ASUS ROG-LOKI-750P-SFX-L-GAMING

2M050000255

Lab ID AS75002053

Certification ID 252053

Test Result Report ID: 22PS2053A

Certificate Issue Date: Aug 25, 2022

Scheme: ETA-EMI PSU

115V



230V



115V



230V



Scheme: LAMBDA PSU



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	ASUS
Model	ROG-LOKI-750P-SFX-L-GAMING
OEM/ODM	Great Wall
Serial Number	2M050000255
Product Specifications	
Manufacturer-Provided Information	
□□□□ (Vrms)	100-240
□□□□ (Arms)	10-5
□□□□ (Hz)	47-63

□□□□ (W)	750
Operating Temperature (Continuous Full Load) (°C)	
□□	SFX-L
□□□□	Fully Modular
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
□□	120mm Double Ball Bearing Fan (CF1225H12D)
□□□□□	✓
Cybenetics Testing Information	
Lab ID	AS75002053
Date of receipt	Jul 2, 2022
Testing Date	Aug 26, 2022
Report Issued Date	Aug 25, 2022
Engineer Name	-
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

□□□□□ (Non-accredited measurements)

□□□□□				
□□	□□□□	□□□□□□	Gauge	In Cable Capacitors
ATX □□ 20+4 pin (450mm)	1	1	18AWG	□
4+4 pin EPS 12V □□ (550mm)	2	2	16AWG	□
12+4 pin PCIe (460mm)	1	1	16-24AWG	□
2x 6+2pin PCIe□□ (450mm)	1	2	16AWG	□
6+2pin PCIe□□ (450mm)	1	1	16-18AWG	□
SATA□□ (300mm+190mm+90mm)	2	6	18AWG	□
□ 4pin Molex□□ (300mm+100mm+100mm+100mm)	1	4	18AWG	□
Addressable Aura RGB cable (80mm)	1	1	22AWG	□

RGB controller cable (85mm)	1	1	24AWG	□

□□□□

□		3.3V	5V	12V	5VSB	-12V
□□□□	□□	20	20	62.5	2.5	0.8
	□	110		750	12.5	9.6
□□□□□ (W)		750				

Test Results

Temperature & Compliance Info

□□□□ (°C /°F)	28-32 / 82.4-89.6
□□ ErP Lot3/6□□	✓
□□ (EU) No 617/2013□□	✓
ALPM (Alternative Low Power Mode) compatible	✓

Performance Summary

115V

Accredited	
□□□□ (>1450 load combinations)	90.554%
Average Noise Output (>1450 Load Combinations)	18.87dBA
PF□□□ (>1450 Load Combinations)	0.986
Efficiency With 10W (≤500W) or 2% (>500W) Load	71.487%
□□□□□□	0.0542W
Non-Accredited	
12V Ripple (Full Load)	21.96mV
5V Ripple (Full Load)	11.79mV
3.3V Ripple (Full Load)	16.72mV
5VSB Ripple (Full Load)	10.70mV

12V Load Regulation	0.11%
5V Load Regulation	0.26%
3.3V Load Regulation	0.33%
5VSB Load Regulation	3.35%
Inrush Current	65.220A

230V

Accredited		
□□□□ (>1450 load combinations)		92.331%
Average Noise Output (>1450 Load Combinations)		19.20dBA
PF□□□ (>1450 Load Combinations)		0.949
Efficiency With 10W (≤500W) or 2% (>500W) Load		-
□□□□□□		0.0986W
Non-Accredited		
12V Ripple (Full Load)		22.98mV
5V Ripple (Full Load)		11.94mV
3.3V Ripple (Full Load)		16.59mV
5VSB Ripple (Full Load)		10.53mV
12V Load Regulation		0.09%
5V Load Regulation		0.28%
3.3V Load Regulation		0.33%
5VSB Load Regulation		3.33%
Inrush Current		85.920A
12V Transient Response (200%)		11.51V
5V Transient Response (200%)		4.938V
3.3V Transient Response (200%)		3.232V
5VSB Transient Response (200%)		4.848V
□□□□ & PG□□		20.00ms
AC Loss to PWR_OK Hold Up Time		17.40ms
PWR_OK Inactive to DC Loss Delay		2.60ms
PSU Timings: T1 (20% / 100%)	39.0ms	40.0ms
PSU Timings: T3 (20% / 100%)	120.0ms	120.0ms

OPP (25.57°C / 43.32°C)	116.81%	125.35%

□□□□ & PG□□

Hold-Up Time (ms)	20
AC Loss to PWR_OK Hold Up Time (ms)	17.4
PWR_OK Inactive to DC Loss Delay (ms)	2.6

□□□□

Tables

115V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	115.16 V	115.13 V	113.85 V	115.20 V	116.15 V	PASS
Mains Frequency:	60.00 Hz	59.95 Hz	59.40 Hz	60.02 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.416	1.415	1.340	1.418	1.490	PASS
Mains Voltage THD:	0.13 %	0.10 %	N/A	0.17 %	2.00 %	PASS
Real Power:	0.054 W	0.048 W	N/A	0.062 W	N/A	N/A
Apparent Power:	9.902 W	9.697 W	N/A	10.121 W	N/A	N/A
Power Factor:	0.005	N/A	N/A	N/A	N/A	N/A

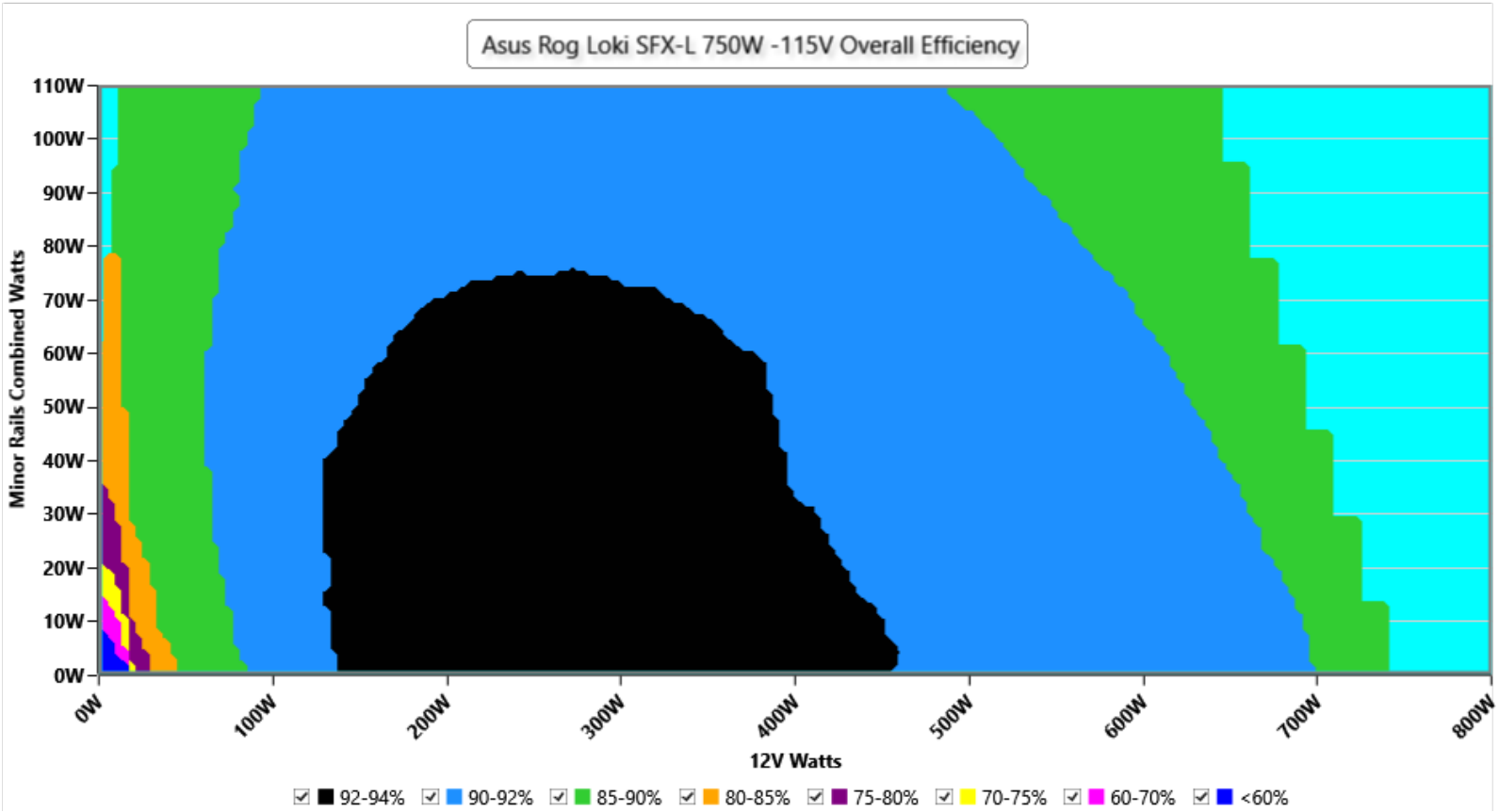
230V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	230.34 V	230.23 V	227.70 V	230.38 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:	0.12 %	0.10 %	N/A	0.20 %	2.00 %	PASS

Real Power:	0.099 W	0.085 W	N/A	0.128 W	N/A	N/A
Apparent Power:	33.071 W	32.638 W	N/A	33.550 W	N/A	N/A
Power Factor:	0.003	N/A	N/A	N/A	N/A	N/A

□□□□□□

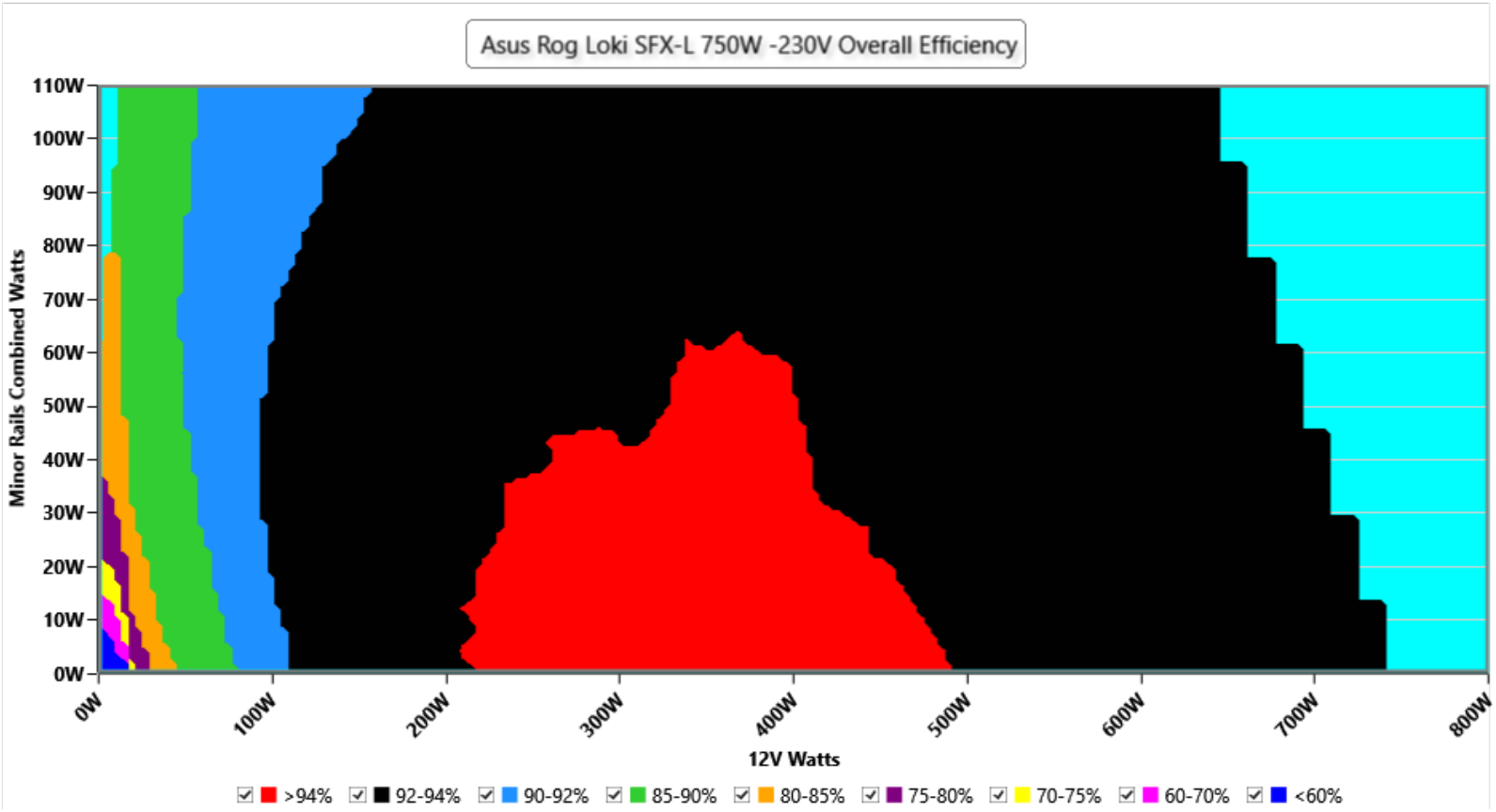
115V



□□

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



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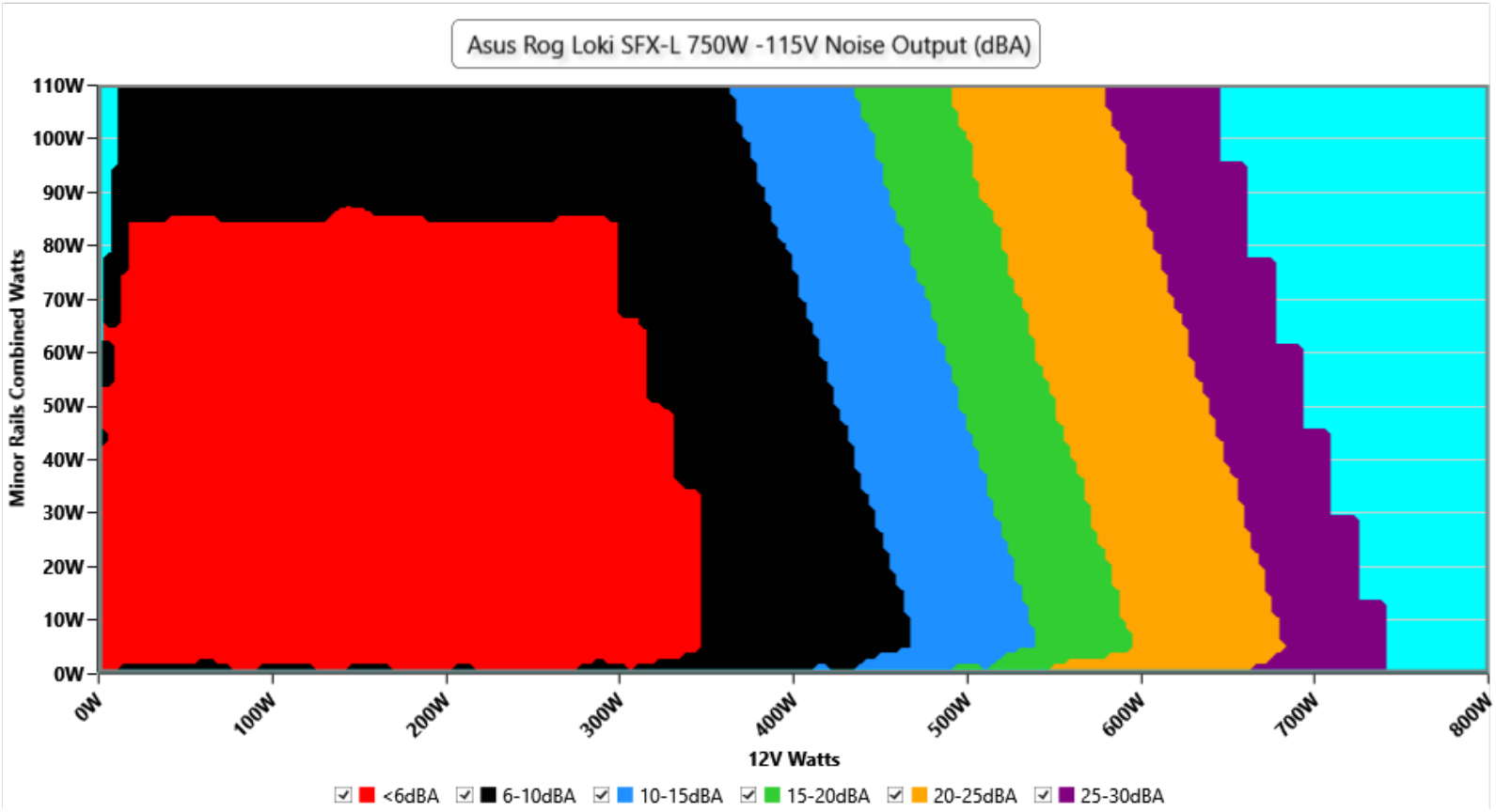
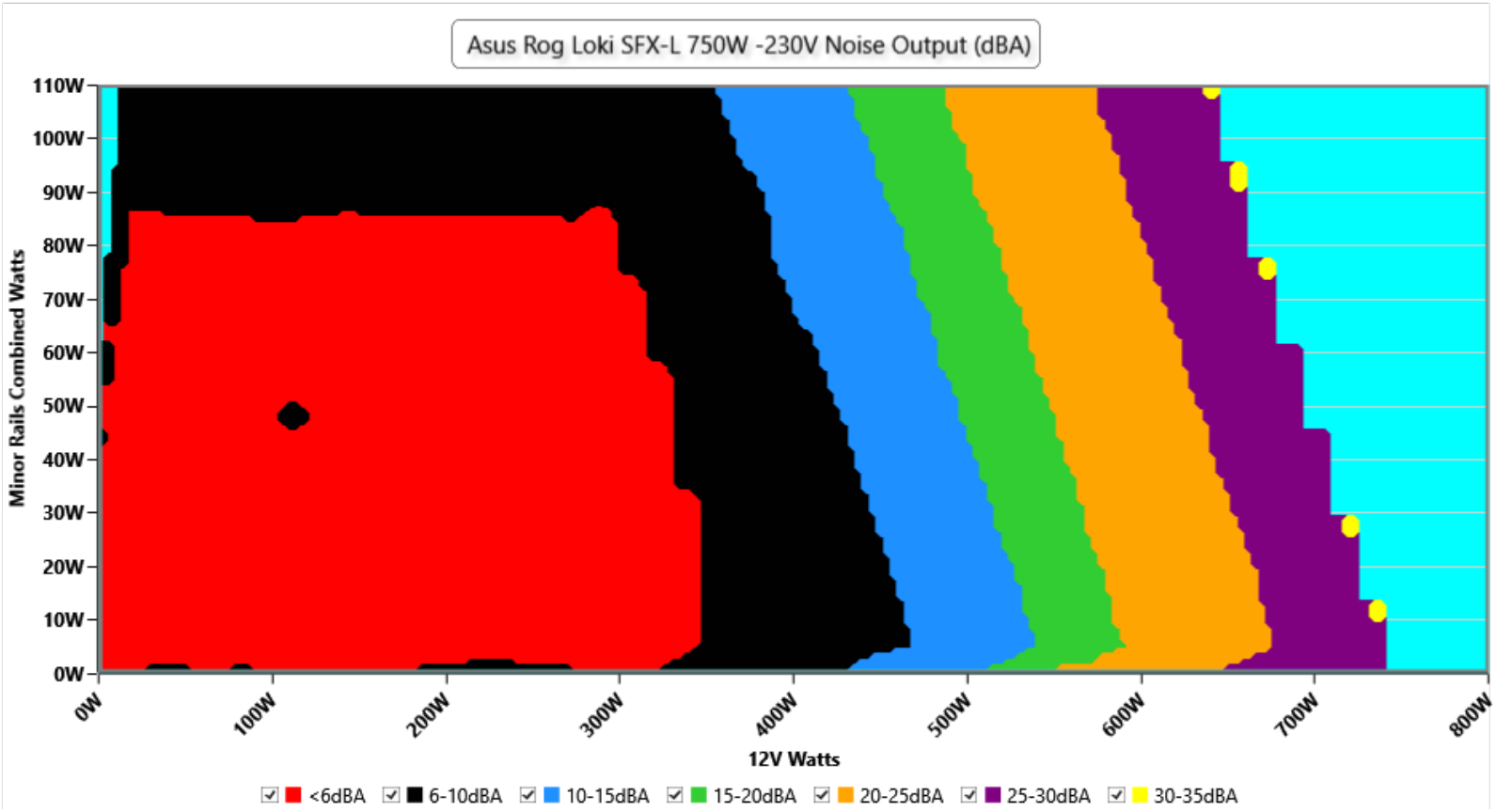
115V



□□

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



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

Noise under high ambient temperature (indicative)

115V

Load	Normal ambient fan · noise · intake	High ambient fan · noise · intake	Noise change
10%	0 RPM · <6.0 dB(A) · 44.3 °C	0 RPM · <6.0 dB(A) · 44.3 °C	fan off in both
20%	0 RPM · <6.0 dB(A) · 45.4 °C	0 RPM · <6.0 dB(A) · 45.4 °C	fan off in both
50%	0 RPM · <6.0 dB(A) · 47.8 °C	0 RPM · <6.0 dB(A) · 47.8 °C	fan off in both
100%	1189 RPM · 26.8 dB(A) · 45.0 °C	1189 RPM · 26.8 dB(A) · 45.0 °C	**+0.0 dB(A)**

230V

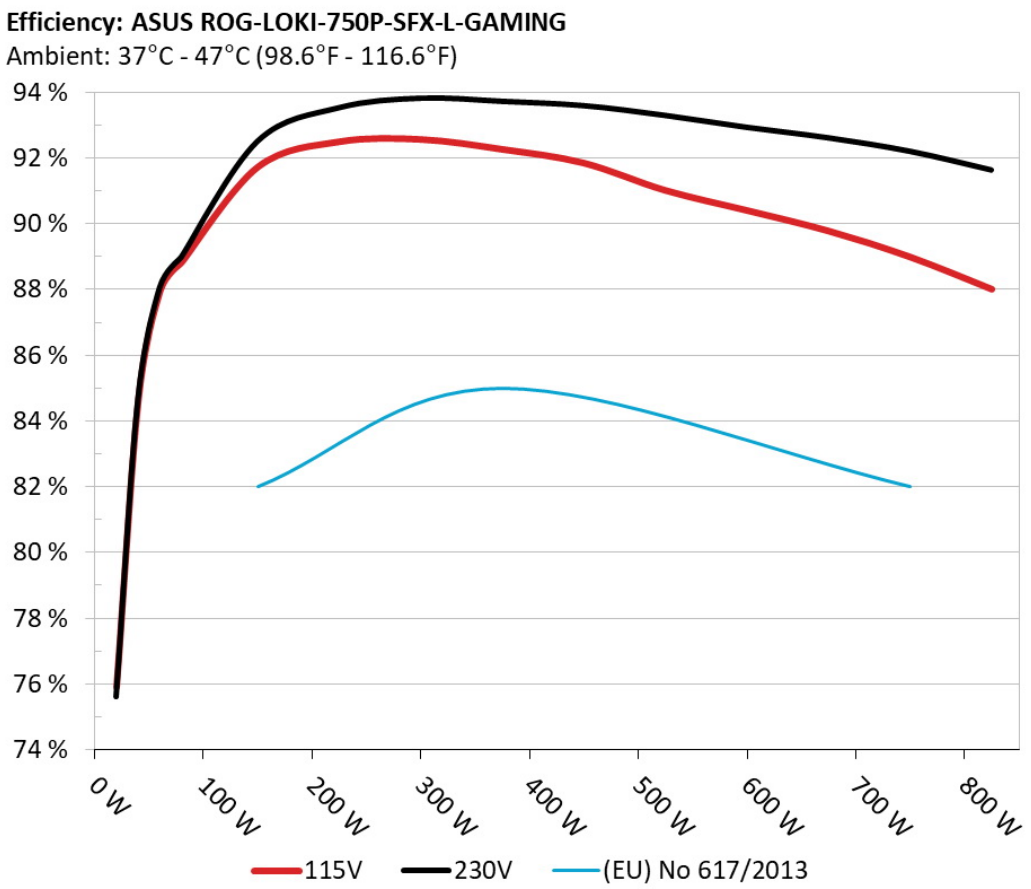
Load	Normal ambient fan · noise · intake	High ambient fan · noise · intake	Noise change
10%	0 RPM · <6.0 dB(A) · 44.5 °C	0 RPM · <6.0 dB(A) · 44.5 °C	fan off in both
20%	0 RPM · <6.0 dB(A) · 44.9 °C	0 RPM · <6.0 dB(A) · 44.9 °C	fan off in both
50%	0 RPM · <6.0 dB(A) · 48.1 °C	0 RPM · <6.0 dB(A) · 48.1 °C	fan off in both
100%	1196 RPM · 27.1 dB(A) · 45.3 °C	1196 RPM · 27.1 dB(A) · 45.3 °C	**+0.0 dB(A)**

INFO

Fan speed, noise and the measured intake temperature at 10, 20, 50 and 100 % load, from the two load regulation tests: at normal ambient (about 30-32 °C) and at high ambient (about 40-47 °C). These are stabilized readings at fixed loads, not averages over the certification sweep, so they are indicative of how the fan behaves when it is hot. "<6.0" is the floor of our sound meter, with the fan stopped; with the fan stopped, the intake sensor can read higher than the chamber air.

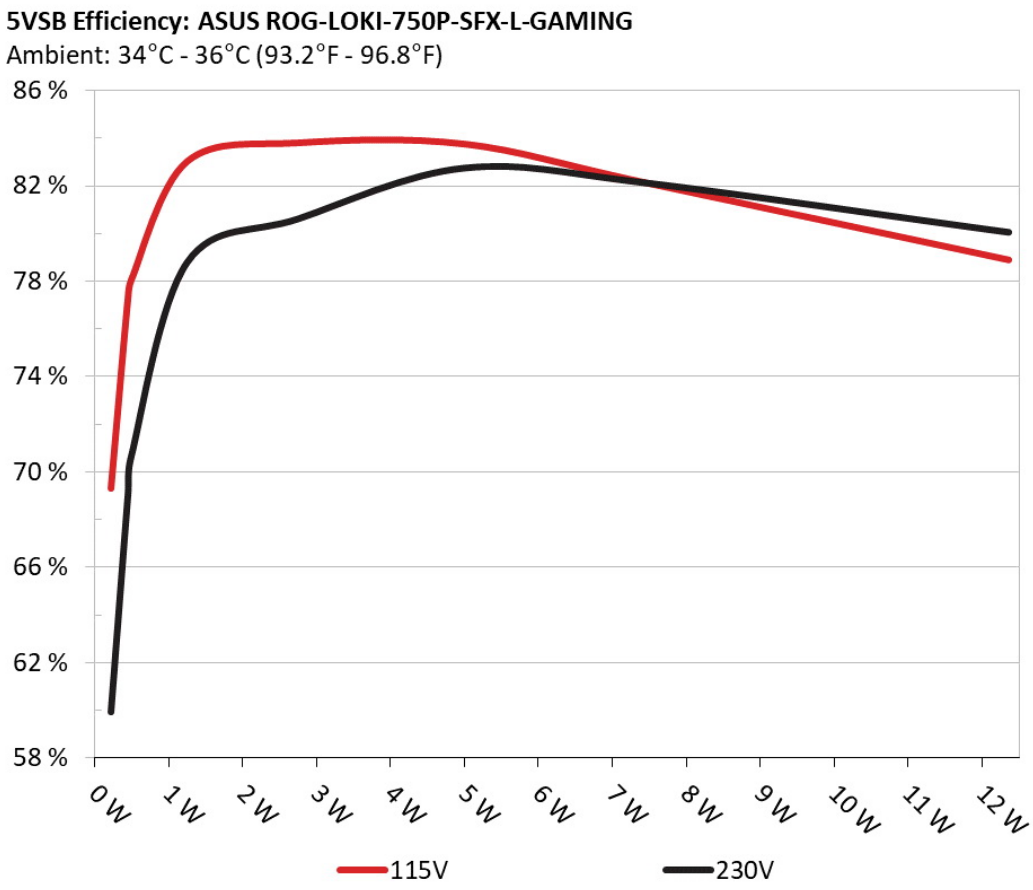
Informational. Not part of the ETA or LAMBDA rating.

Indicative Performance



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□□□□



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

□□□□ □□ 5Vsb □□ (ErP Lot3/6 & CEC)

115V

□□ #	5VSB	DC/AC (□)	□□	PF/AC □□
1	0.045A	0.227W	69.326%	0.035
	5.043V	0.327W		115.17V
2	0.09A	0.454W	77.241%	0.062
	5.041V	0.588W		115.17V
3	0.55A	2.761W	83.812%	0.267
	5.022V	3.294W		115.17V
4	1A	5.005W	83.763%	0.365
	5.005V	5.975W		115.16V
5	1.5A	7.479W	82.124%	0.417
	4.986V	9.106W		115.16V
6	2.499A	12.368W	78.906%	0.472
	4.949V	15.674W		115.16V

230V

□□ #	5VSB	DC/AC (□)	□□	PF/AC □□
1	0.045A	0.227W	59.92%	0.011
	5.043V	0.36W		230.34V
2	0.09A	0.454W	68.967%	0.021
	5.041V	0.658W		230.34V
3	0.55A	2.759W	80.628%	0.104
	5.018V	3.423W		230.34V
4	1A	5.002W	82.758%	0.17
	5.003V	6.044W		230.34V
5	1.5A	7.475W	82.127%	0.231
	4.984V	9.102W		230.34V
6	2.499A	12.359W	80.06%	0.311
	4.945V	15.437W		230.34V

Supplementary Tests (For Reference)

10-110%□□□□

115V

□□	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
10%	4.448A	1.976A	1.985A	1.003A	74.995	88.831%	0	<6.0	44.28°C	0.982
	12.005V	5.062V	3.325V	4.983V	84.423				40.22°C	115.14V
20%	9.914A	2.967A	2.98A	1.207A	149.919	91.726%	0	<6.0	45.43°C	0.981
	12.005V	5.056V	3.322V	4.972V	163.442				41.07°C	115.12V
30%	15.728A	3.461A	3.477A	1.412A	224.911	92.494%	0	<6.0	46.28°C	0.98
	12.007V	5.057V	3.321V	4.958V	243.165				41.51°C	115.1V
40%	21.551A	3.956A	3.975A	1.618A	299.991	92.564%	0	<6.0	46.75°C	0.985
	12.008V	5.056V	3.32V	4.943V	324.09				41.74°C	115.08V
50%	26.970A	4.944A	4.97A	1.827A	374.4	92.262%	0	<6.0	47.79°C	0.989
	12.009V	5.057V	3.32V	4.927V	405.803				42.26°C	115.07V
60%	32.428A	5.936A	5.967A	2A	449.161	91.849%	643	7.7	42.85°C	0.992
	12.012V	5.054V	3.318V	4.915V	489.026				48.92°C	115.04V
70%	37.888A	6.927A	6.964A	2.245A	524.244	91.015%	795	12.2	43.72°C	0.993
	12.013V	5.054V	3.317V	4.897V	576.008				50.82°C	115.01V
80%	43.413A	7.92A	7.959A	2.352A	599.442	90.403%	946	19.5	43.79°C	0.994
	12.013V	5.052V	3.316V	4.887V	663.086				52.02°C	114.98V
90%	49.275A	8.415A	8.445A	2.459A	674.456	89.778%	1071	23.8	44.79°C	0.995
	12.014V	5.05V	3.315V	4.877V	751.247				54.06°C	114.96V
100%	55.130A	8.912A	8.96A	2.568A	749.586	88.986%	1189	26.8	45°C	0.996
	12.015V	5.049V	3.314V	4.866V	842.37				55.14°C	114.93V
110%	60.651A	9.904A	10.049A	2.571A	824.61	88.005%	1307	30.2	46.74°C	0.997
	12.017V	5.049V	3.313V	4.86V	937.007				57.71°C	114.9V
CL1	0.115A	13.07A	13.142A	0A	111.278	86.134%	600	6.6	40.37°C	0.986
	12.013V	5.065V	3.324V	5.021V	129.192				45.87°C	115.13V

CL2	0.115A	19.739A	0A	0A	101.381	84.756%	982	21.4	39.98°C	0.986
	12.009V	5.066V	3.323V	5.028V	119.614				47.26°C	115.14V
CL3	0.115A	0A	19.835A	0A	67.371	81.166%	1282	30.4	40.6°C	0.983
	12.006V	5.063V	3.327V	5.026V	83.007				49.62°C	115.14V
CL4	62.370A	0A	0A	0A	749.51	89.967%	1230	29.4	43.46°C	0.995
	12.017V	5.051V	3.315V	4.992V	833.089				54.41°C	114.93V

The results above are not used in the certification process

230V

□□	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
10%	4.447A	1.975A	1.985A	1.003A	74.997	88.991%	0	<6.0	44.49°C	0.841
	12.007V	5.063V	3.325V	4.986V	84.277				40.46°C	230.33V
20%	9.907A	2.964A	2.979A	1.206A	149.92	92.513%	0	<6.0	44.87°C	0.927
	12.013V	5.061V	3.324V	4.973V	162.056				40.55°C	230.32V
30%	15.726A	3.459A	3.476A	1.411A	224.912	93.536%	0	<6.0	45.93°C	0.95
	12.009V	5.06V	3.323V	4.96V	240.463				41.18°C	230.31V
40%	21.548A	3.953A	3.974A	1.618A	299.991	93.827%	0	<6.0	47.21°C	0.962
	12.010V	5.06V	3.322V	4.945V	319.727				42.19°C	230.3V
50%	26.973A	4.943A	4.969A	1.825A	374.459	93.732%	0	<6.0	48.13°C	0.968
	12.010V	5.058V	3.321V	4.93V	399.496				42.68°C	230.29V
60%	32.434A	5.934A	5.966A	2A	449.206	93.601%	631	7.4	42.72°C	0.973
	12.011V	5.056V	3.319V	4.917V	479.916				48.74°C	230.28V
70%	37.896A	6.927A	6.964A	2.244A	524.291	93.304%	797	12.3	43.5°C	0.975
	12.011V	5.054V	3.317V	4.899V	561.913				50.65°C	230.27V
80%	43.422A	7.919A	7.958A	2.352A	599.506	92.941%	947	19.6	44.13°C	0.978
	12.012V	5.053V	3.316V	4.888V	645.04				52.21°C	230.26V
90%	49.281A	8.416A	8.445A	2.459A	674.494	92.621%	1075	24	44.42°C	0.981
	12.013V	5.05V	3.315V	4.878V	728.207				53.52°C	230.25V
100%	55.138A	8.913A	8.96A	2.567A	749.623	92.211%	1196	27.1	45.27°C	0.982
	12.014V	5.049V	3.314V	4.867V	812.947				55.32°C	230.24V

110%	60.660A	9.905A	10.049A	2.571A	824.659	91.641%	1298	30.1	45.57°C	0.984
	12.016V	5.048V	3.313V	4.86V	899.881				56.54°C	230.23V
CL1	0.115A	13.07A	13.142A	0A	111.283	87.057%	597	6.5	42.55°C	0.906
	12.021V	5.065V	3.325V	5.021V	127.828				47.98°C	230.33V
CL2	0.115A	19.74A	0A	0A	101.384	85.463%	991	21.8	40.45°C	0.898
	12.018V	5.066V	3.323V	5.028V	118.628				47.73°C	230.33V
CL3	0.115A	0A	19.83A	0A	67.372	81.313%	1280	30.4	40.71°C	0.837
	12.008V	5.066V	3.328V	5.025V	82.856				49.88°C	230.33V
CL4	62.379A	0A	0A	0A	749.599	92.94%	1230	29.4	43.11°C	0.981
	12.017V	5.051V	3.315V	4.991V	806.528				54.05°C	230.24V

The results above are not used in the certification process

20-80□□□□□

115V

□□	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
20W	1.236A	0.494A	0.496A	0.199A	19.99	75.896%	0	<6.0	40.48°C	0.894
	12.001V	5.06V	3.325V	5.029V	26.338				37.39°C	115.16V
40W	2.723A	0.692A	0.695A	0.299A	39.991	84.653%	0	<6.0	41.44°C	0.952
	12.002V	5.061V	3.325V	5.021V	47.242				38.19°C	115.15V
60W	4.209A	0.889A	0.893A	0.399A	59.991	87.959%	0	<6.0	43.09°C	0.969
	12.003V	5.061V	3.325V	5.013V	68.205				39.43°C	115.15V
80W	5.690A	1.087A	1.092A	0.499A	79.932	89.765%	0	<6.0	43.55°C	0.98
	12.004V	5.061V	3.325V	5.007V	89.048				39.57°C	115.15V

The results above are not used in the certification process

230V

□□	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
20W	1.236A	0.494A	0.496A	0.199A	19.994	75.608%	0	<6.0	39.95°C	0.523
	12.006V	5.061V	3.325V	5.029V	26.449				36.92°C	230.33V
40W	2.722A	0.692A	0.695A	0.299A	39.994	84.645%	0	<6.0	40.51°C	0.703
	12.005V	5.062V	3.325V	5.021V	47.249				37.22°C	230.33V
60W	4.208A	0.889A	0.893A	0.399A	59.995	88.063%	0	<6.0	42.1°C	0.799
	12.006V	5.062V	3.325V	5.013V	68.123				38.57°C	230.33V
80W	5.688A	1.087A	1.092A	0.499A	79.934	90.095%	0	<6.0	43.13°C	0.851
	12.008V	5.062V	3.325V	5.007V	88.719				39.41°C	230.33V

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□□□□

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	24.41mV	19.82mV	13.04mV	25.71mV	Pass
20% Load	9.06mV	8.84mV	12.99mV	8.80mV	Pass
30% Load	31.95mV	21.96mV	12.69mV	29.75mV	Pass
40% Load	29.36mV	21.09mV	13.95mV	28.28mV	Pass
50% Load	30.38mV	20.89mV	13.04mV	28.59mV	Pass
60% Load	29.57mV	17.53mV	13.10mV	22.87mV	Pass
70% Load	13.42mV	9.55mV	13.55mV	9.26mV	Pass
80% Load	14.53mV	10.37mV	15.12mV	9.21mV	Pass
90% Load	32.35mV	21.80mV	14.36mV	24.44mV	Pass
100% Load	21.96mV	11.79mV	16.72mV	10.70mV	Pass
110% Load	23.98mV	12.76mV	16.90mV	10.63mV	Pass
Crossload1	15.89mV	10.36mV	17.84mV	17.01mV	Pass
Crossload2	33.27mV	22.82mV	13.75mV	30.21mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
Crossload3	14.94mV	7.72mV	14.61mV	16.60mV	Pass
Crossload4	19.74mV	9.63mV	16.11mV	17.61mV	Pass

The results above are not used in the certification process

230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	7.29mV	8.74mV	13.04mV	8.60mV	Pass
20% Load	16.28mV	8.84mV	13.04mV	8.30mV	Pass
30% Load	38.33mV	9.86mV	14.10mV	36.59mV	Pass
40% Load	32.76mV	11.03mV	13.70mV	38.71mV	Pass
50% Load	11.55mV	9.50mV	13.65mV	9.56mV	Pass
60% Load	32.61mV	9.76mV	14.36mV	37.50mV	Pass
70% Load	31.75mV	10.21mV	14.36mV	33.19mV	Pass
80% Load	14.73mV	9.50mV	13.75mV	8.45mV	Pass
90% Load	32.51mV	12.50mV	15.67mV	33.85mV	Pass
100% Load	22.98mV	11.94mV	16.59mV	10.53mV	Pass
110% Load	23.95mV	12.43mV	17.58mV	11.39mV	Pass
Crossload1	23.75mV	11.18mV	17.31mV	16.60mV	Pass
Crossload2	33.47mV	17.18mV	14.26mV	45.49mV	Pass
Crossload3	32.40mV	13.11mV	15.57mV	39.87mV	Pass
Crossload4	20.01mV	10.06mV	16.10mV	18.31mV	Pass

The results above are not used in the certification process





ASUS ROG-LOKI-750P-SFX-L-GAMING

Top side

Power specifications label

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