

Anex

Corsair AX850

Lab ID#: 552

Receipt Date: -

Test Date: -

Report:

Report Date: Nov 28, 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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PAGE 1/8

RESULTS	
Temperature Range (°C /°F)	30-32 / 86-89.6
Average Efficiency	92.543
Efficiency With 10W ($\leq 500W$) or 2% ($> 500W$) Load -115V	75.879
Average Efficiency 5VSB	79.542
Standby Power Consumption (W) -115V	0.0476505
Standby Power Consumption (W) -230V	0.0794828
Average PF	0.988
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓
Avg Noise Output	15.37
Efficiency Rating (ETA)	TITANIUM
Noise Rating (LAMBDA)	A+

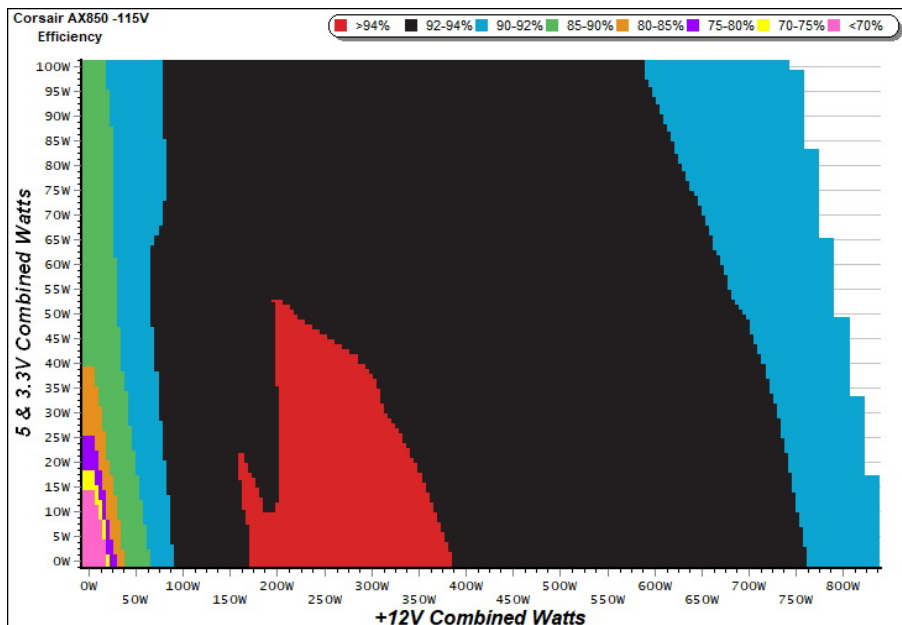
TEST EQUIPMENT		
Electronic Loads	Chroma 6314A x2 63123A x6 63102A 63101A	Chroma 63601-5 x4 Chroma 63600-2 x2 63640-80-80 x20 63610-80-20 x2
AC Sources	Chroma 6530, Chroma 61604, Keysight AC6804B	
Power Analyzers	N4L PPA1530 x2, N4L PPA5530	
Oscilloscopes	Picoscope 4444 & 3424, Keysight DSOX3024A, Rigol 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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PAGE 2/8

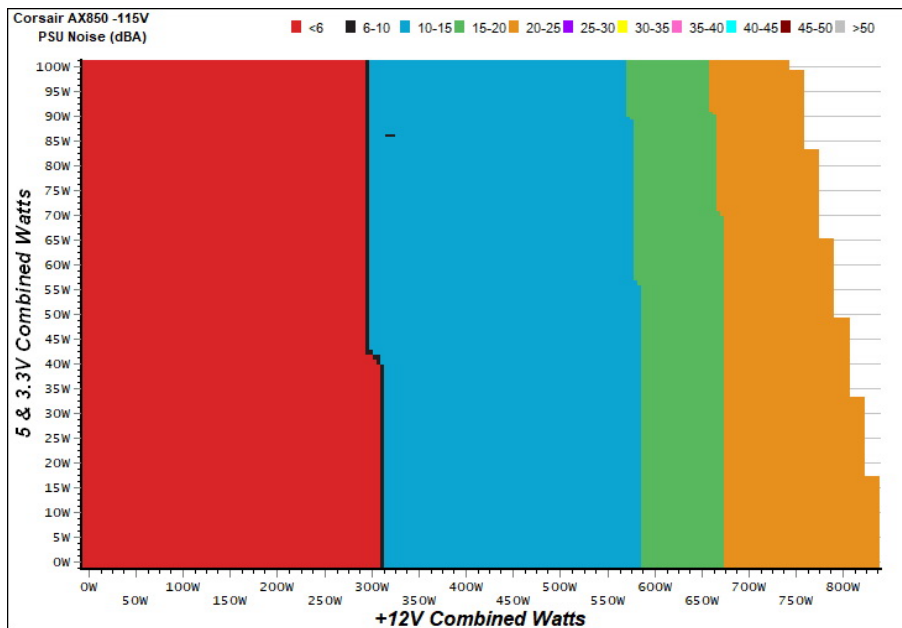
EFFICIENCY GRAPH



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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Anex

Corsair AX850

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

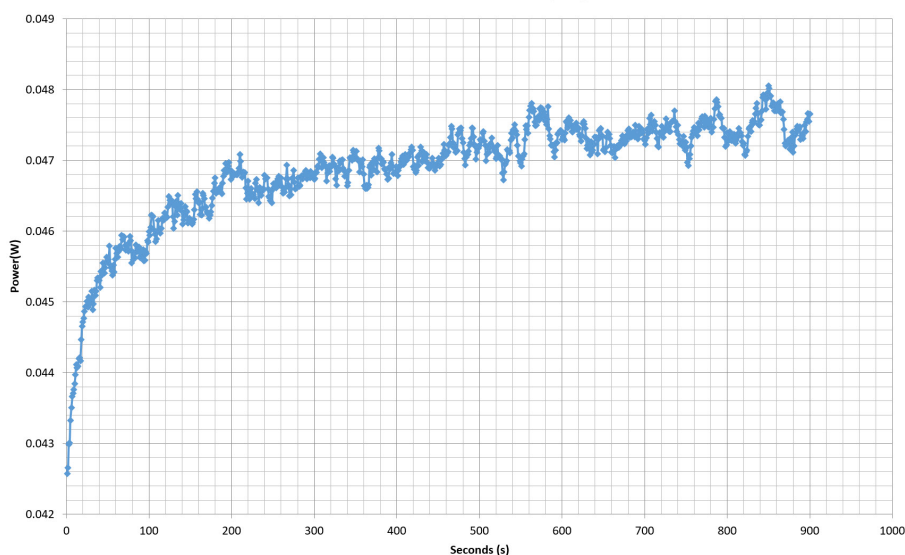
Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.223	68.196%	0.000
	4.957V	0.327		115.08V
2	0.090A	0.446	72.876%	0.058
	4.956V	0.612		115.08V
3	0.550A	2.722	80.342%	0.250
	4.948V	3.388		115.13V
4	1.000A	4.940	80.456%	0.345
	4.939V	6.140		115.13V
5	1.500A	7.395	80.582%	0.401
	4.929V	9.177		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 -115V

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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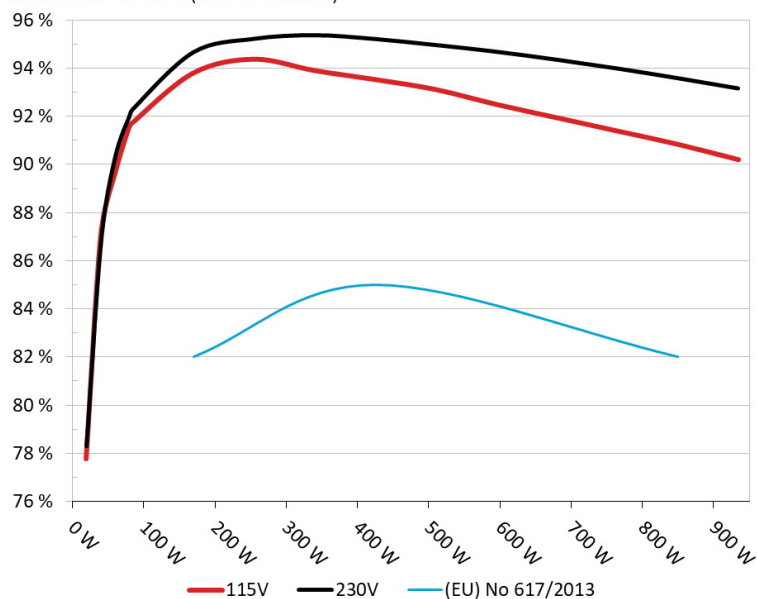
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PAGE 4/8

EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Corsair AX850

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



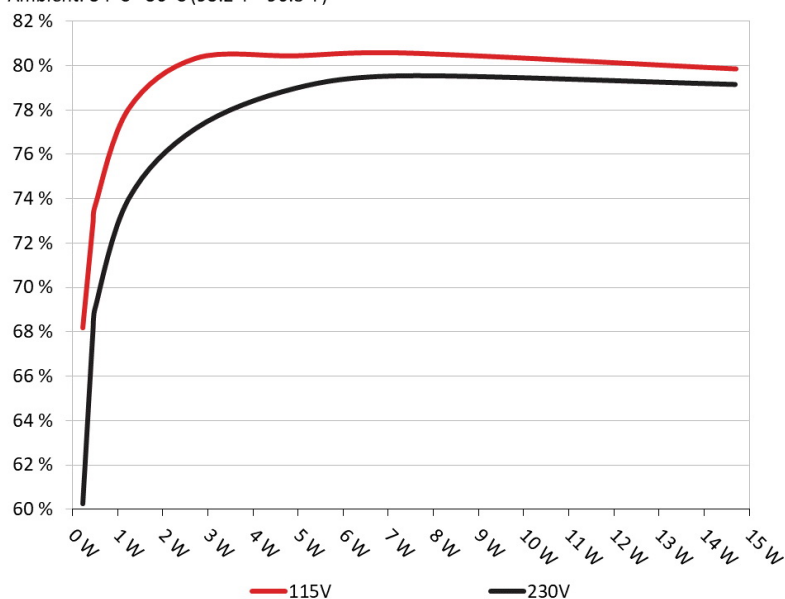
INFO

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	5.158A	1.977A	1.953A	0.992A	84.759	91.742%	0	<6.0	46.67°C	0.957
	12.248V	5.056V	3.376V	5.044V	92.388				39.72°C	115.10V
2	11.302A	2.967A	2.932A	1.191A	169.272	93.792%	0	<6.0	47.61°C	0.983
	12.244V	5.054V	3.374V	5.040V	180.476				40.29°C	115.11V
3	17.840A	3.466A	3.407A	1.391A	254.382	94.374%	0	<6.0	49.13°C	0.992
	12.241V	5.051V	3.373V	5.035V	269.547				41.23°C	115.11V
4	24.390A	3.960A	3.912A	1.591A	339.654	93.904%	609	13.6	41.66°C	0.991
	12.237V	5.050V	3.372V	5.031V	361.704				50.10°C	115.11V
5	30.609A	4.955A	4.893A	1.791A	424.971	93.528%	617	14.0	42.11°C	0.993
	12.234V	5.047V	3.370V	5.027V	454.377				51.54°C	115.11V
6	36.766A	5.947A	5.877A	1.991A	509.488	93.116%	665	16.3	42.74°C	0.995
	12.231V	5.045V	3.369V	5.023V	547.157				52.67°C	115.12V
7	42.992A	6.941A	6.857A	2.192A	594.807	92.497%	718	18.9	43.20°C	0.996
	12.228V	5.043V	3.368V	5.020V	643.058				53.46°C	115.12V
8	49.224A	7.936A	7.841A	2.393A	680.174	91.940%	804	24.0	43.49°C	0.997
	12.225V	5.041V	3.367V	5.016V	739.806				54.50°C	115.12V
9	55.856A	8.436A	8.319A	2.393A	765.116	91.388%	865	25.9	44.59°C	0.997
	12.221V	5.039V	3.365V	5.014V	837.221				55.93°C	115.13V
10	62.220A	8.937A	8.827A	2.999A	849.915	90.836%	928	27.1	45.80°C	0.997
	12.218V	5.037V	3.364V	5.002V	935.657				57.55°C	115.13V
11	69.177A	8.939A	8.830A	3.001A	934.705	90.202%	1141	33.7	46.60°C	0.998
	12.215V	5.035V	3.363V	5.000V	1036.237				58.75°C	115.13V
CL1	0.147A	11.999A	12.000A	0.000A	102.847	89.010%	776	22.4	42.73°C	0.969
	12.245V	5.052V	3.369V	5.076V	115.545				51.65°C	115.14V
CL2	70.013A	1.003A	0.998A	1.000A	868.794	91.108%	905	26.7	45.44°C	0.998
	12.217V	5.040V	3.369V	5.028V	953.588				57.46°C	115.13V

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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	1.170A	0.493A	0.471A	0.198A	19.421	77.771%	0	<6.0	0.778
	12.249V	5.062V	3.380V	5.061V	24.972				115.09V
2	2.416A	0.988A	0.974A	0.396A	39.881	87.016%	0	<6.0	0.901
	12.249V	5.058V	3.377V	5.054V	45.832				115.10V
3	3.588A	1.480A	1.449A	0.594A	59.328	89.580%	0	<6.0	0.936
	12.249V	5.057V	3.377V	5.051V	66.229				115.10V
4	4.828A	1.977A	1.952A	0.793A	79.721	91.555%	0	<6.0	0.954
	12.248V	5.056V	3.376V	5.048V	87.074				115.10V

RIPPLE MEASUREMENTS

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	6.7 mV	4.3 mV	8.6 mV	6.8 mV	Pass
20% Load	8.3 mV	4.6 mV	9.0 mV	7.1 mV	Pass
30% Load	9.2 mV	5.2 mV	9.6 mV	7.2 mV	Pass
40% Load	5.7 mV	5.8 mV	9.9 mV	8.0 mV	Pass
50% Load	5.6 mV	4.7 mV	9.7 mV	8.0 mV	Pass
60% Load	6.0 mV	5.1 mV	9.7 mV	8.5 mV	Pass
70% Load	6.7 mV	5.0 mV	10.3 mV	8.3 mV	Pass
80% Load	6.9 mV	5.1 mV	10.6 mV	8.9 mV	Pass
90% Load	6.8 mV	5.1 mV	10.4 mV	8.1 mV	Pass
100% Load	10.8 mV	5.8 mV	11.8 mV	9.6 mV	Pass
110% Load	10.9 mV	5.7 mV	12.5 mV	10.1 mV	Pass
Crossload 1	8.9 mV	5.1 mV	12.0 mV	7.8 mV	Pass
Crossload 2	10.9 mV	5.5 mV	10.7 mV	9.6 mV	Pass

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PAGE 7/8

Anex

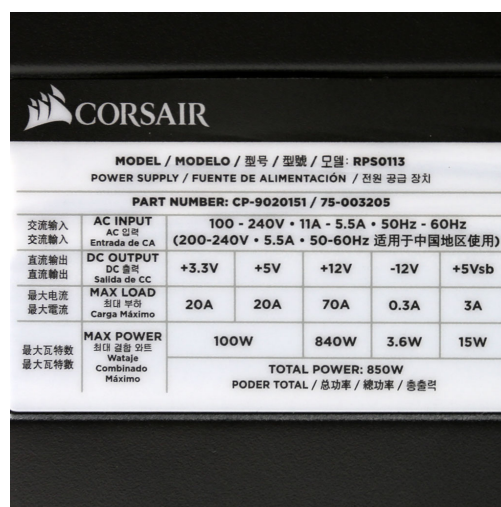
Corsair AX850

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 直流出力	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 最大瓦特数	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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PAGE 8/8