665	88.571%	938	27.7	41.93°C	0.974
	12.167V	5.049V	3.350V	5.076V	144.138				47.41°C	115.09V

CL2	83.013A	1.000A	0.999A	1.000A	1021.927	90.682%	1376	40.3	45.89°C	0.998
	12.149V	5.033V	3.351V	5.022V	1126.939				56.05°C	115.09V

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	6.449A	1.978A	1.965A	0.992A	100.062	92.781%	693	18.1	40.01°C	0.814
	12.167V	5.054V	3.358V	5.042V	107.848				42.67°C	230.30V
2	13.883A	2.969A	2.947A	1.191A	199.780	94.839%	696	18.2	40.80°C	0.915
	12.165V	5.052V	3.357V	5.038V	210.652				43.84°C	230.31V
3	21.648A	3.467A	3.425A	1.391A	299.283	95.379%	700	18.4	41.22°C	0.947
	12.162V	5.049V	3.356V	5.033V	313.784				45.11°C	230.32V
4	29.486A	3.964A	3.932A	1.592A	399.753	95.417%	727	19.8	42.04°C	0.963
	12.160V	5.047V	3.355V	5.028V	418.953				47.57°C	230.33V
5	36.963A	4.957A	4.920A	1.792A	499.861	95.236%	776	22.3	42.26°C	0.973
	12.157V	5.044V	3.353V	5.024V	524.867				48.27°C	230.34V
6	44.442A	5.952A	5.907A	1.993A	600.007	94.939%	845	25.6	42.64°C	0.978
	12.155V	5.042V	3.352V	5.019V	631.995				49.54°C	230.35V
7	51.890A	6.947A	6.894A	2.194A	699.730	94.602%	911	26.5	43.07°C	0.982
	12.153V	5.039V	3.351V	5.015V	739.657				51.77°C	230.35V
8	59.405A	7.944A	7.882A	2.395A	800.242	94.213%	993	29.6	43.35°C	0.985
	12.151V	5.037V	3.349V	5.011V	849.400				52.83°C	230.35V
9	67.246A	8.443A	8.361A	2.396A	899.489	93.822%	1069	32.0	44.46°C	0.988
	12.149V	5.035V	3.349V	5.011V	958.720				54.99°C	230.34V
10	74.930A	8.942A	8.871A	3.002A	999.878	93.276%	1359	39.7	45.43°C	0.989
	12.147V	5.032V	3.348V	4.999V	1071.958				56.73°C	230.32V
11	83.177A	8.946A	8.875A	3.002A	1099.889	92.783%	1741	45.6	46.65°C	0.990
	12.145V	5.030V	3.347V	4.997V	1185.439				58.79°C	230.31V
CL1	0.138A	15.000A	14.998A	0.000A	127.687	89.491%	843	25.6	42.72°C	0.863
	12.165V	5.050V	3.351V	5.077V	142.681				48.12°C	230.28V

CL2	83.008A	1.002A	0.999A	1.000A	1021.796	93.522%	1228	36.3	45.80°C	0.989
	12.148V	5.034V	3.351V	5.023V	1092.576				57.01°C	230.30V

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	1.171A	0.491A	0.474A	0.198A	19.323	76.572%	0	<6.0	0.784
	12.161V	5.063V	3.364V	5.061V	25.235				115.08V
2	2.421A	0.987A	0.978A	0.396A	39.722	86.070%	0	<6.0	0.895
	12.161V	5.058V	3.361V	5.054V	46.151				115.08V
3	3.604A	1.482A	1.455A	0.594A	59.208	89.345%	0	<6.0	0.936
	12.160V	5.057V	3.360V	5.050V	66.269				115.09V
4	4.857A	1.976A	1.961A	0.793A	79.645	90.898%	0	<6.0	0.953
	12.161V	5.056V	3.359V	5.047V	87.620				115.09V

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	1.186A	0.494A	0.474A	0.198A	19.519	77.815%	0	<6.0	0.444
	12.161V	5.061V	3.363V	5.059V	25.084				230.22V
2	2.435A	0.990A	0.982A	0.396A	39.916	86.320%	0	<6.0	0.611
	12.160V	5.056V	3.360V	5.052V	46.242				230.28V
3	3.619A	1.484A	1.457A	0.594A	59.403	89.748%	0	<6.0	0.704
	12.160V	5.055V	3.359V	5.049V	66.189				230.29V
4	4.869A	1.979A	1.964A	0.793A	79.833	91.619%	0	<6.0	0.770
	12.165V	5.055V	3.359V	5.046V	87.136				230.29V

The results above are not used in the certification process

Ripple Measurements

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	12.5 mV	9.7 mV	12.9 mV	10.7 mV	Pass
20% Load	13.0 mV	5.2 mV	10.8 mV	12.7 mV	Pass
30% Load	6.7 mV	5.0 mV	10.1 mV	9.1 mV	Pass
40% Load	7.7 mV	6.4 mV	9.1 mV	7.3 mV	Pass
50% Load	8.4 mV	5.0 mV	8.7 mV	7.2 mV	Pass
60% Load	8.8 mV	5.2 mV	9.0 mV	7.4 mV	Pass
70% Load	9.7 mV	5.3 mV	9.1 mV	8.2 mV	Pass
80% Load	10.4 mV	5.5 mV	9.8 mV	8.5 mV	Pass
90% Load	10.9 mV	5.6 mV	10.1 mV	8.4 mV	Pass
100% Load	15.2 mV	6.5 mV	10.7 mV	9.6 mV	Pass
110% Load	15.7 mV	6.6 mV	11.0 mV	9.9 mV	Pass
Crossload 1	15.2 mV	5.2 mV	11.6 mV	7.0 mV	Pass
Crossload 2	15.1 mV	6.2 mV	9.5 mV	9.0 mV	Pass

The results above are not used in the certification process

230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	14.2 mV	7.7 mV	12.2 mV	8.2 mV	Pass
20% Load	13.8 mV	5.1 mV	8.5 mV	7.1 mV	Pass
30% Load	6.8 mV	4.9 mV	8.4 mV	7.0 mV	Pass
40% Load	8.0 mV	5.7 mV	9.3 mV	7.3 mV	Pass
50% Load	8.3 mV	5.4 mV	9.2 mV	7.7 mV	Pass
60% Load	9.0 mV	4.9 mV	8.3 mV	7.3 mV	Pass
70% Load	10.1 mV	5.3 mV	9.3 mV	7.8 mV	Pass
80% Load	10.8 mV	5.2 mV	8.9 mV	7.9 mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
90% Load	11.6 mV	6.8 mV	9.7 mV	8.3 mV	Pass
100% Load	15.9 mV	5.5 mV	9.5 mV	9.4 mV	Pass
110% Load	16.2 mV	5.9 mV	9.8 mV	9.0 mV	Pass
Crossload 1	17.4 mV	4.8 mV	10.2 mV	8.1 mV	Pass
Crossload 2	15.7 mV	5.6 mV	8.9 mV	9.1 mV	Pass

The results above are not used in the certification process

Corsair AX1000



Top side

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

						
MODEL / MODELO / 型号 / 型號 / 모델: RPS0114						
POWER SUPPLY / FUENTE DE ALIMENTACIÓN / 전원 공급 장치						
PART NUMBER: CP-9020152/ 75-003206						
交流输入 交流輸入	AC INPUT AC 입력 Entrada de CA	100 - 240V • 13A - 6.5A • 50Hz - 60Hz (200-240V • 6.5A • 50-60Hz 适用于中国地区使用)				
直流输出 直流輸出	DC OUTPUT DC 출력 Salida de CC	+3.3V	+5V	+12V	-12V	+5Vsb
最大电流 最大電流	MAX LOAD 최대 부하 Carga Máximo	25A	25A	83A	0.3A	3A
最大瓦特数 最大瓦特數	MAX POWER 최대 결합 와트 Wataje Combinado Máximo	125W		996W	3.6W	15W
		TOTAL POWER: 1000W PODER TOTAL / 总功率 / 總功率 / 총출력				

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

www.cybenetics.com - info@cybenetics.com