FSP Technology MEGA GM 850W

Serial Number S5020130001

Lab ID FS85002981

Certification ID 252981

Test Result Report ID: 25PS2981A

Certificate Issue Date: Sep 29, 2025

Scheme: ETA-EMI PSU

115V



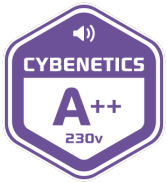
230V



115V



230V



Scheme: LAMBDA PSU



Outside Validation Scope



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	FSP Technology
Model	MEGA GM 850W
OEM/ODM	FSP
Serial Number	S5020130001
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	5.5-11

Rated Frequency (Hz)	50-60
Rated Power (W)	850
Operating Temperature (Continuous Full Load) (°C)	
Type	ATX12V
Cable Design	Fully Modular
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
Cooling	135mm Hydro Dynamic Bearing Fan (PLA13525S12M)
Semi-Passive Operation	✓ (selectable)
Cybenetics Testing Information	
Lab ID	FS85002981
Date of receipt	Sep 8, 2025
Testing Date	Sep 25, 2025
Report Issued Date	Sep 29, 2025
Engineer Name	Ioannis Kalyviotis
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

Cables and Connectors(Non-accredited measurements)

Modular Cables				
Description	**Cable Count**	**Connector Count (Total)**	**Gauge**	Cable Type
ATX connector 20+4 pin (600mm)	1	1	16-22AWG	Tinned Copper
4+4 pin ATX12V (700mm)	2	2	16AWG	Tinned Copper
6+2 pin PCIe (650mm)	3	3	16AWG	Tinned Copper
12+4 pin PCIe (700mm) (600W)	1	1	16-24AWG	Tinned Copper
SATA (500mm+155mm+155mm+155mm)	2	8	18AWG	Tinned Copper
SATA (500mm+155mm) / 4-pin Molex (+155mm+155mm)	1	2 / 2	18AWG	Tinned Copper
4-pin Molex (500mm+155mm+155mm+155mm)	1	4	18AWG	Tinned Copper

Protection Features(Manufacturer)

Over Power Protection	✓
Over Current (+12V) Protection	✓
Over Temperature Protection	✓
Short Circuit Protection	✓
Surge Protection	✓
Inrush Current Protection	✓
Fan Failure Protection	✗

Power Specifications

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	20	20	70.83	3	0.3
	Watts	120		850	15	3.6
Total Max. Power (W)		850				

Parts Description

General Data	
Manufacturer (OEM)	FSP
PCB Type	Double-Sided
Primary Side	
Transient Filter	2x Y caps,3x X caps, 2x CM chokes, 1x MOV
Inrush Protection	NTC Thermistor SCK-056 (5 Ohm @ 25°C) & Relay
Bridge Rectifier	2x HY Electronic GBJ2506 (600V, 25A @ 25°C)
APFC MOSFETs	2x Alpha & Omega AOTF160A60L (600V, 15A @ 100°C, Rds(on): 0.16Ohm)
APFC Boost Diode	STMicroelectronics STPSC6H065 (650V, 6A @ 110°C)
Bulk Cap(s)	2x Nippon Chemi-Con (420V, 330uF each or 660uF combined, 2000h @ 105°C,KMR)
Main Switchers	2x STMicroelectronics STF28N60M2 (650V, 14A @ 100°C, Rds(on): 0.150Ohm)
APFC Controller	Infineon ICE2PCS02G
Resonant Controller	Champion CM6901T2X
IC Driver	Novosense NSI6602

Topology	Primary side: APFC, Half-Bridge & LLC Resonant Converter Secondary side: [12V] Synchronous Rectification & [Minor Rails] DC-DC converters
Secondary Side	
+12V MOSFETs	4x CMR014N04N
5V & 3.3V	DC-DC Converters: 6x XSEMI XP3R303GMT (30V, 25 @ 70°C, Rds(on): 3.3mOhm) PWM Controller(s): ANPEC APW7159C
Filtering Capacitors	Electrolytic: 4x Nippon Chemi-Con (2-5,000 @ 105°C, KZE) 6x Rubycon (6-10,000 @ 105°C, ZLH) Polymer: 35x Nippon Chemi-Con, 3x FPCAP
Supervisor IC	Weltrend WT7527RA (OVP, UVP, OCP, PG)
Fan Controller	ANPEC APW9010
Fan Model	Power Logic PLA13525S12M (135mm, 12V, 0.4A, Hydro Dynamic Bearing Fan)
5VSB Circuit	
Rectifier	PFC Device Corporation P15L50SP (50V, 15A)
Standby PWM Controller	Nexperia PSMN2R4-30YLD (30V, 100A @ 25°C, Rds(on): 2.4mOhm)

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	✓
ALPM (Alternative Low Power Mode) compatible	✓
ATX v3.1 PSU Power Excursion	✓
Conducted Emissions EN 55032 & CISPR 32	Passed

Performance Summary

115V

Accredited	
Average Efficiency (>1450 load combinations)	90.259%
Average Noise Output (>1450 Load Combinations)	8.27dBA
Average PF (>1450 Load Combinations)	0.984
Efficiency With 10W (≤500W) or 2% (>500W) Load	71.234%
Standby Power Consumption	0.0656W
Non-Accredited	
12V Ripple (Full Load)	34.30mV
5V Ripple (Full Load)	27.74mV
3.3V Ripple (Full Load)	24.87mV
5VSB Ripple (Full Load)	30.51mV
12V Load Regulation	0.50%
5V Load Regulation	0.33%
3.3V Load Regulation	0.39%
5VSB Load Regulation	4.17%
Inrush Current	32.940A

230V

Accredited	
Average Efficiency (>1450 load combinations)	92.265%
Average Noise Output (>1450 Load Combinations)	7.97dBA
Average PF (>1450 Load Combinations)	0.959
Efficiency With 10W (≤500W) or 2% (>500W) Load	71.877%
Standby Power Consumption	0.1044W
Non-Accredited	
12V Ripple (Full Load)	32.38mV
5V Ripple (Full Load)	21.67mV
3.3V Ripple (Full Load)	20.74mV

5VSB Ripple (Full Load)		26.74mV
12V Load Regulation		0.56%
5V Load Regulation		0.39%
3.3V Load Regulation		0.45%
5VSB Load Regulation		4.23%
Inrush Current		65.730A
12V Transient Response (200%)		11.59V
5V Transient Response (200%)		5.028V
3.3V Transient Response (200%)		3.227V
5VSB Transient Response (200%)		5.036V
Hold-Up Time & PWR_OK Signal		20.60ms
AC Loss to PWR_OK Hold Up Time		18.30ms
PWR_OK Inactive to DC Loss Delay		2.30ms
PSU Timings: T1 (20% / 100%)	66.0ms	46.0ms
PSU Timings: T3 (20% / 100%)	127.0ms	123.0ms
12V OCP (32.0°C / 44.1°C)	101.40A (143.16%), 12.068V	101.40A (143.16%), 12.077V
5V OCP (32.0°C / 44.1°C)	24.2A (121.00%), 5.083V	23.5A (117.50%), 5.087V
3.3V OCP (32.0°C / 44.1°C)	28.3A (141.50%), 3.335V	27.8A (139.00%), 3.338V
5VSB OCP (32.0°C / 44.1°C)	3.6A (120.00%), 4.916V	3.6A (120.00%), 4.915V
OPP (31.98°C / 42.78°C)	142.67%	142.67%

Hold-Up Time & PWR_OK Signal

Hold-Up Time (ms)	20.6
AC Loss to PWR_OK Hold Up Time (ms)	18.3
PWR_OK Inactive to DC Loss Delay (ms)	2.3

Vampire Power

Tables

115V

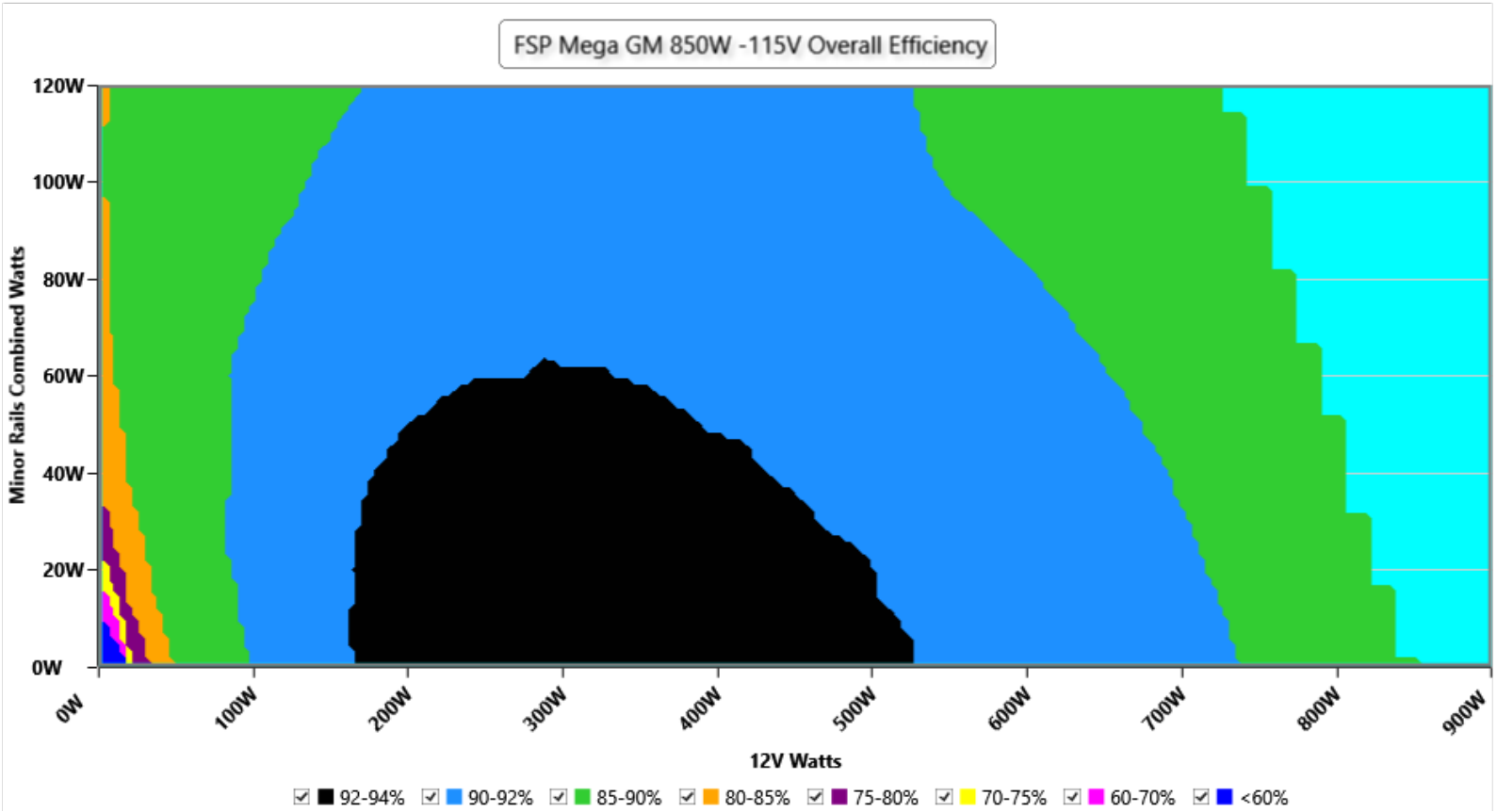
Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	114.95 V	114.94 V	113.85 V	114.97 V	116.15 V	PASS
Mains Frequency:	60.00 Hz	59.99 Hz	59.40 Hz	60.01 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.416	1.415	1.340	1.416	1.490	PASS
Mains Voltage THD:	0.13 %	0.10 %	N/A	0.17 %	2.00 %	PASS
Real Power:	0.066 W	0.043 W	N/A	0.091 W	N/A	N/A
Apparent Power:	8.400 W	8.377 W	N/A	8.422 W	N/A	N/A
Power Factor:	0.007	N/A	N/A	N/A	N/A	N/A

230V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	229.90 V	229.89 V	227.70 V	229.93 V	232.30 V	PASS
Mains Frequency:	50.00 Hz	50.00 Hz	49.50 Hz	50.00 Hz	50.50 Hz	PASS
Mains Voltage CF:	1.415	1.415	1.340	1.416	1.490	PASS
Mains Voltage THD:	0.15 %	0.13 %	N/A	0.16 %	2.00 %	PASS
Real Power:	0.104 W	0.059 W	N/A	0.194 W	N/A	N/A
Apparent Power:	27.396 W	27.357 W	N/A	27.439 W	N/A	N/A
Power Factor:	0.002	N/A	N/A	N/A	N/A	N/A

Efficiency Graph

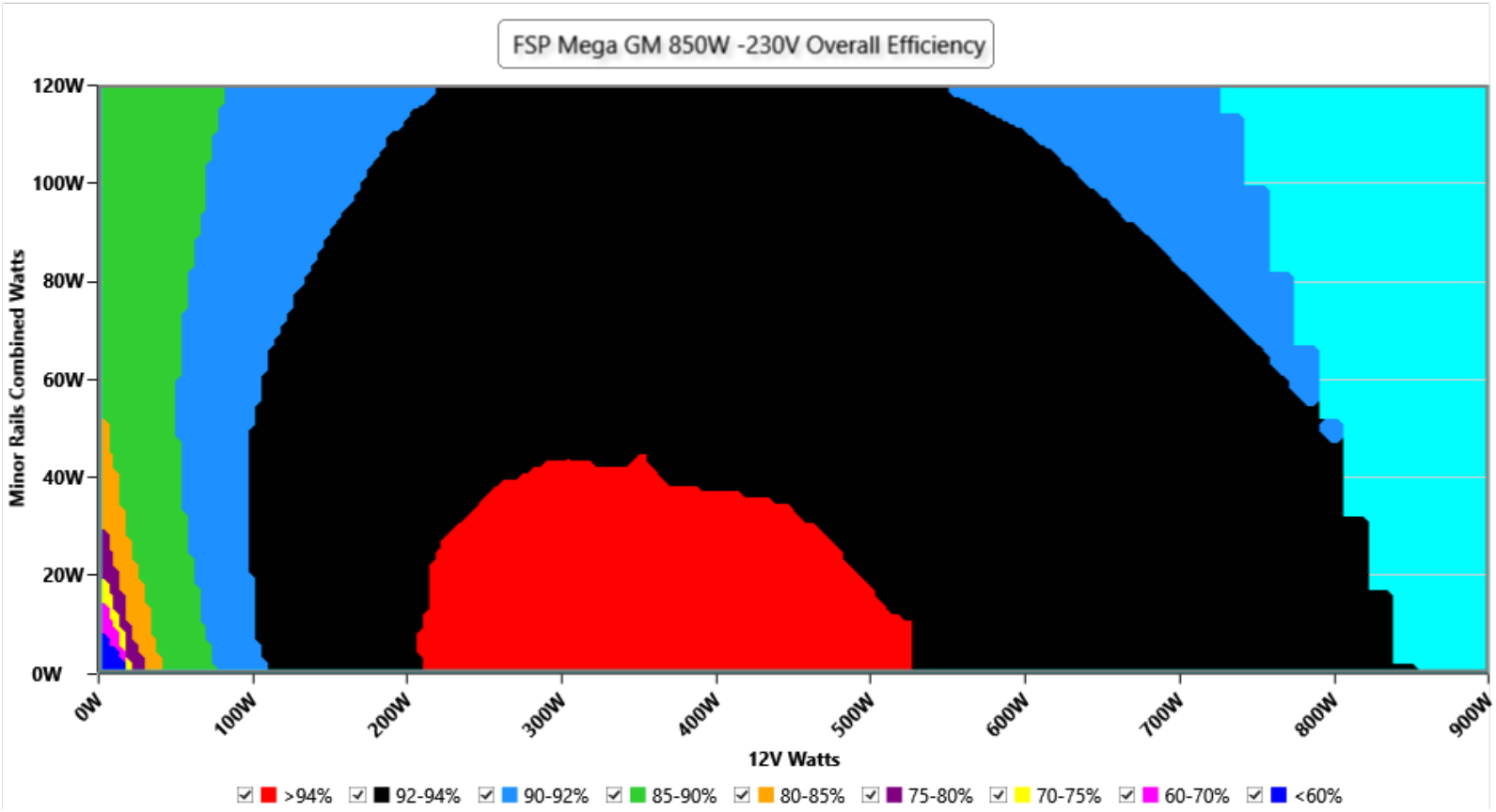
115V



INFO

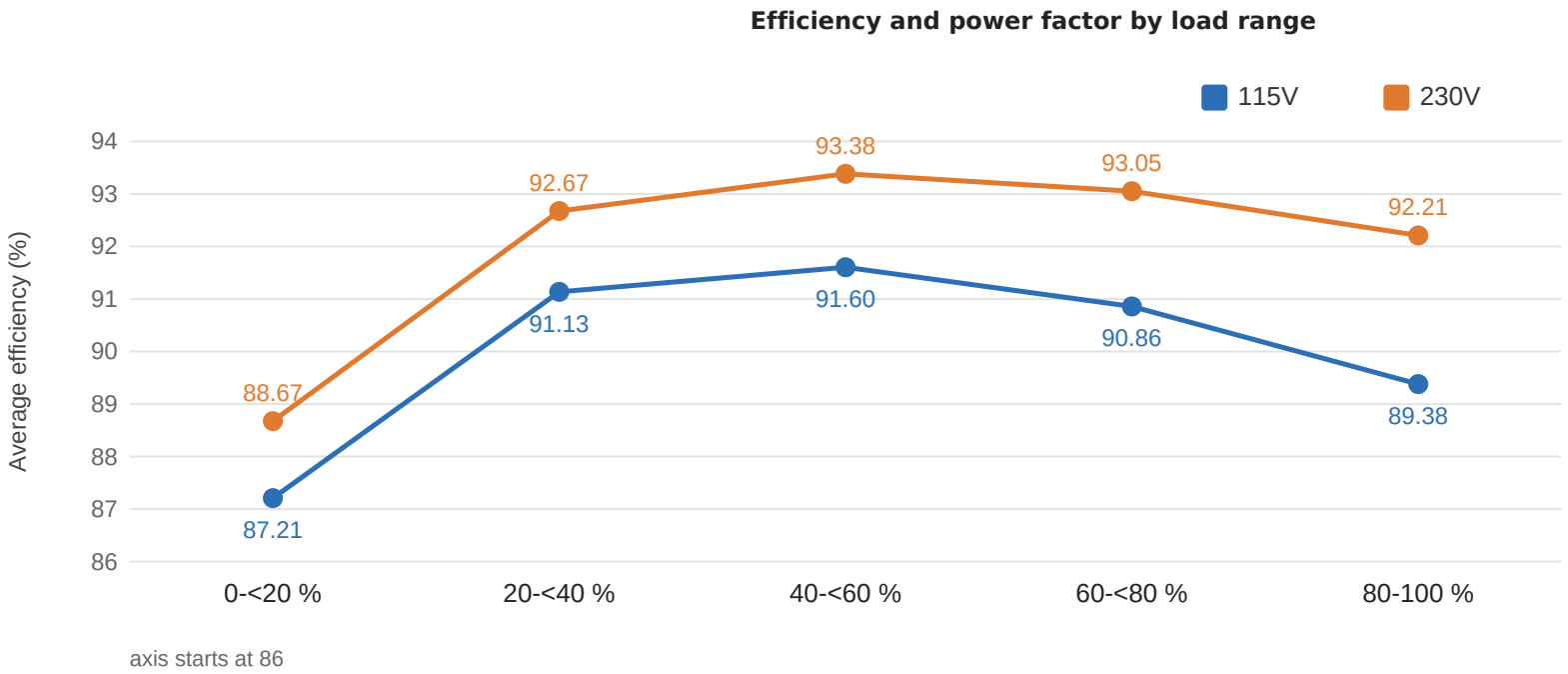
This graph depicts the PSU`s efficiency throughout its entire operational range. For the generation of the efficiency and noise graphs we set our loaders to auto mode through our custom-made software before trying thousands of possible load combinations

230V

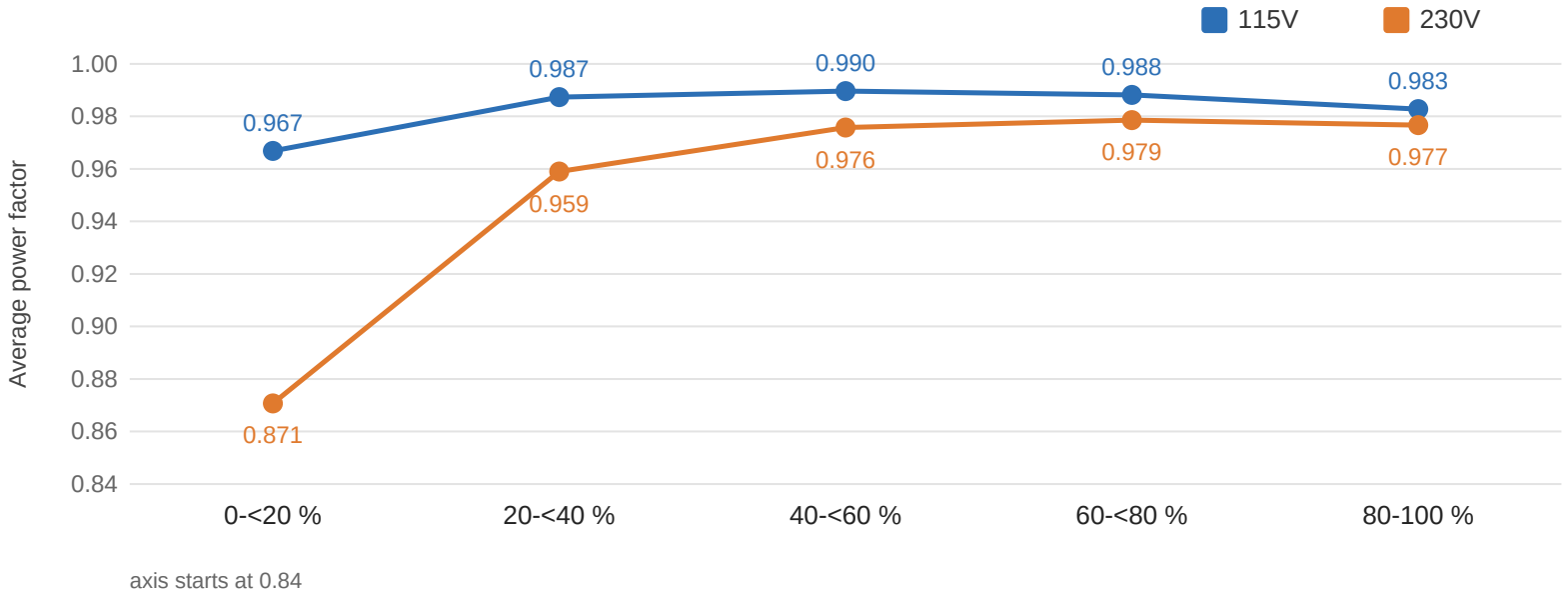


INFO

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



axis starts at 86



axis starts at 0.84

Load range	Points	Efficiency 115V	Efficiency 230V	PF 115V	PF 230V
0-<20 %	200 / 200	87.21%	88.67%	0.967	0.871
20-<40 %	318 / 318	91.13%	92.67%	0.987	0.959
40-<60 %	319 / 320	91.60%	93.38%	0.990	0.976
60-<80 %	318 / 317	90.86%	93.05%	0.988	0.979
80-100 %	326 / 326	89.38%	92.21%	0.983	0.977
70-100 % (High-Load)	486 / 486	89.76%	92.42%	0.984	0.977
All (published average)	1481 / 1481	90.26%	92.27%	0.984	0.959

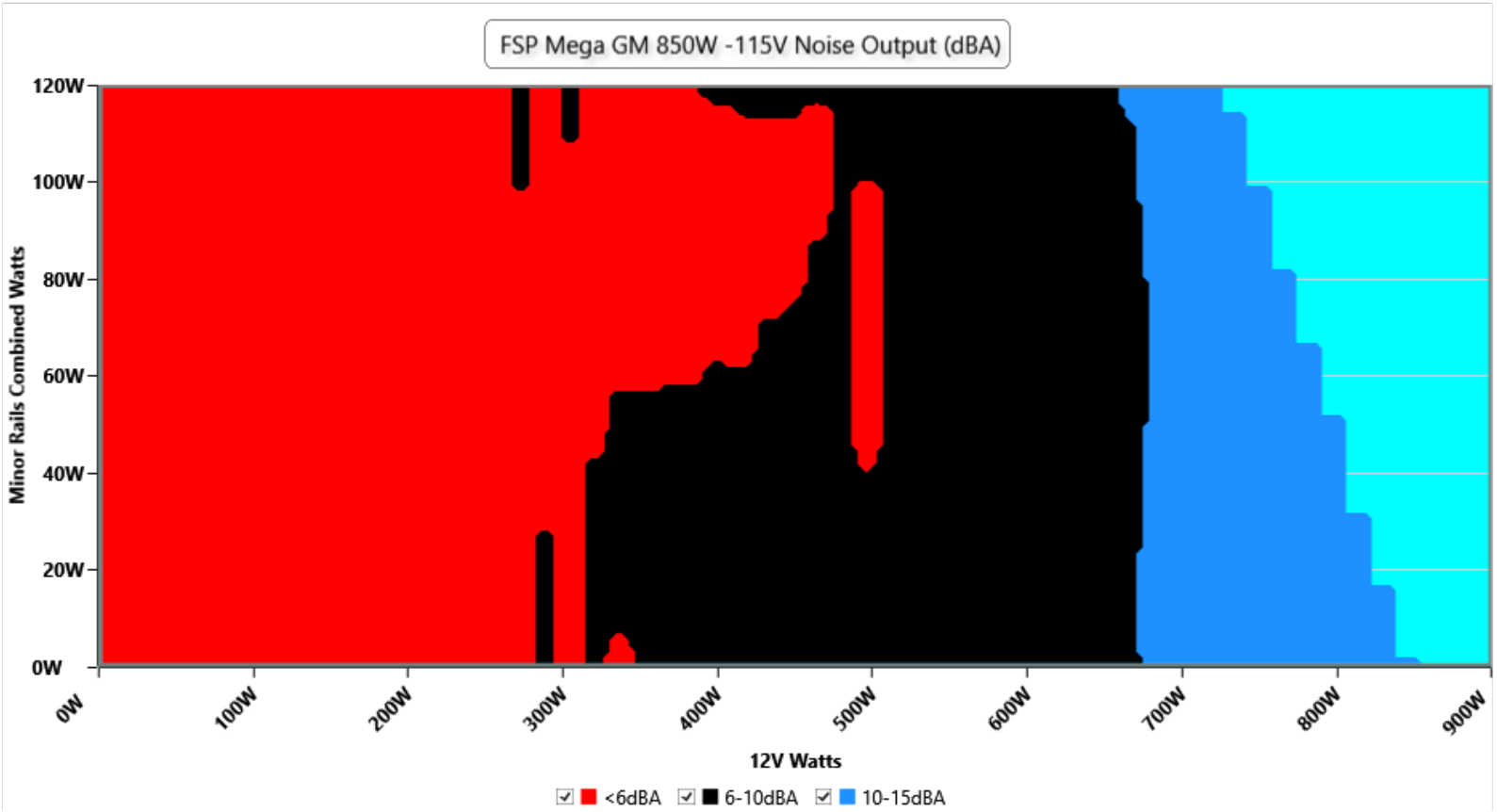
INFO

The average efficiency and power factor in five ranges of load. Calculated from the 1481 (115V) and 1481 (230V) load combinations of the certification sweep, the same data that ETA and LAMBDA use (test 0 excluded). Load is the total DC output as a share of the rated 850 W. These are plain averages of the valid readings, as for the ETA rating, so the ranges combined give back the published averages.

Informational. Not part of the ETA or LAMBDA rating.

Noise Graph

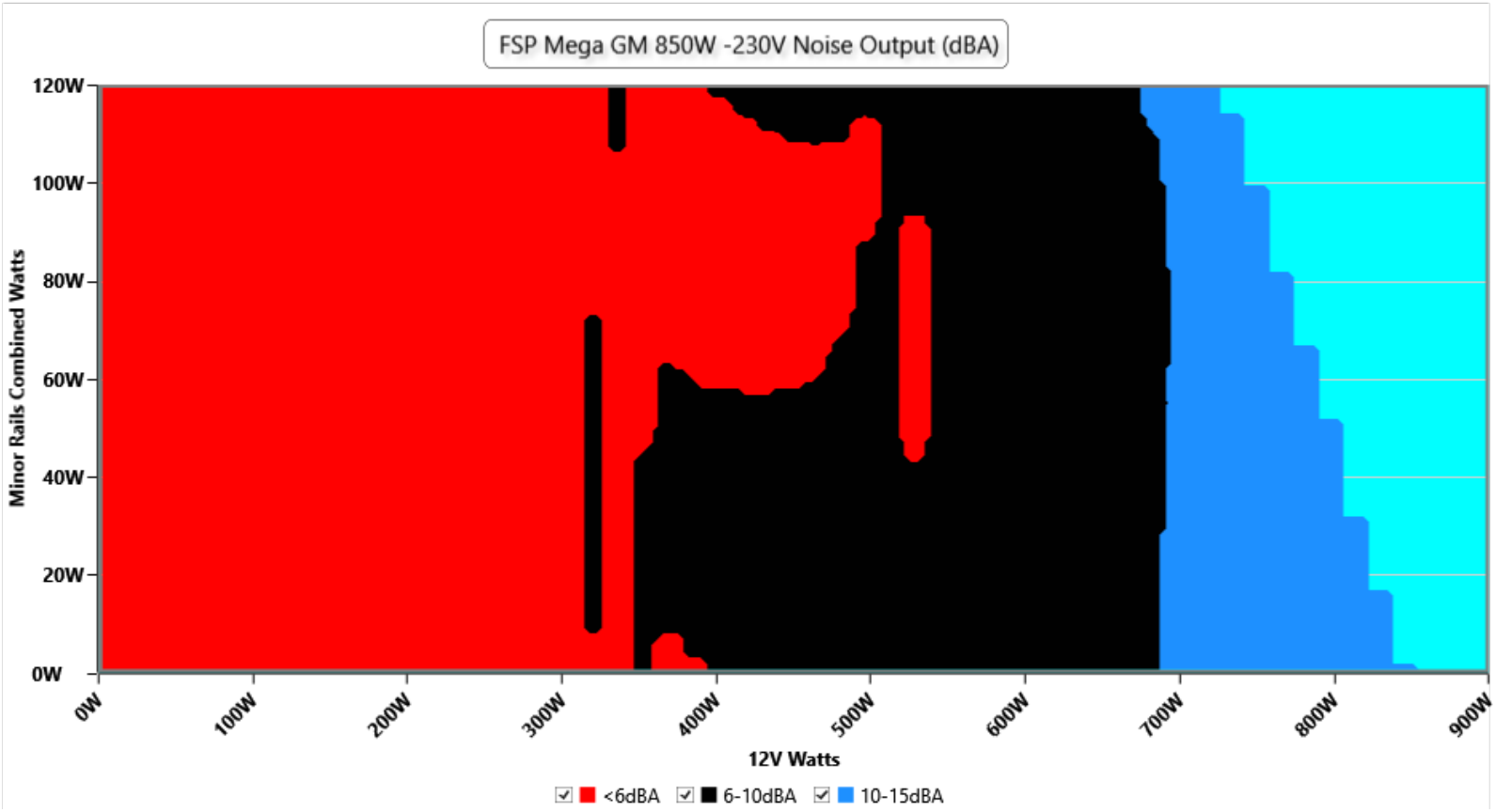
115V



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

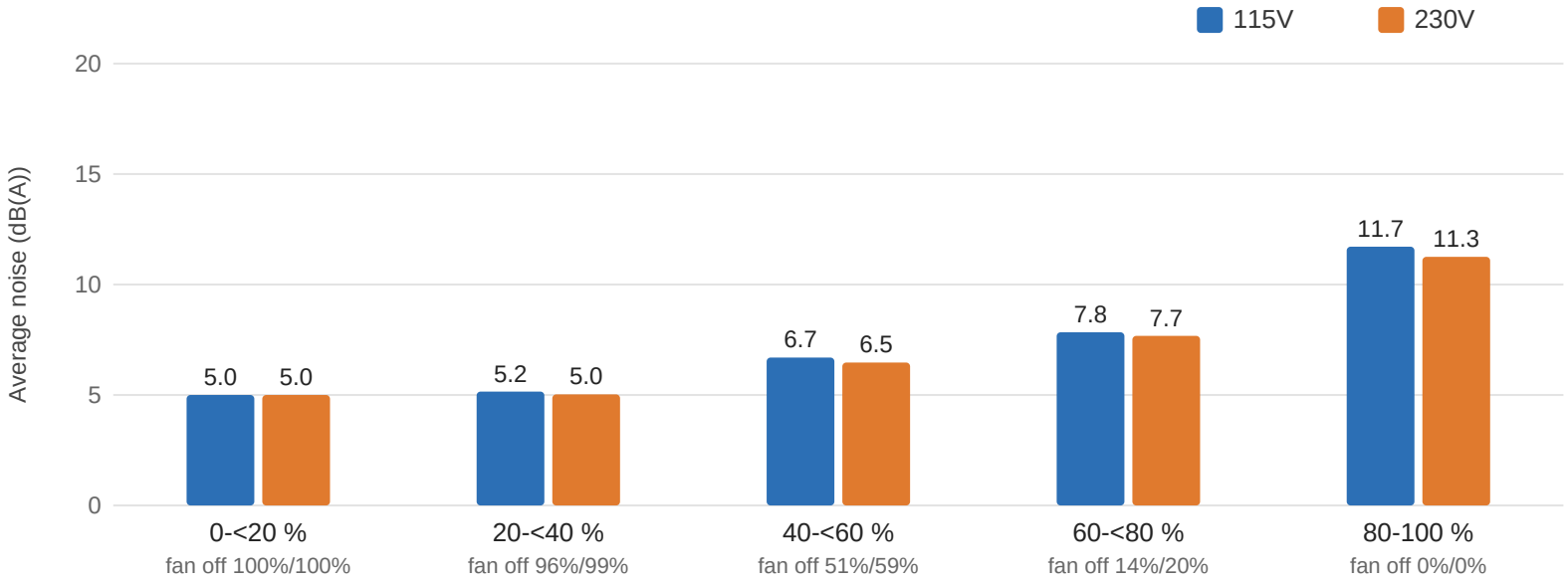
The PSU`s noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

Noise by load range

High-Load Index (70-100 % load)

Noise **10.9 dB(A)** at 115V and **10.4 dB(A)** at 230V · loudest point 14.0 dB(A)

Efficiency 89.76% / 92.42% · power factor 0.984 / 0.977 (115V / 230V)



Load range	Noise 115V avg (loudest)	Noise 230V avg (loudest)	Fan off 115V / 230V
0-<20 %	5.0 (5.0)	5.0 (5.0)	100% / 100%
20-<40 %	5.2 (8.3)	5.0 (8.3)	96% / 99%
40-<60 %	6.7 (8.3)	6.5 (8.3)	51% / 59%
60-<80 %	7.8 (8.3)	7.7 (8.3)	14% / 20%
80-100 %	11.7 (14.0)	11.3 (14.0)	0% / 0%
70-100 % (High-Load)	10.9 (14.0)	10.4 (14.0)	0% / 2%
All (published average)	8.3 (14.0)	8.0 (14.0)	48% / 52%

INFO

The average noise in five ranges of load, the share of points with the fan stopped (semi-passive operation), and the High-Load Index: the same figures for all points at 70 % of the rated output and above. Calculated from the 1481 (115V) and 1481 (230V) load combinations of the certification sweep, the same data that ETA and LAMBDA use (test 0 excluded). Load is the total DC output as a share of the rated 850 W. Noise is averaged on the energy scale, as for LAMBDA, so the ranges combined give back the published average noise. Each load combination is held for about five seconds; the stabilized readings at fixed loads are under "Noise under high ambient temperature".

Informational. Not part of the ETA or LAMBDA rating.

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) · 31.2 °C	0 RPM · <6.0 dB(A) · 43.3 °C	fan off in both
20%	0 RPM · <6.0 dB(A) · 32.6 °C	0 RPM · <6.0 dB(A) · 43.4 °C	fan off in both
50%	0 RPM · <6.0 dB(A) · 35.5 °C	0 RPM · <6.0 dB(A) · 54.0 °C	fan off in both
100%	609 RPM · 9.1 dB(A) · 30.8 °C	1268 RPM · 33.7 dB(A) · 46.0 °C	**+24.6 dB(A)**

230V

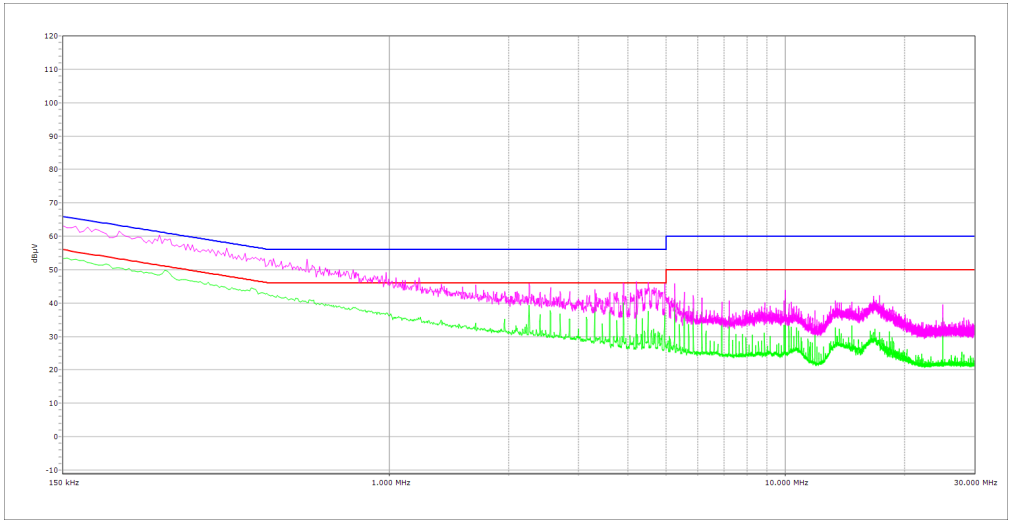
Load	Normal ambient fan · noise · intake	High ambient fan · noise · intake	Noise change
10%	0 RPM · <6.0 dB(A) · 31.2 °C	0 RPM · <6.0 dB(A) · 49.1 °C	fan off in both
20%	0 RPM · <6.0 dB(A) · 33.1 °C	0 RPM · <6.0 dB(A) · 49.2 °C	fan off in both
50%	0 RPM · <6.0 dB(A) · 36.5 °C	0 RPM · <6.0 dB(A) · 55.1 °C	fan off in both
100%	612 RPM · 9.1 dB(A) · 30.4 °C	1174 RPM · 31.4 dB(A) · 45.6 °C	**+22.3 dB(A)**

INFO

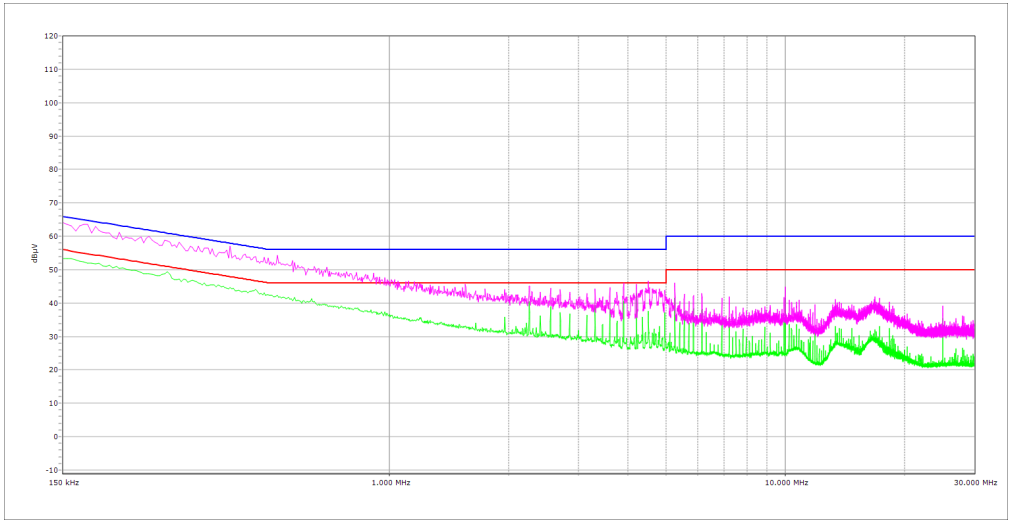
Fan speed, noise and the measured intake temperature at 10, 20, 50 and 100 % load, from the two load regulation tests: at normal ambient (about 30-32 °C) and at high ambient (about 40-47 °C). These are stabilized readings at fixed loads, not averages over the certification sweep, so they are indicative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

Informational. Not part of the ETA or LAMBDA rating.

Conducted Emissions EN 55032 & CISPR 32



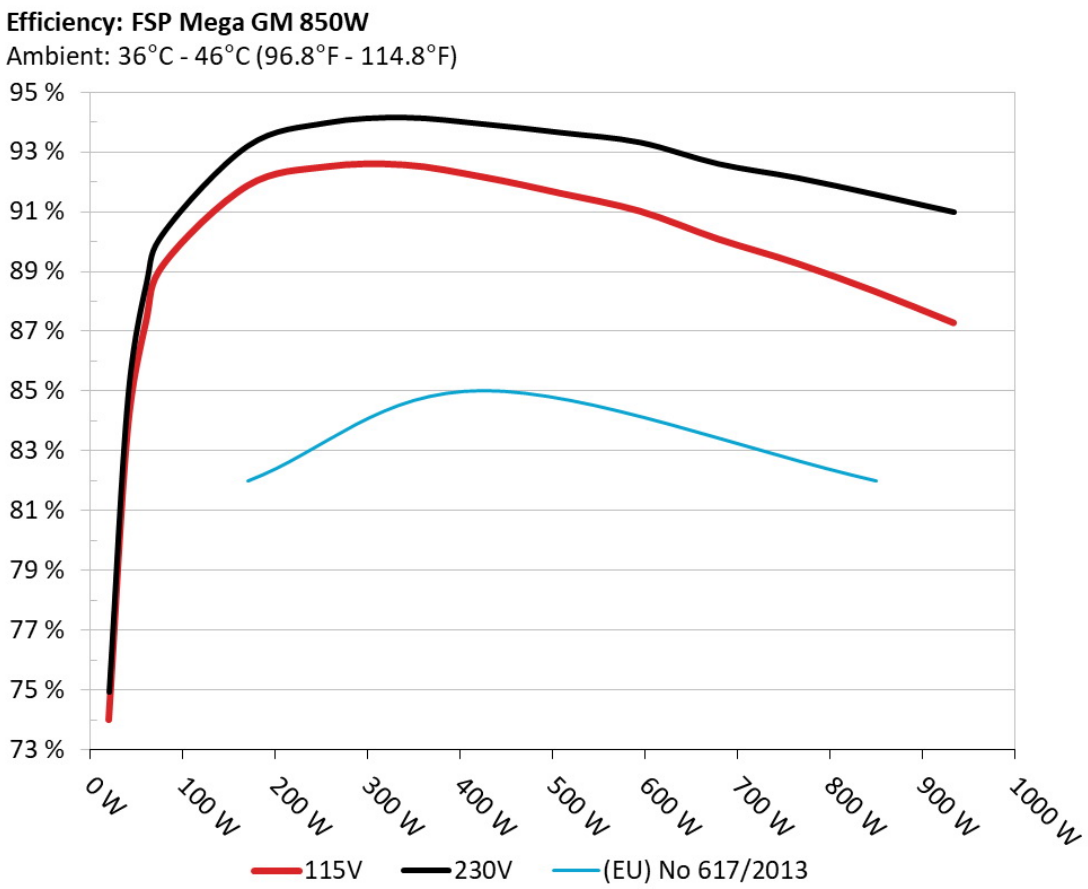
NEUTRAL



PHASE

Indicative Performance

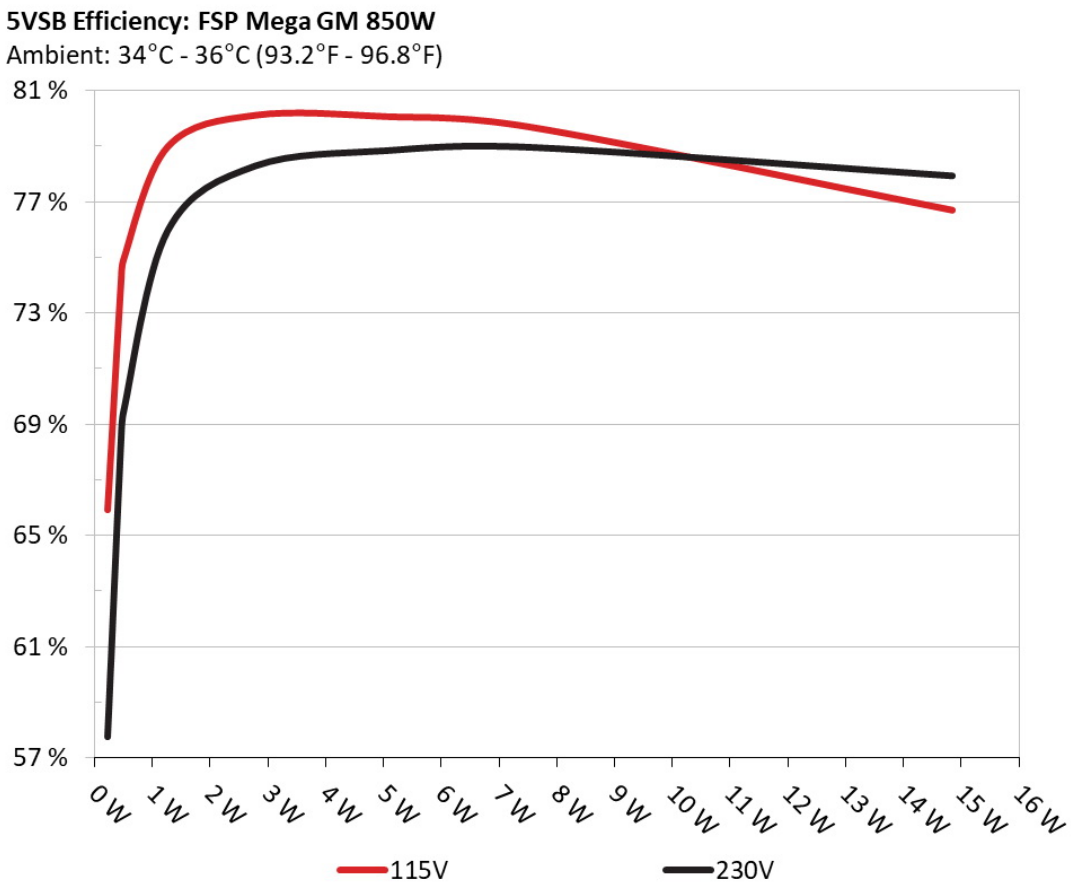
Efficiency under high ambient temperature



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



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**	0.23W	65.943%	0.043
	5.098V	0.349W		115.04V
2	**0.09A**	0.459W	74.036%	0.074
	5.096V	0.62W		115.04V
3	**0.55A**	2.791W	80.119%	0.252
	5.073V	3.483W		115.04V
4	**1A**	5.052W	80.07%	0.309
	5.051V	6.309W		115.04V
5	**1.5A**	7.541W	79.694%	0.34
	5.027V	9.463W		115.04V
6	**3A**	14.853W	76.708%	0.376
	4.951V	19.363W		115.03V

230V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	**0.045A**	0.23W	57.762%	0.015
	5.101V	0.399W		229.99V
2	**0.09A**	0.459W	68.304%	0.025
	5.097V	0.673W		229.99V
3	**0.55A**	2.79W	78.281%	0.119
	5.073V	3.564W		230V
4	**1A**	5.051W	78.829%	0.18
	5.05V	6.409W		230V
5	**1.5A**	7.539W	78.952%	0.224
	5.025V	9.55W		229.99V
6	**3A**	14.856W	77.924%	0.287
	4.952V	19.064W		229.99V

Protection Features

OCP (Normal @ 32.0°C)	12V: 101.40A (143.16%), 12.068V 5V: 24.2A (121.00%), 5.083V 3.3V: 28.3A (141.50%), 3.335V 5VSB: 3.6A (120.00%), 4.916V
OCP (Hot @ 44.1°C)	12V: 101.40A (143.16%), 12.077V 5V: 23.5A (117.50%), 5.087V 3.3V: 27.8A (139.00%), 3.338V 5VSB: 3.6A (120.00%), 4.915V
OPP (Normal @ 32.0°C)	1212.72W (142.67%)
OPP (Hot @ 42.8°C)	1212.71W (142.67%)
OTP	✓ (98°C @ Heat Sink)
SCP	12V to Earth: ✓ 5V to Earth: ✓ 3.3V to Earth: ✓ 5VSB to Earth: ✓ -12V to Earth: ✓
PWR_OK	Proper Operation
UVP (Full Load @ 90V)	✓
UVP (No Damage @ 80V)	✓
Conducted Emissions EN55032 & CISPR 32	✓
NLO	✓
Fan Failure Protection	✗
SIP	Surge: MOV Inrush: NTC & Bypass Relay

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
10%	**5.222A**	**1.957A**	**1.968A**	**0.991A**	85.014	89.145%	0	<6.0	43.34°C	0.963
	12.145V	5.109V	3.354V	5.048V	95.366				40.15°C	115.01V
20%	**11.458A**	**2.937A**	**2.953A**	**1.192A**	169.978	91.886%	0	<6.0	43.37°C	0.986
	12.138V	5.108V	3.353V	5.034V	184.989				40.8°C	114.98V
30%	**18.046A**	**3.427A**	**3.446A**	**1.395A**	254.987	92.523%	0	<6.0	45.98°C	0.987
	12.132V	5.107V	3.353V	5.02V	275.589				41.13°C	114.95V
40%	**24.647A**	**3.918A**	**3.939A**	**1.599A**	340.069	92.587%	0	<6.0	49.12°C	0.989
	12.126V	5.106V	3.351V	5.005V	367.297				41.67°C	114.92V
50%	**30.889A**	**4.898A**	**4.926A**	**1.803A**	424.882	92.18%	0	<6.0	54.04°C	0.99
	12.120V	5.105V	3.35V	4.991V	460.927				42.08°C	114.89V
60%	**37.112A**	**5.879A**	**5.913A**	**2A**	509.356	91.631%	622	9.8	42.71°C	0.989
	12.114V	5.104V	3.349V	4.978V	555.888				63.06°C	114.86V
70%	**43.414A**	**6.864A**	**6.903A**	**2.218A**	594.712	91.037%	628	10.1	43.17°C	0.988
	12.107V	5.1V	3.347V	4.96V	653.263				61.86°C	114.83V
80%	**49.724A**	**7.845A**	**7.893A**	**2.322A**	679.53	90.103%	673	12.4	43.76°C	0.986
	12.100V	5.098V	3.345V	4.952V	754.175				63.87°C	114.8V
90%	**56.435A**	**8.337A**	**8.374A**	**2.428A**	764.95	89.287%	932	24	44.03°C	0.983
	12.093V	5.096V	3.344V	4.943V	856.737				65.59°C	114.77V
100%	**62.895A**	**8.832A**	**8.887A**	**3.066A**	849.759	88.342%	1268	33.7	45.95°C	0.978
	12.085V	5.094V	3.342V	4.893V	961.895				65.43°C	114.73V
110%	**69.234A**	**9.819A**	**9.971A**	**3.066A**	934.336	87.297%	1588	40.6	45.82°C	0.973
	12.076V	5.091V	3.34V	4.893V	1070.302				65.41°C	114.7V
CL1	**0.116A**	**14.171A**	**14.264A**	**0A**	121.293	84.678%	626	9.9	41.28°C	0.977
	12.142V	5.094V	3.344V	5.147V	143.24				57.08°C	114.99V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
CL2	**0.115A**	**19.634A**	**0A**	**0A**	101.363	83.741%	621	9.8	41.44°C	0.973
	12.146V	5.092V	3.355V	5.16V	121.044				53.27°C	115V
CL3	**0.114A**	**0A**	**19.739A**	**0A**	67.4	79.2%	620	9.8	41.31°C	0.96
	12.145V	5.112V	3.344V	5.117V	85.101				50.93°C	115.02V
CL4	**70.277A**	**0A**	**0A**	**0.002A**	849.54	89.275%	742	15.9	45.38°C	0.98
	12.089V	5.108V	3.35V	5.1V	951.605				62.98°C	114.74V

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
10%	**5.219A**	**1.956A**	**1.967A**	**0.99A**	85.008	90.357%	0	<6.0	49.12°C	0.849
	12.150V	5.112V	3.356V	5.049V	94.082				40.25°C	229.98V
20%	**11.452A**	**2.935A**	**2.951A**	**1.192A**	169.957	93.196%	0	<6.0	49.21°C	0.937
	12.143V	5.11V	3.355V	5.036V	182.365				40.64°C	229.97V
30%	**18.039A**	**3.426A**	**3.445A**	**1.394A**	254.971	93.968%	0	<6.0	49.49°C	0.961
	12.136V	5.109V	3.353V	5.021V	271.339				41.25°C	229.95V
40%	**24.639A**	**3.916A**	**3.938A**	**1.598A**	340.061	94.148%	0	<6.0	52.52°C	0.972
	12.130V	5.108V	3.353V	5.006V	361.197				41.69°C	229.94V
50%	**30.881A**	**4.897A**	**4.925A**	**1.803A**	424.876	93.931%	0	<6.0	55.08°C	0.976
	12.123V	5.106V	3.351V	4.991V	452.328				42.12°C	229.92V
60%	**37.109A**	**5.879A**	**5.913A**	**2A**	509.351	93.643%	628	10.1	42.77°C	0.977
	12.115V	5.103V	3.349V	4.976V	543.93				54.04°C	229.9V
70%	**43.421A**	**6.865A**	**6.905A**	**2.218A**	594.721	93.315%	629	10.1	43.37°C	0.978
	12.105V	5.1V	3.346V	4.959V	637.328				52.89°C	229.89V
80%	**49.730A**	**7.845A**	**7.893A**	**2.322A**	679.541	92.597%	680	13	43.69°C	0.979
	12.098V	5.097V	3.345V	4.952V	733.868				54.38°C	229.87V
90%	**56.445A**	**8.338A**	**8.375A**	**2.428A**	764.964	92.131%	866	21.3	44.4°C	0.977
	12.091V	5.096V	3.343V	4.943V	830.302				53.8°C	229.86V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
100%	**62.906A**	**8.833A**	**8.888A**	**3.065A**	849.777	91.571%	1174	31.4	45.62°C	0.974
	12.083V	5.094V	3.342V	4.894V	928.001				52.1°C	229.84V
110%	**69.245A**	**9.82A**	**9.972A**	**3.066A**	934.344	90.986%	1503	38.7	46.21°C	0.973
	12.074V	5.091V	3.339V	4.893V	1026.914				51.56°C	229.83V
CL1	**0.116A**	**14.171A**	**14.265A**	**0A**	121.295	86.176%	627	9.9	41.53°C	0.914
	12.141V	5.094V	3.344V	5.146V	140.753				50.54°C	229.97V
CL2	**0.115A**	**19.634A**	**0A**	**0A**	101.366	84.925%	622	9.8	41.9°C	0.893
	12.146V	5.092V	3.355V	5.16V	119.359				49.15°C	229.97V
CL3	**0.114A**	**0A**	**19.74A**	**0A**	67.401	80.264%	620	9.8	41.11°C	0.831
	12.146V	5.112V	3.344V	5.117V	83.973				47.61°C	229.98V
CL4	**70.284A**	**0A**	**0A**	**0.002A**	849.545	92.394%	745	16	45.69°C	0.975
	12.088V	5.108V	3.35V	5.1V	919.484				52.94°C	229.84V

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])	Temps (In/Out)	PF/AC Volts
20W	**1.223A**	**0.489A**	**0.492A**	**0.196A**	20.003	74%	0	<6.0	37.2°C	0.861
	12.145V	5.109V	3.354V	5.097V	27.031				36.23°C	115.03V
40W	**2.692A**	**0.685A**	**0.689A**	**0.295A**	40.006	83.605%	0	<6.0	39.17°C	0.927
	12.145V	5.11V	3.355V	5.093V	47.851				37.7°C	115.02V
60W	**4.161A**	**0.881A**	**0.885A**	**0.393A**	60.008	87.3%	0	<6.0	40.41°C	0.948
	12.145V	5.111V	3.355V	5.087V	68.737				38.95°C	115.02V
80W	**5.626A**	**1.076A**	**1.082A**	**0.492A**	79.966	89.283%	0	<6.0	43.3°C	0.96
	12.145V	5.111V	3.355V	5.081V	89.565				39.25°C	115.01V

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
20W	**1.224A**	**0.489A**	**0.492A**	**0.196A**	20.005	74.935%	0	<6.0	38.63°C	0.534
	12.139V	5.112V	3.356V	5.101V	26.697				36.04°C	229.99V
40W	**2.690A**	**0.685A**	**0.688A**	**0.294A**	40.003	84.707%	0	<6.0	40.82°C	0.711
	12.151V	5.113V	3.357V	5.096V	47.226				37.53°C	229.99V
60W	**4.159A**	**0.88A**	**0.885A**	**0.393A**	60.003	88.571%	0	<6.0	44.96°C	0.792
	12.150V	5.113V	3.357V	5.089V	67.745				38.21°C	229.98V
80W	**5.624A**	**1.076A**	**1.081A**	**0.492A**	79.953	90.342%	0	<6.0	46.68°C	0.84
	12.149V	5.114V	3.357V	5.083V	88.501				39.11°C	229.98V

The results above are not used in the certification process

Ripple Measurements

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	25.07mV	16.61mV	16.98mV	16.11mV	Pass
20% Load	26.35mV	16.86mV	17.03mV	16.83mV	Pass
30% Load	26.29mV	16.61mV	16.27mV	16.98mV	Pass
40% Load	27.93mV	17.32mV	16.98mV	19.23mV	Pass
50% Load	29.93mV	19.16mV	18.98mV	21.18mV	Pass
60% Load	30.13mV	19.31mV	19.75mV	22.40mV	Pass
70% Load	31.87mV	21.10mV	18.83mV	25.17mV	Pass
80% Load	33.51mV	20.49mV	20.62mV	25.06mV	Pass
90% Load	33.10mV	22.17mV	22.10mV	27.72mV	Pass
100% Load	34.30mV	27.74mV	24.87mV	30.51mV	Pass
110% Load	36.14mV	27.23mV	26.19mV	34.88mV	Pass
Crossload1	26.66mV	18.51mV	17.66mV	16.79mV	Pass
Crossload2	25.79mV	18.85mV	17.04mV	17.49mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
Crossload3	24.81mV	16.45mV	20.56mV	16.22mV	Pass
Crossload4	34.10mV	23.68mV	21.27mV	28.61mV	Pass

The results above are not used in the certification process

230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	25.02mV	17.01mV	16.42mV	16.11mV	Pass
20% Load	25.38mV	16.86mV	16.32mV	16.42mV	Pass
30% Load	25.48mV	17.22mV	16.27mV	18.01mV	Pass
40% Load	26.86mV	17.98mV	18.01mV	19.79mV	Pass
50% Load	27.47mV	18.09mV	17.96mV	20.77mV	Pass
60% Load	28.86mV	19.16mV	18.01mV	22.25mV	Pass
70% Load	31.41mV	19.21mV	18.93mV	24.04mV	Pass
80% Load	31.26mV	20.84mV	19.64mV	24.35mV	Pass
90% Load	31.26mV	20.79mV	20.26mV	25.98mV	Pass
100% Load	32.38mV	21.67mV	20.74mV	26.74mV	Pass
110% Load	33.30mV	21.96mV	19.79mV	28.34mV	Pass
Crossload1	25.43mV	18.04mV	16.59mV	17.27mV	Pass
Crossload2	26.09mV	19.00mV	17.14mV	16.78mV	Pass
Crossload3	25.32mV	17.98mV	19.23mV	17.04mV	Pass
Crossload4	34.14mV	21.09mV	19.74mV	26.57mV	Pass

The results above are not used in the certification process

FSP Technology MEGA GM 850W



Top side



Power specifications label



Fan



PSU Internals

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 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

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