

Anex

Corsair AX850

Lab ID#: 553

Receipt Date: -

Test Date: -

Report:

Report Date: Nov 29, 2018

DUT INFORMATION

Brand	Corsair
Manufacturer (OEM)	Seasonic
Series	AX
Model Number	AX850
Serial Number	18437001000059540002
DUT Notes	CP-9020151

DUT SPECIFICATIONS

Rated Voltage (Vrms)	100-240
Rated Current (Arms)	11-5.5
Rated Frequency (Hz)	50-60
Rated Power (W)	850
Type	ATX12V
Cooling	135mm Fluid Dynamic Bearing Fan (HA13525L12F-Z)
Semi-Passive Operation	✓ (selectable)
Cable Design	Fully Modular

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	20	20	70	3	0.3
	Watts	100		840	15	3.6
Total Max. Power (W)		850				

CABLES AND CONNECTORS

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 (550mm+100mm+100mm)	2	6	18AWG	No
FDD Adapter (110mm)	1	1	22AWG	No
AC Power Cord (1400mm)	1	1	14AWG	-

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RESULTS	
Temperature Range (°C /°F)	30-32 / 86-89.6
Average Efficiency	94.077
Efficiency With 10W (≤500W) or 2% (>500W) Load -115V	75.879
Average Efficiency 5VSB	78.154
Standby Power Consumption (W) -115V	0.0476505
Standby Power Consumption (W) -230V	0.0794828
Average PF	0.944
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓
Avg Noise Output	14.66
Efficiency Rating (ETA)	TITANIUM
Noise Rating (LAMBDA)	A++

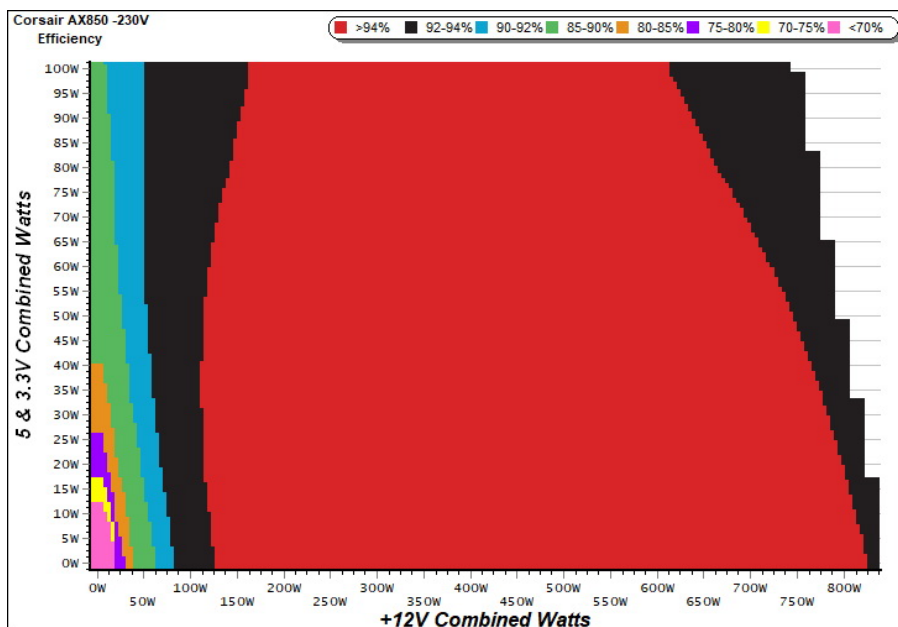
TEST EQUIPMENT		
Electronic Loads	Chroma 6314A x2 63123A x6 63102A 63101A	Chroma 63601-5 x4 Chroma 63600-2 x2 63640-80-80 x20 63610-80-20 x2
AC Sources	Chroma 6530, Chroma 61604, Keysight AC6804B	
Power Analyzers	N4L PPA1530 x2, N4L PPA5530	
Oscilloscopes	Picoscope 4444 & 3424, Keysight DSOX3024A, Rigol DS2072A	
Voltmeter	Keithley 2015 THD 6.5 Digit	
Sound Analyzer	Bruel & Kjaer 2250-L G4	
Microphone	Bruel & Kjaer Type 4955-A, Bruel & Kjaer Type 4189	
Data Loggers	Picoscope TC-08 x2, Labjack U3-HV x2	

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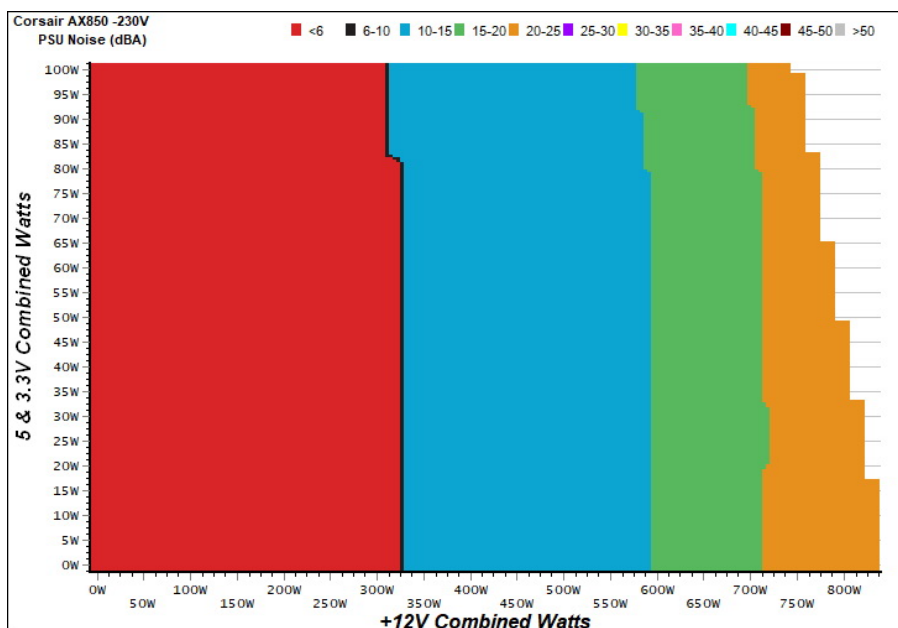
EFFICIENCY GRAPH



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



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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Corsair AX850

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

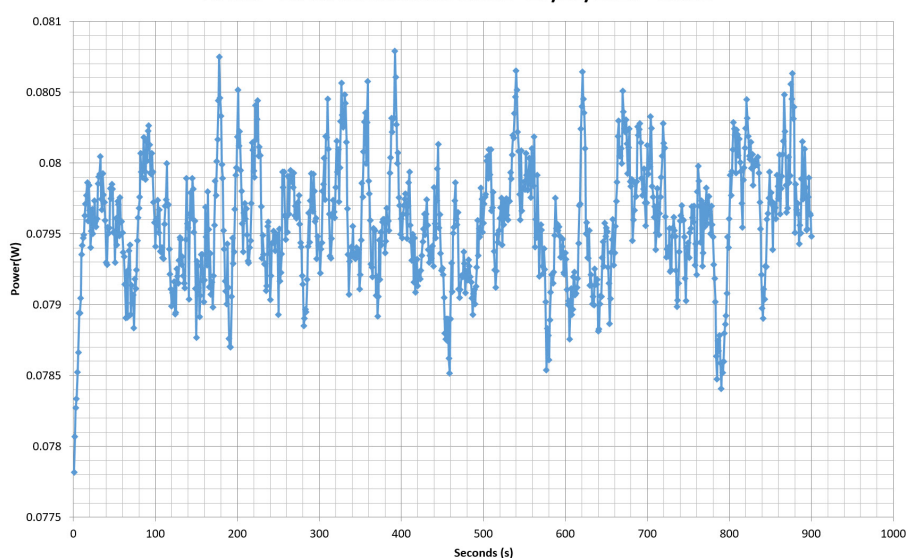
Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.223	68.196%	0.000
	4.957V	0.327		115.08V
2	0.090A	0.446	72.876%	0.058
	4.956V	0.612		115.08V
3	0.550A	2.722	80.342%	0.250
	4.948V	3.388		115.13V
4	1.000A	4.940	80.456%	0.345
	4.939V	6.140		115.13V
5	1.500A	7.395	80.582%	0.401
	4.929V	9.177		115.13V
6	3.001A	14.703	79.869%	0.474
	4.900V	18.409		115.12V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.223	60.270%	0.011
	4.957V	0.370		230.22V
2	0.090A	0.446	67.988%	0.019
	4.956V	0.656		365.12V
3	0.550A	2.720	77.163%	0.097
	4.946V	3.525		230.22V
4	1.000A	4.938	78.983%	0.160
	4.937V	6.252		230.22V
5	1.500A	7.392	79.544%	0.217
	4.927V	9.293		230.22V
6	3.000A	14.690	79.153%	0.326
	4.896V	18.559		230.22V

VAMPIRE POWER -230V

Power - 18437001000059540002 - 27/11/2018 - 09:02



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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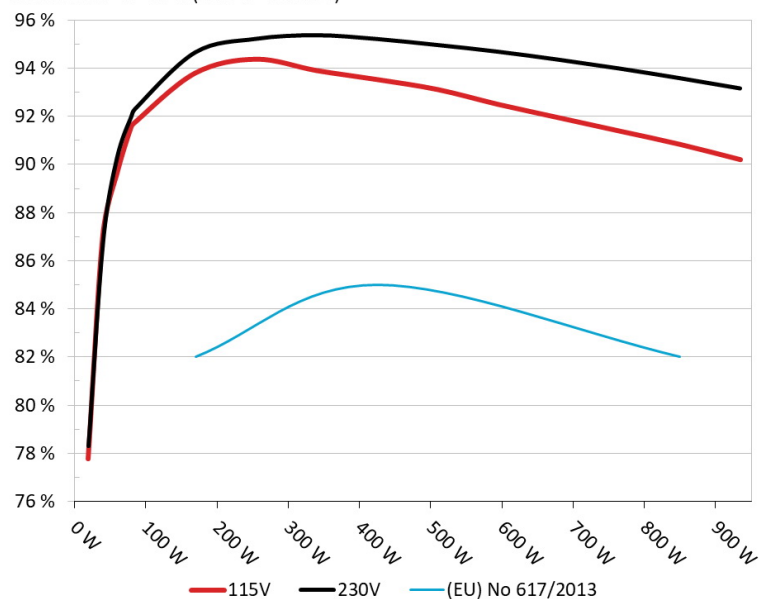
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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Corsair AX850

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



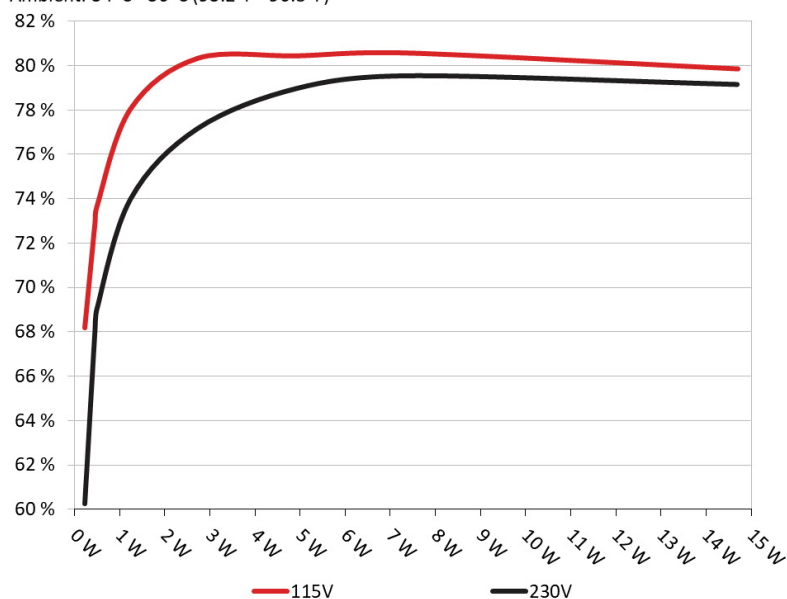
INFO

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 AX850

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

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10-110% LOAD TESTS

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
1	5.167A	1.978A	1.954A	0.992A	84.872	92.300%	0	<6.0	46.14°C	0.779
	12.245V	5.056V	3.376V	5.044V	91.952				39.33°C	230.32V
2	11.307A	2.968A	2.933A	1.191A	169.319	94.647%	0	<6.0	47.58°C	0.899
	12.242V	5.054V	3.374V	5.040V	178.895				40.15°C	230.32V
3	17.844A	3.464A	3.406A	1.390A	254.380	95.211%	0	<6.0	48.66°C	0.940
	12.239V	5.052V	3.373V	5.035V	267.174				40.87°C	230.31V
4	24.384A	3.959A	3.912A	1.590A	339.546	95.360%	0	<6.0	49.46°C	0.960
	12.236V	5.050V	3.372V	5.031V	356.068				41.42°C	230.29V
5	30.602A	4.951A	4.892A	1.790A	424.837	95.203%	618	14.0	41.83°C	0.970
	12.233V	5.048V	3.371V	5.027V	446.244				50.37°C	230.28V
6	36.761A	5.944A	5.872A	1.991A	509.366	94.955%	631	14.7	42.63°C	0.976
	12.230V	5.046V	3.369V	5.024V	536.430				51.62°C	230.28V
7	42.986A	6.938A	6.858A	2.191A	594.639	94.676%	695	17.5	42.80°C	0.981
	12.226V	5.044V	3.368V	5.020V	628.077				52.45°C	230.29V
8	49.216A	7.934A	7.837A	2.393A	680.003	94.343%	777	22.4	43.36°C	0.985
	12.224V	5.041V	3.367V	5.016V	720.775				53.47°C	230.28V
9	55.849A	8.433A	8.319A	2.393A	764.972	93.979%	852	25.1	44.52°C	0.986
	12.220V	5.039V	3.366V	5.015V	813.982				55.05°C	230.29V
10	62.217A	8.935A	8.825A	2.999A	849.811	93.578%	921	27.0	45.55°C	0.988
	12.217V	5.037V	3.365V	5.003V	908.135				56.56°C	230.29V
11	69.174A	8.937A	8.828A	3.000A	934.589	93.152%	1172	34.5	46.61°C	0.990
	12.214V	5.035V	3.364V	5.001V	1003.300				57.87°C	230.30V
CL1	0.140A	11.997A	11.998A	0.000A	102.756	89.822%	729	19.8	42.15°C	0.829
	12.243V	5.053V	3.369V	5.076V	114.399				50.88°C	230.29V
CL2	70.004A	1.000A	0.997A	1.000A	868.596	93.849%	891	26.1	45.29°C	0.989
	12.216V	5.040V	3.369V	5.029V	925.522				56.39°C	230.30V

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20-80W LOAD TESTS									
Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	PF/AC Volts
1	1.178A	0.491A	0.472A	0.198A	19.510	78.303%	0	<6.0	0.439
	12.247V	5.062V	3.380V	5.061V	24.916				230.30V
2	2.422A	0.990A	0.976A	0.396A	39.965	86.780%	0	<6.0	0.612
	12.246V	5.058V	3.377V	5.054V	46.053				230.30V
3	3.595A	1.483A	1.448A	0.594A	59.413	90.252%	0	<6.0	0.705
	12.245V	5.058V	3.377V	5.051V	65.830				230.31V
4	4.838A	1.978A	1.952A	0.793A	79.837	92.007%	0	<6.0	0.766
	12.245V	5.057V	3.376V	5.048V	86.773				230.30V

RIPPLE MEASUREMENTS					
Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	7.1 mV	4.8 mV	8.8 mV	7.1 mV	Pass
20% Load	8.8 mV	4.7 mV	8.9 mV	7.0 mV	Pass
30% Load	10.0 mV	4.9 mV	8.9 mV	7.4 mV	Pass
40% Load	5.7 mV	5.7 mV	10.4 mV	8.4 mV	Pass
50% Load	5.4 mV	5.2 mV	9.5 mV	7.9 mV	Pass
60% Load	6.2 mV	5.0 mV	10.4 mV	9.5 mV	Pass
70% Load	6.7 mV	5.3 mV	10.0 mV	8.9 mV	Pass
80% Load	7.1 mV	5.0 mV	10.8 mV	9.2 mV	Pass
90% Load	7.3 mV	5.3 mV	10.3 mV	9.6 mV	Pass
100% Load	10.9 mV	5.9 mV	11.5 mV	10.6 mV	Pass
110% Load	11.5 mV	5.8 mV	11.4 mV	11.7 mV	Pass
Crossload 1	10.1 mV	4.7 mV	11.5 mV	8.3 mV	Pass
Crossload 2	10.8 mV	5.9 mV	10.3 mV	10.2 mV	Pass

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

Hold-Up Time (ms)	22.10
AC Loss to PWR_OK Hold Up Time (ms)	20.40
PWR_OK Inactive to DC Loss Delay (ms)	1.70



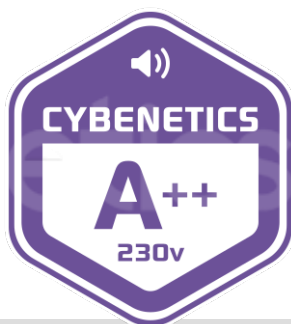
Top side



CORSAIR						
MODEL / MODELO / 型号 / 型號 / 모델: RPS0113						
POWER SUPPLY / FUENTE DE ALIMENTACIÓN / 전원 공급 장치						
PART NUMBER: CP-9020151 / 75-003205						
交流输入 交流輸入	AC INPUT AC 입력 Entrada de CA	100 - 240V • 11A • 5.5A • 50Hz - 60Hz (200-240V • 5.5A • 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	20A	20A	70A	0.3A	3A
最大瓦特数 最大瓦特數	MAX POWER 최대 결합 출력 Wataje Combinado Máximo	100W		840W	3.6W	15W
TOTAL POWER: 850W PODER TOTAL / 总功率 / 總功率 / 총출력						

Power specifications label

CERTIFICATIONS



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