

Lab ID#: AS85002045
Receipt Date: Jul 2, 2022
Test Date: Jul 22, 2022

Report: 22PS2045A
Report Date: Jul 22, 2022

DUT INFORMATION	
Brand	Asus
Manufacturer (OEM)	Great Wall
Series	Rog Loki
Model Number	ROG-LOKI-850P-SFX-L-GAMING
Serial Number	2M020065637
DUT Notes	Applies to ROG-LOKI-850P-SFX-L-WHITE-GAMING also

DUT SPECIFICATIONS	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	47-63
Rated Frequency (Hz)	10-5
Rated Power (W)	850
Type	SFX-L
Cooling	120mm Double Ball Bearing Fan (CF1225H12D)
Semi-Passive Operation	✓
Cable Design	Fully 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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RESULTS

Temperature Range (°C /°F)	30-32 / 86-89.6 (+2°C / +- 3.6°F)
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓
ALPM (Alternative Low Power Mode) compatible	✓

115V

Average Efficiency	90.306%
Efficiency With 10W (≤500W) or 2% (>500W)	72.591
Average Efficiency 5VSB	83.977%
Standby Power Consumption (W)	0.0504000
Average PF	0.986
Avg Noise Output	23.76 dB(A)
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	A

230V

Average Efficiency	92.234%
Average Efficiency 5VSB	82.722%
Standby Power Consumption (W)	0.0933000
Average PF	0.947
Avg Noise Output	23.86 dB(A)
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	A

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	20	20	70.8	2.5	0.8
	Watts	110		850	12.5	9.6
Total Max. Power (W)		850				

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CABLES AND CONNECTORS

Modular Cables

Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 20+4 pin (450mm)	1	1	18AWG	No
4+4 pin EPS12V (550mm)	2	2	16AWG	No
12+4 pin PCIe (460mm)	1	1	16-24AWG	No
2x 6+2 pin PCIe (450mm)	1	2	16AWG	No
6+2 pin PCIe (450mm)	1	1	16-18AWG	No
SATA (300mm+190mm+90mm)	2	6	18AWG	No
4 pin Molex (300mm+100mm+100mm+100mm)	1	4	18AWG	No
Addressable Aura RGB cable (80mm)	1	1	22AWG	No
RGB controller cable (80mm)	1	1	24AWG	No

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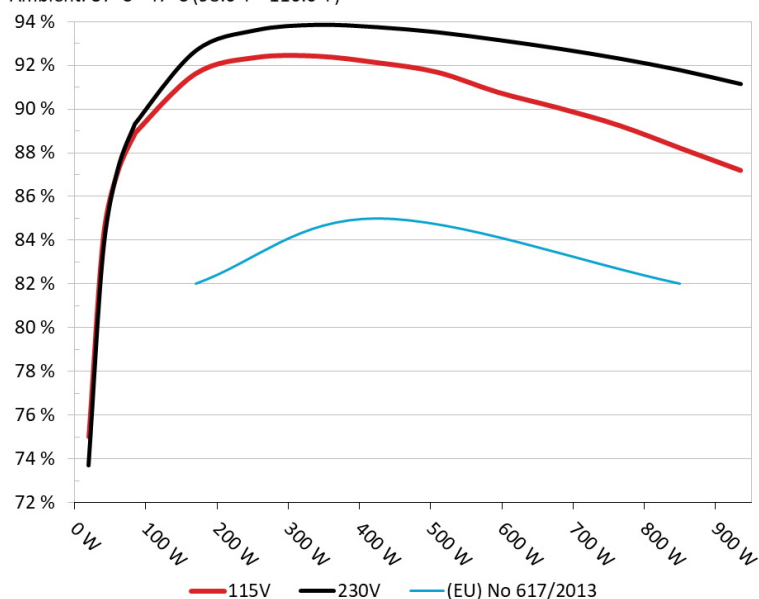
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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Asus Rog Loki SFX-L 850W

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



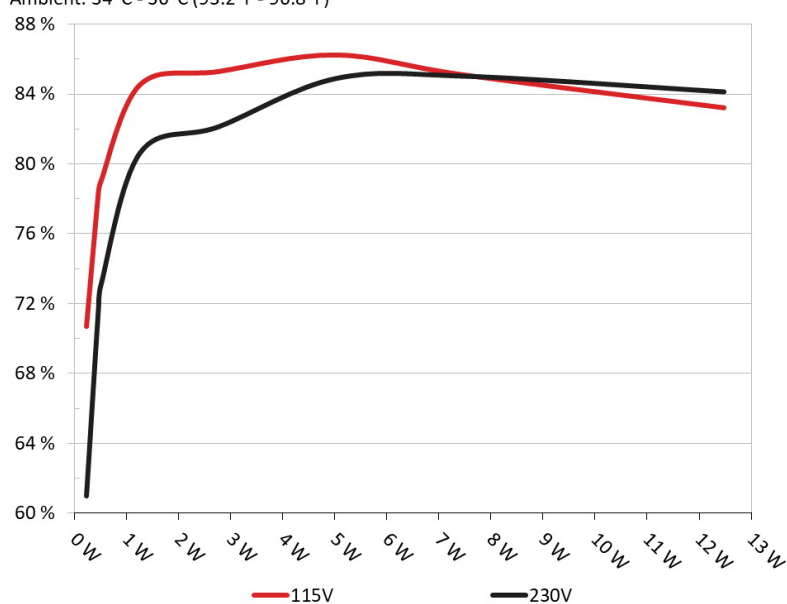
INFO

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: Asus Rog Loki SFX-L 850W

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.227W	70.687%	0.033
	5.044V	0.321W		114.93V
2	0.09A	0.454W	78.266%	0.058
	5.043V	0.58W		114.94V
3	0.55A	2.768W	85.281%	0.257
	5.031V	3.246W		114.93V
4	1A	5.023W	86.227%	0.343
	5.022V	5.826W		114.93V
5	1.5A	7.519W	85.068%	0.405
	5.012V	8.839W		114.92V
6	2.501A	12.478W	83.204%	0.463
	4.99V	14.997W		114.92V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.227W	60.988%	0.011
	5.045V	0.372W		230.3V
2	0.09A	0.454W	71.596%	0.019
	5.044V	0.634W		230.29V
3	0.55A	2.766W	82.147%	0.097
	5.028V	3.367W		230.29V
4	1A	5.02W	84.913%	0.16
	5.02V	5.912W		230.29V
5	1.5A	7.515W	85.041%	0.219
	5.009V	8.837W		230.29V
6	2.501A	12.469W	84.148%	0.298
	4.986V	14.818W		230.29V

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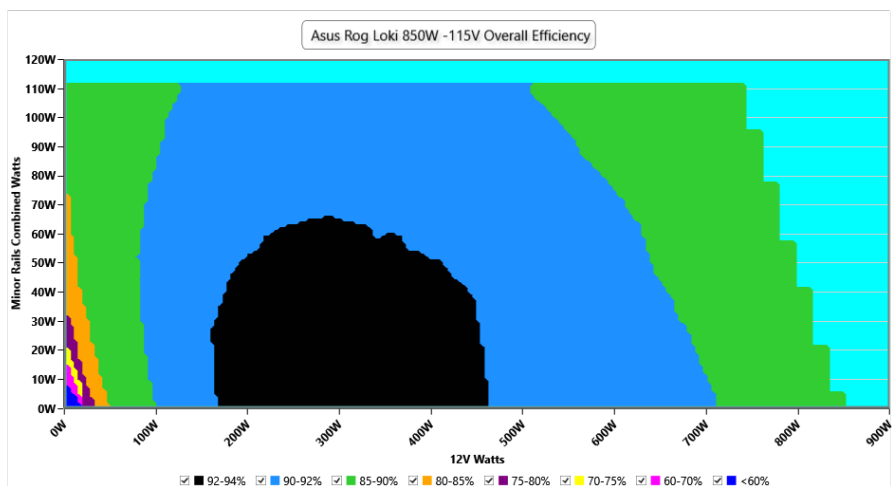
115V

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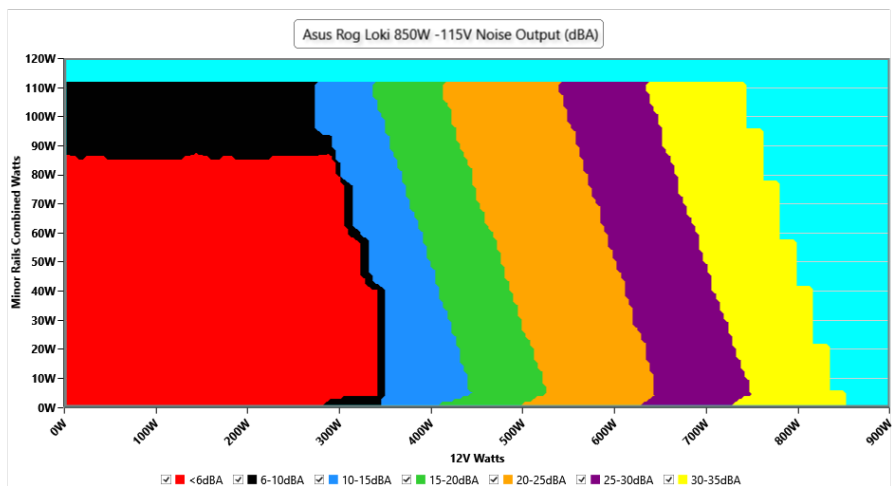
EFFICIENCY GRAPH 115V



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 (+2 °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

Detailed Results

	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	115.13 V	115.10 V	113.85 V	115.17 V	116.15 V	PASS
Mains Frequency:	60.00 Hz	59.95 Hz	59.40 Hz	60.03 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.416	1.415	1.340	1.417	1.490	PASS
Mains Voltage THD:	0.13 %	0.10 %	N/A	0.18 %	2.00 %	PASS
Real Power:	0.050 W	0.044 W	N/A	0.058 W	N/A	N/A
Apparent Power:	9.828 W	9.766 W	N/A	9.881 W	N/A	N/A
Power Factor:	0.005	N/A	N/A	N/A	N/A	N/A

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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COMMISSION REGULATION (EU) NO 617/2013 TESTING 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%	5.291A	1.978A	1.994A	1.001A	85.021	88.881%	0	<6.0	44.39°C	0.972
	11.986V	5.058V	3.31V	4.998V	95.657				40.06°C	115.11V
20%	11.605A	2.968A	2.994A	1.203A	169.997	91.608%	0	<6.0	45.73°C	0.975
	11.985V	5.055V	3.307V	4.988V	185.569				40.92°C	115.09V
50%	31.272A	4.953A	5.002A	1.816A	425.205	92.107%	840	14.5	42.69°C	0.99
	11.982V	5.048V	3.299V	4.958V	461.642				48.85°C	115.02V
100%	63.774A	8.934A	9.038A	2.554A	850.013	88.214%	1490	35.9	45.98°C	0.996
	11.960V	5.039V	3.286V	4.897V	963.581				56.02°C	114.88V

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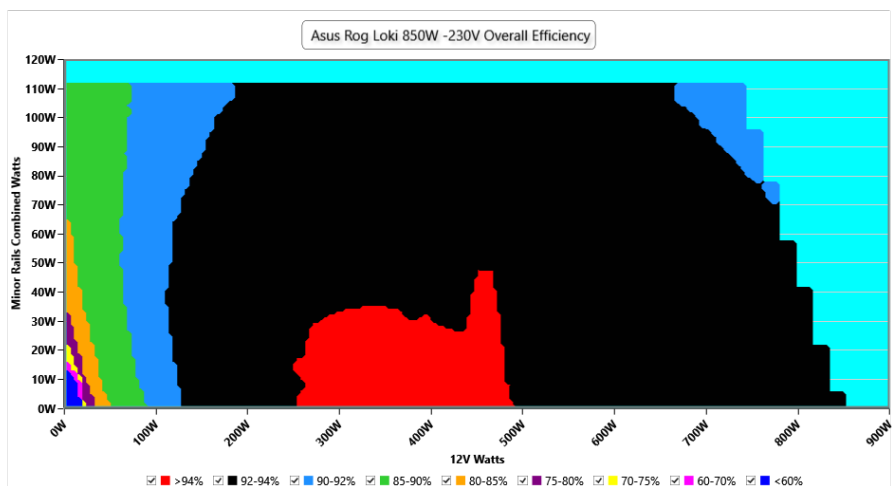
230V

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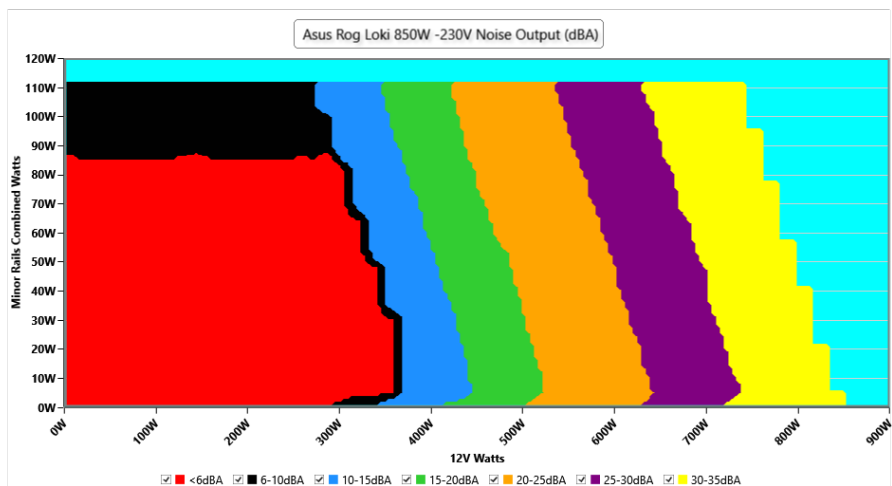
EFFICIENCY GRAPH 230V



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 230V



INFO

The PSU's noise in its entire operational range and under 30-32 °C (+2 °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

Detailed Results

	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	230.28 V	230.17 V	227.70 V	230.34 V	232.30 V	PASS
Mains Frequency:	50.00 Hz	49.99 Hz	49.50 Hz	50.01 Hz	50.50 Hz	PASS
Mains Voltage CF:	1.416	1.415	1.340	1.417	1.490	PASS
Mains Voltage THD:	0.13 %	0.10 %	N/A	0.23 %	2.00 %	PASS
Real Power:	0.093 W	0.082 W	N/A	0.119 W	N/A	N/A
Apparent Power:	33.072 W	32.852 W	N/A	33.260 W	N/A	N/A
Power Factor:	0.003	N/A	N/A	N/A	N/A	N/A

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COMMISSION REGULATION (EU) NO 617/2013 TESTING 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%	5.292A	1.979A	1.995A	1.002A	85.026	89.27%	0	<6.0	44.88°C	0.828
	11.987V	5.055V	3.308V	4.991V	95.244				40.45°C	230.32V
20%	11.599A	2.969A	2.995A	1.205A	170.013	92.656%	0	<6.0	45.83°C	0.92
	11.993V	5.054V	3.306V	4.983V	183.492				40.93°C	230.31V
50%	31.274A	4.955A	5.004A	1.82A	425.294	93.748%	840	14.5	42°C	0.965
	11.984V	5.047V	3.298V	4.947V	453.657				48.14°C	230.28V
100%	63.754A	8.938A	9.042A	2.562A	850.113	91.783%	1431	32.8	45.25°C	0.981
	11.966V	5.038V	3.285V	4.882V	926.214				55.28°C	230.22V

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EFFICIENCY AND NOISE REPORT IN ACCORDANCE WITH
CYBENETICS ETA AND CYBENETICS LAMBDA PROCEDURE

Asus ROG-LOKI-850P-SFX-L-GAMING

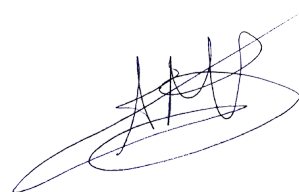


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Power specifications label

CERTIFICATIONS 115V

Aristeidis Bitziopoulos
Lab Director

CERTIFICATIONS 230V



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