FSP Technology VITA GM 850W

Serial Number S4021000092

Lab ID FS85002470

Certification ID 252470

Test Result Report ID: 24PS2470A

Certificate Issue Date: Jun 11, 2024

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	VITA GM 850W
OEM/ODM	FSP
Serial Number	S4021000092
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	120mm Rifle Bearing Fan (D12SH-12)
Semi-Passive Operation	✗
Cybenetics Testing Information	
Lab ID	FS85002470
Date of receipt	May 21, 2024
Testing Date	Jun 11, 2024
Report Issued Date	Jun 11, 2024
Engineer Name	-
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

Cables and Connectors
(Non-accredited measurements)

Modular Cables				
Description	**Cable Count**	**Connector Count (Total)**	**Gauge**	In Cable Capacitors
ATX connector 20+4 pin (600mm)	1	1	18-22AWG	No
4+4 pin EPS12V (700mm)	2	2	16AWG	No
6+2 pin PCIe (650mm+150mm)	2	4	16-18AWG	No
12+4 pin PCIe (700mm) (600W)	1	1	16-24AWG	No

SATA (500mm+150mm+150mm+150mm)	1	4	18AWG	No
SATA (500mm+150mm) / 4-pin Molex (+155mm+100mm)	2	4 / 4	18-20AWG	No
AC Power Cord (1350mm) - C13 coupler	1	1	18AWG	-

Protection Features

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	100		850	15	3.6
Total Max. Power (W)		850				

Parts Description

General Data	
Manufacturer (OEM)	FSP
PCB Type	Double-Sided
Primary Side	
Transient Filter	4x Y caps, 2x X caps, 2x CM chokes, 1x MOV
Inrush Protection	1x NTC Thermistor SCK-056 (5 Ohm) & Relay
Bridge Rectifier(s)	2x GBU1506 (600V, 15A @ 100°C)
APFC MOSFETs	2x GP36S60YERD

APFC Boost Diode	1x Toshiba TRS8E65F (650V, 8A, @ 175°C)
Bulk Cap(s)	1x Nippon Chemi-con (450V, 680uF, 3,000h @ 105°C, KHS)
Main Switchers	2x Toshiba TK25A60X5 (600V, 25A, @ 150°C, Rds(on): 0.14Ohm)
APFC Controller	Champion CM6500UNX
Resonant Controller	Champion CU6901VPA
Topology	Primary side: APFC, Half-Bridge & LLC converter Secondary side: Synchronous Rectification & DC-DC converters
Secondary Side	
+12V MOSFETs	6x CYStek MTB1D6NO4RH8 (40V, 84A @ 100°C, Rds(on): 1.8mOhm)
5V & 3.3V	DC-DC Converters: 4x XSEMI XP3R303GMT-L (30V, 25A @ 70°C, Rds(on): 3.3mOhm) PWM Controller(s): UPI uP3861P
Filtering Capacitors	Electrolytic: 4x Nippon Chemi-Con (105°C, W) 2x Nippon Chemi-Con (1-5,000h @ 105°C,KZE), 2x Nippon Chemi-Con (5-6,000h @ 105°C, ZKH), Polymer: 4x Nippon Chemi-Con, 2x Apaq, 26x
Supervisor IC	IN1T703I-SDG
Fan Model	Yate Loon D12SH-12 (120mm, 12V, 0.30A, Rifle Bearing Fan)
5VSB Circuit	
TVS Diode	1x SMAJ15A
High Side Rectifier	US1MGR (1000V, 1A)
Standby PWM Controller	Grenery GR9230UK

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	✓

Performance Summary

115V

Accredited	
Average Efficiency (>1450 load combinations)	90.089%
Average Noise Output (>1450 Load Combinations)	21.74dBA
Average PF (>1450 Load Combinations)	0.978
Efficiency With 10W (≤500W) or 2% (>500W) Load	69.552%
Standby Power Consumption	0.0475W
Non-Accredited	
12V Ripple (Full Load)	21.80mV
5V Ripple (Full Load)	14.16mV
3.3V Ripple (Full Load)	18.45mV
5VSB Ripple (Full Load)	19.77mV
12V Load Regulation	0.54%
5V Load Regulation	1.39%
3.3V Load Regulation	2.34%
5VSB Load Regulation	2.41%
Inrush Current	32.270A

230V

Accredited	
Average Efficiency (>1450 load combinations)	92.157%
Average Noise Output (>1450 Load Combinations)	21.15dBA
Average PF (>1450 Load Combinations)	0.938
Efficiency With 10W (≤500W) or 2% (>500W) Load	67.428%
Standby Power Consumption	0.1404W
Non-Accredited	
12V Ripple (Full Load)	22.26mV
5V Ripple (Full Load)	13.24mV
3.3V Ripple (Full Load)	18.79mV

5VSB Ripple (Full Load)		17.59mV
12V Load Regulation		0.56%
5V Load Regulation		1.41%
3.3V Load Regulation		2.40%
5VSB Load Regulation		2.43%
Inrush Current		65.070A
12V Transient Response (200%)		11.50V
5V Transient Response (200%)		4.988V
3.3V Transient Response (200%)		3.187V
5VSB Transient Response (200%)		4.928V
Hold-Up Time & PWR_OK Signal		20.20ms
AC Loss to PWR_OK Hold Up Time		14.80ms
PWR_OK Inactive to DC Loss Delay		5.40ms
PSU Timings: T1 (20% / 100%)	49.0ms	49.0ms
PSU Timings: T3 (20% / 100%)	113.0ms	114.0ms
12V OCP (27.2°C / 41.7°C)	79.20A (111.82%), 12.007V	75.60A (106.73%), 12.027V
5V OCP (27.2°C / 41.7°C)	25.4A (127.00%), 5.071V	25.1A (125.50%), 5.072V
3.3V OCP (27.2°C / 41.7°C)	25.1A (125.50%), 3.327V	24.9A (124.50%), 3.327V
5VSB OCP (27.2°C / 41.7°C)	4A (133.33%), 4.987V	4A (133.33%), 4.993V
OPP (27.09°C / 41.93°C)	121.48%	116.77%

Hold-Up Time & PWR_OK Signal

Hold-Up Time (ms)	20.2
AC Loss to PWR_OK Hold Up Time (ms)	14.8
PWR_OK Inactive to DC Loss Delay (ms)	5.4

Stromverbrauch im Ruhezustand

Tables

115V

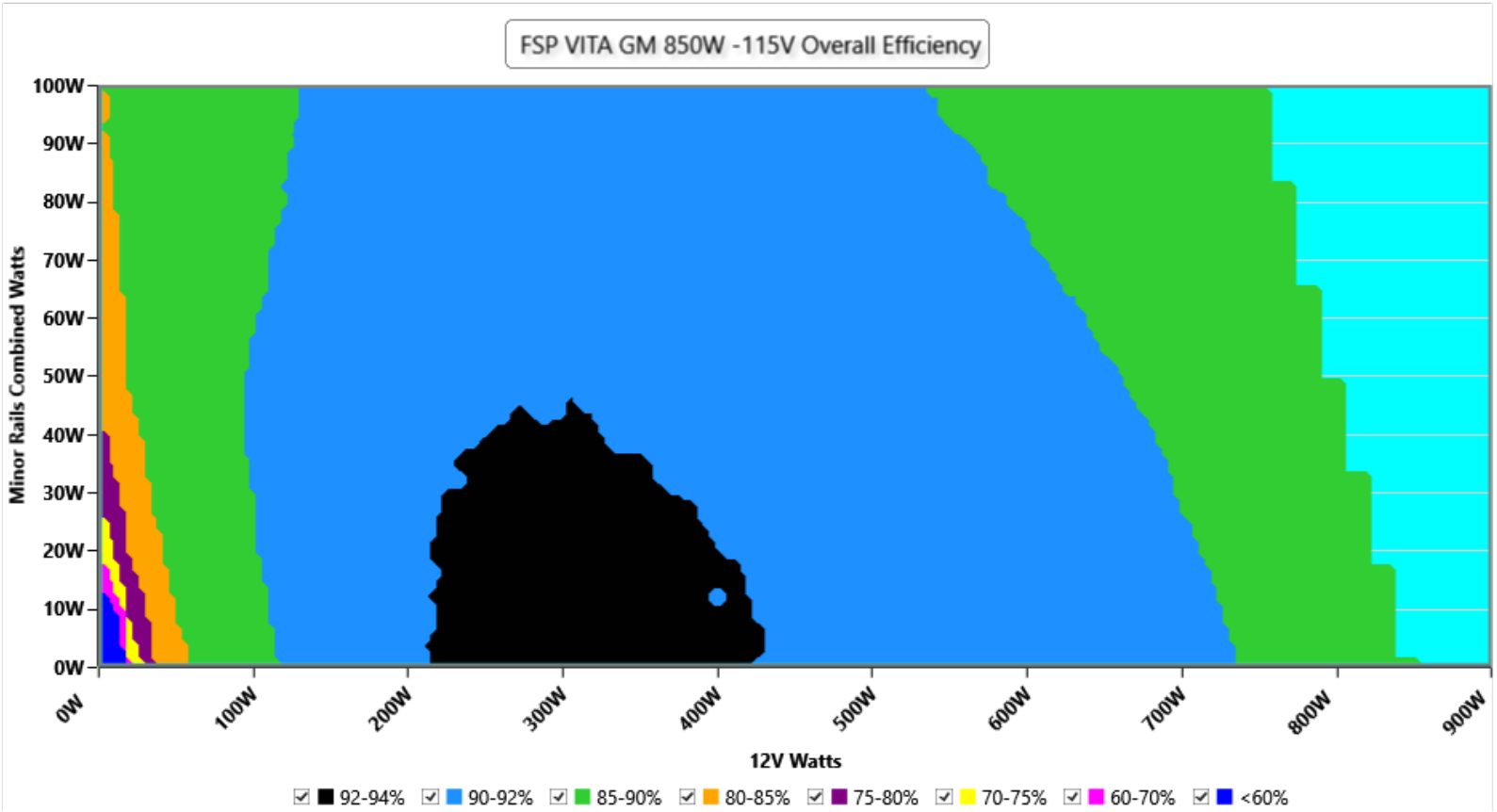
Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	115.08 V	115.04 V	113.85 V	115.11 V	116.15 V	PASS
Mains Frequency:	60.00 Hz	59.96 Hz	59.40 Hz	60.03 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.416	1.415	1.340	1.418	1.490	PASS
Mains Voltage THD:	0.13 %	0.09 %	N/A	0.19 %	2.00 %	PASS
Real Power:	0.048 W	0.005 W	N/A	0.087 W	N/A	N/A
Apparent Power:	13.056 W	12.996 W	N/A	13.124 W	N/A	N/A
Power Factor:	0.003	N/A	N/A	N/A	N/A	N/A

230V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	231.02 V	230.94 V	227.70 V	231.09 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:	1.417	1.416	1.340	1.418	1.490	PASS
Mains Voltage THD:	0.17 %	0.14 %	N/A	0.24 %	2.00 %	PASS
Real Power:	0.140 W	0.102 W	N/A	0.191 W	N/A	N/A
Apparent Power:	44.720 W	44.456 W	N/A	44.984 W	N/A	N/A
Power Factor:	0.003	N/A	N/A	N/A	N/A	N/A

Efficiency Graph

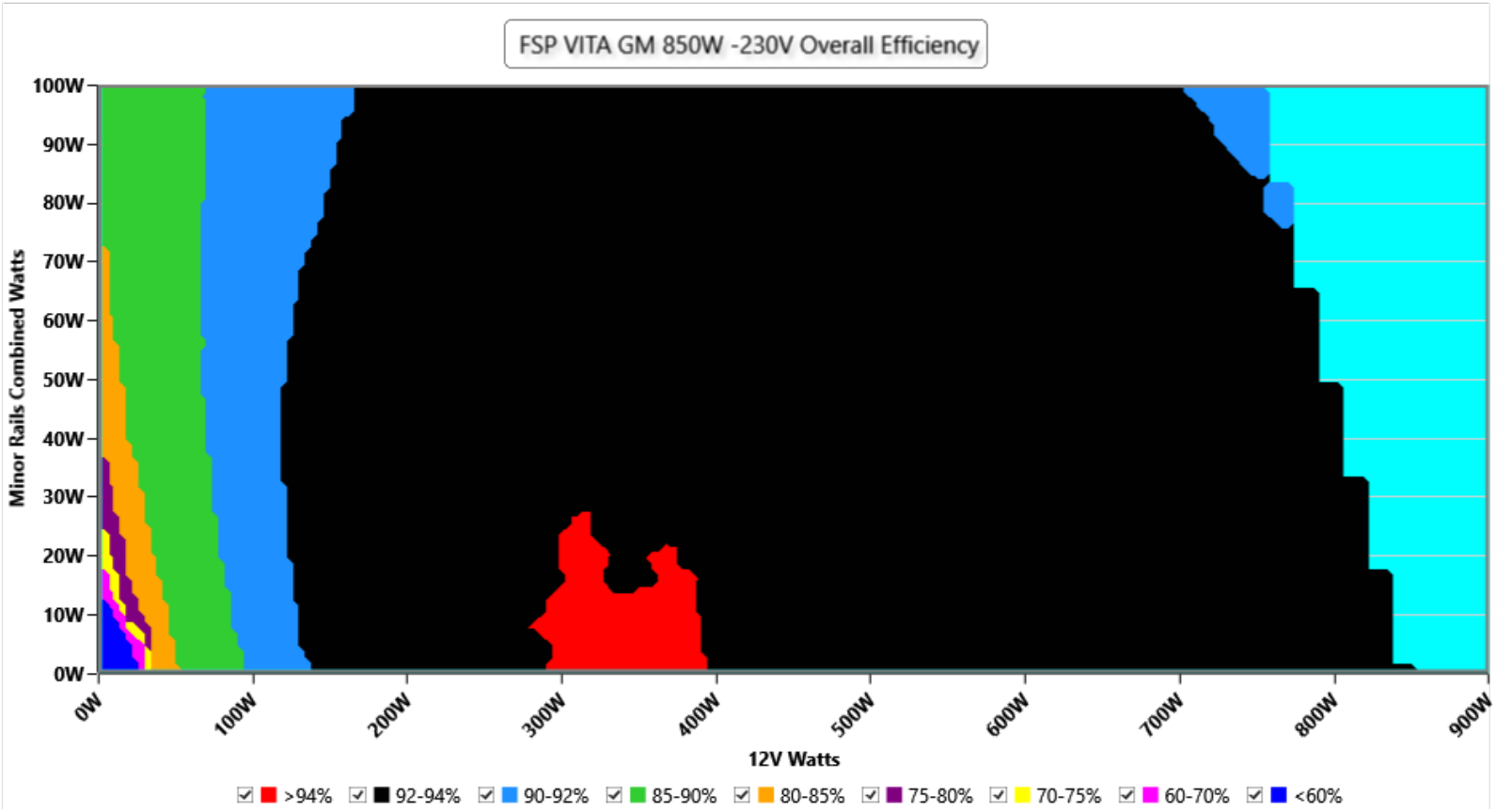
115V



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

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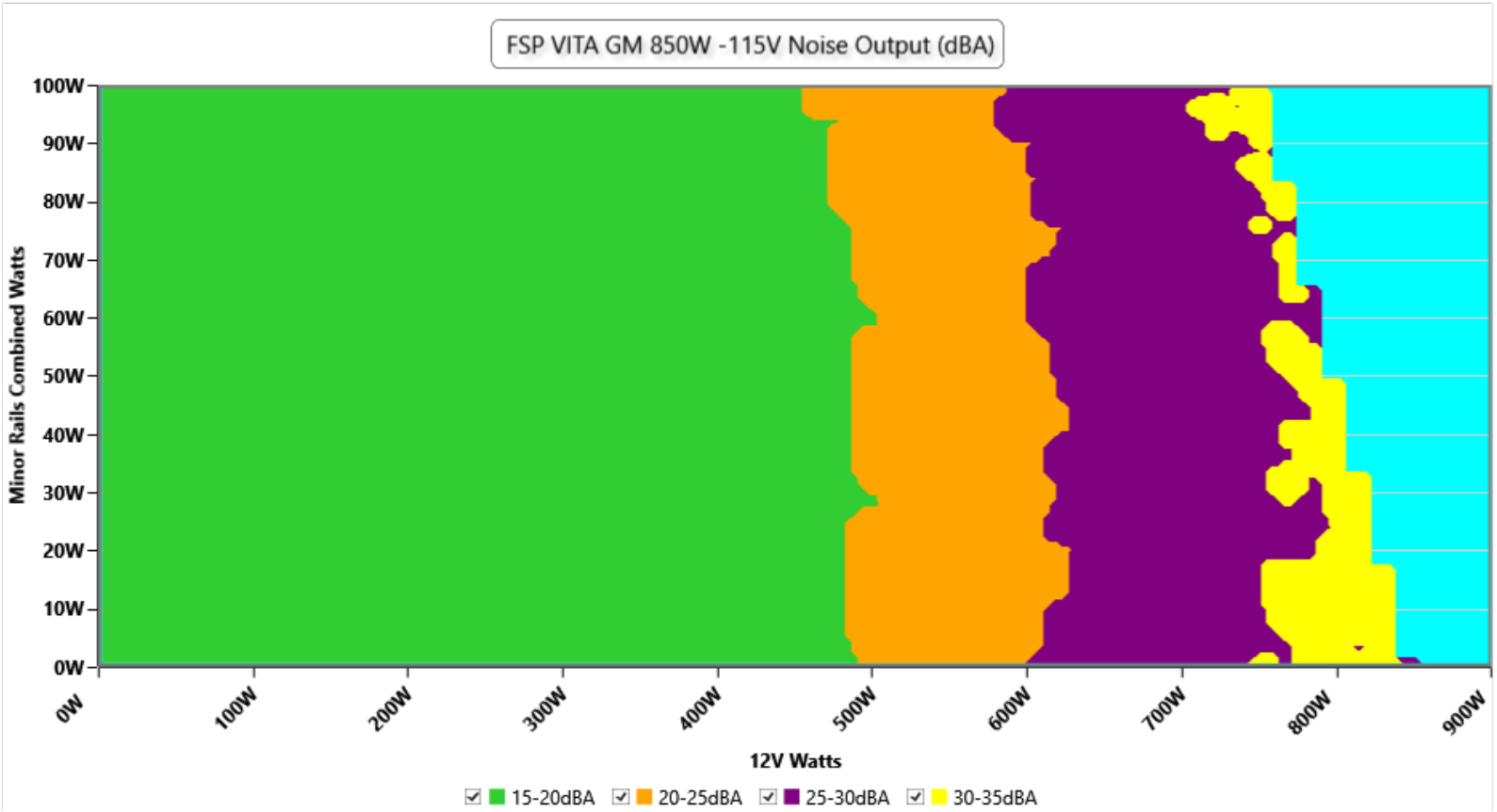
Noise Graph

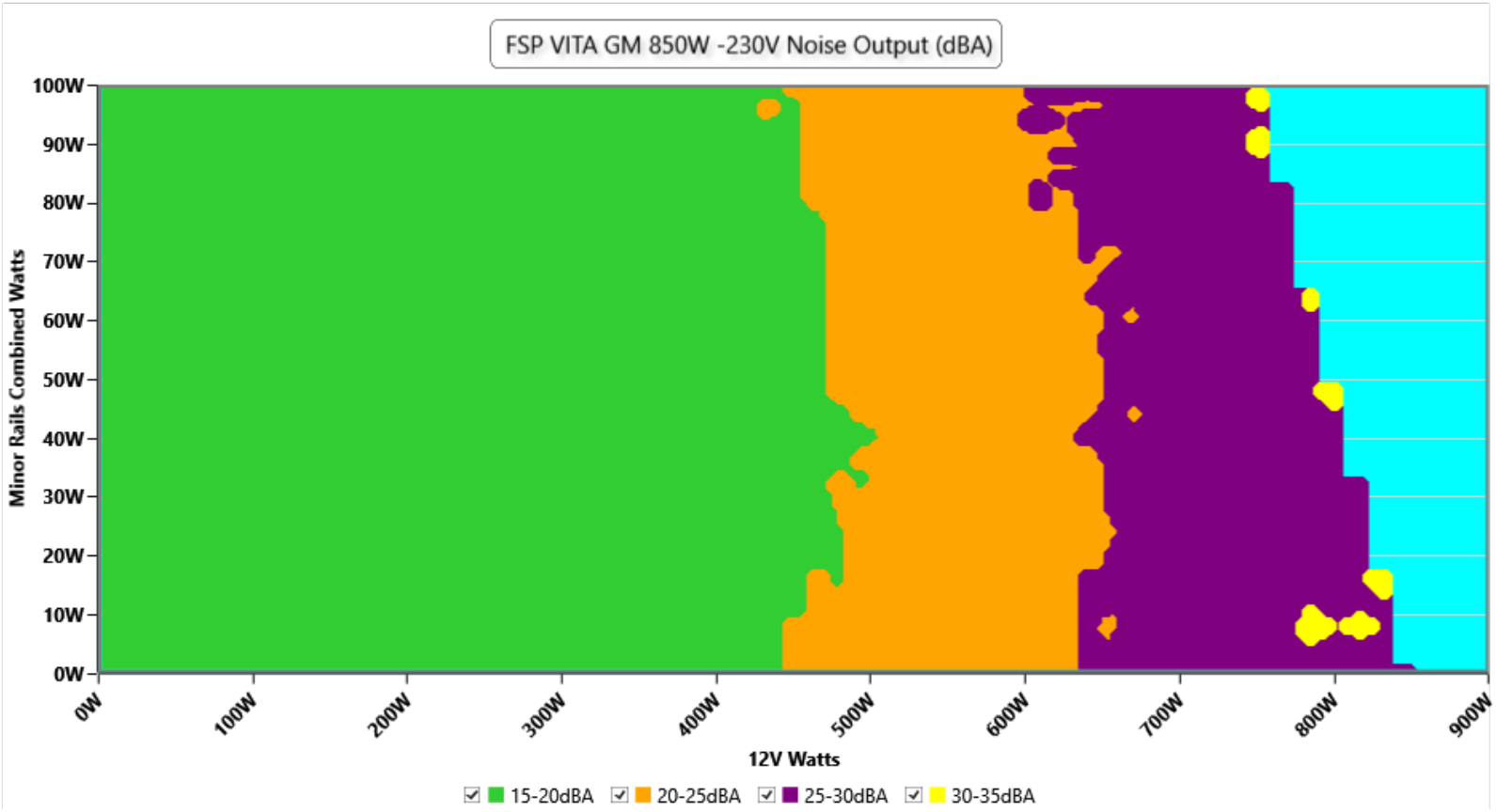
115V



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 under high ambient temperature (indicative)

115V

Load	Normal ambient fan · noise · intake	High ambient fan · noise · intake	Noise change
10%	728 RPM · 16.0 dB(A) · 30.9 °C	747 RPM · 16.8 dB(A) · 40.1 °C	**+0.8 dB(A)**
20%	730 RPM · 16.1 dB(A) · 30.3 °C	749 RPM · 16.9 dB(A) · 40.9 °C	**+0.8 dB(A)**
50%	730 RPM · 16.1 dB(A) · 30.3 °C	787 RPM · 17.4 dB(A) · 42.4 °C	**+1.3 dB(A)**
100%	730 RPM · 16.1 dB(A) · 30.9 °C	1522 RPM · 36.3 dB(A) · 45.2 °C	**+20.2 dB(A)**

230V

Load	Normal ambient fan · noise · intake	High ambient fan · noise · intake	Noise change
10%	726 RPM · 15.9 dB(A) · 29.9 °C	744 RPM · 16.7 dB(A) · 40.3 °C	**+0.8 dB(A)**
20%	730 RPM · 16.1 dB(A) · 30.2 °C	748 RPM · 16.8 dB(A) · 40.6 °C	**+0.7 dB(A)**
50%	736 RPM · 16.5 dB(A) · 30.4 °C	783 RPM · 17.2 dB(A) · 42.4 °C	**+0.7 dB(A)**
100%	1142 RPM · 28.7 dB(A) · 30.9 °C	1686 RPM · 39.7 dB(A) · 45.6 °C	**+11.0 dB(A)**

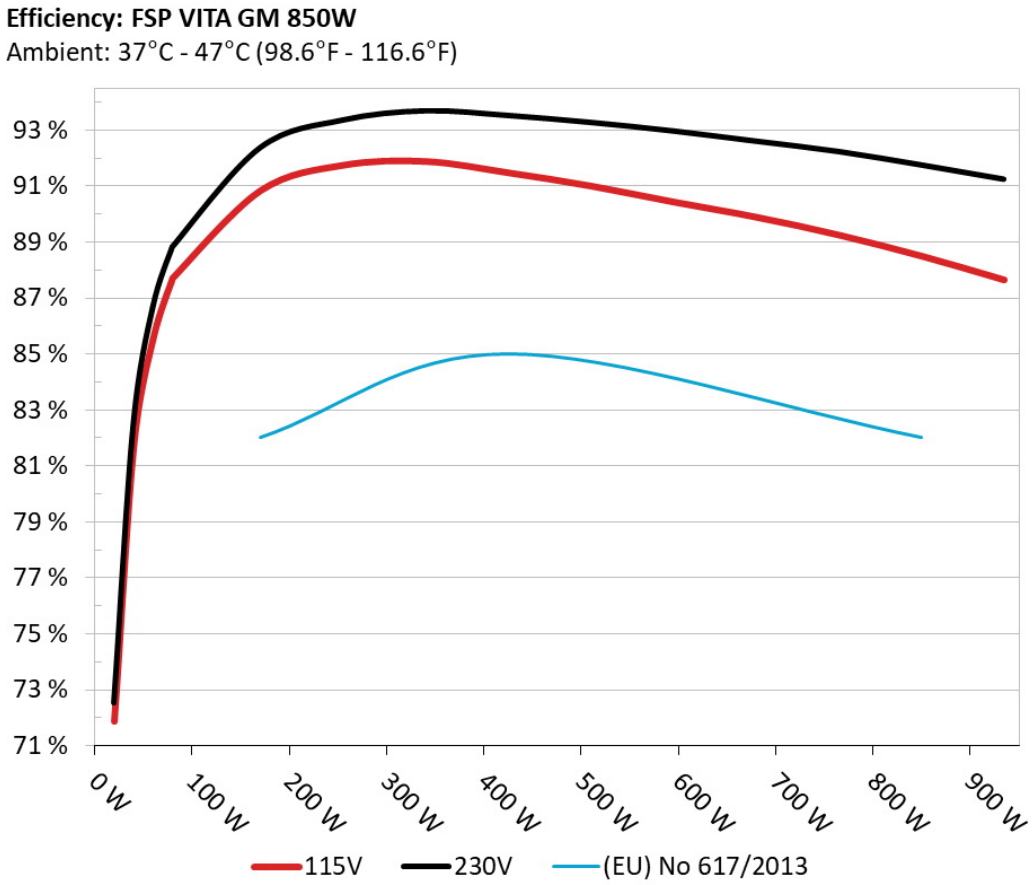
INFO

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: 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.

Indicative Performance

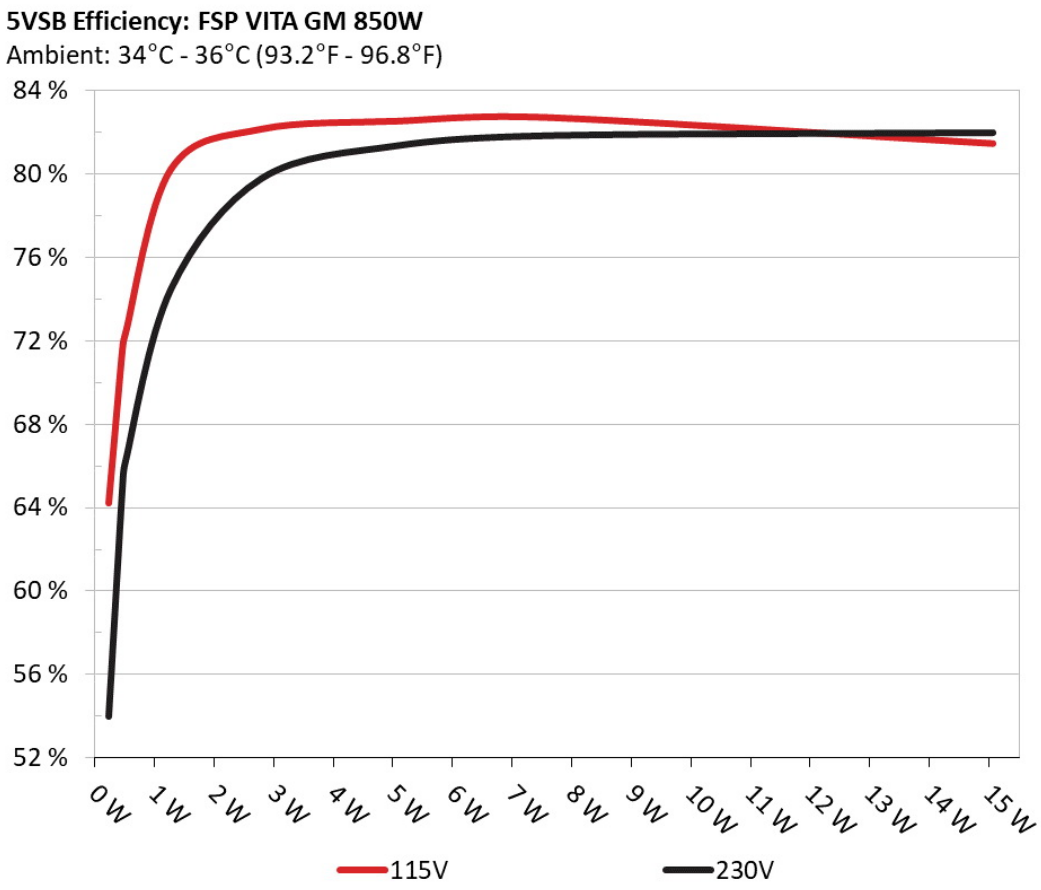
Efficiency under high ambient temperature



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**	0.229W	64.244%	0.027
	5.095V	0.357W		114.87V
2	**0.09A**	0.458W	71.596%	0.049
	5.093V	0.64W		114.88V
3	**0.55A**	2.794W	82.134%	0.22
	5.081V	3.402W		114.86V
4	**1A**	5.07W	82.513%	0.323
	5.07V	6.144W		114.85V
5	**1.5A**	7.586W	82.687%	0.383
	5.057V	9.175W		114.86V
6	**3A**	15.058W	81.444%	0.468
	5.019V	18.488W		114.85V

230V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	**0.045A**	0.229W	53.979%	0.01
	5.095V	0.425W		229.94V
2	**0.09A**	0.458W	64.949%	0.016
	5.093V	0.706W		229.94V
3	**0.55A**	2.794W	79.795%	0.077
	5.081V	3.503W		229.94V
4	**1A**	5.07W	81.361%	0.131
	5.07V	6.231W		229.94V
5	**1.5A**	7.586W	81.843%	0.183
	5.057V	9.269W		229.94V
6	**3A**	15.057W	81.982%	0.293
	5.019V	18.367W		229.94V

Protection Features

OCP (Cold @ 27.2°C)	12V: 79.2A (111.82%), 12.007V 5V: 25.4A (127%), 5.071V 3.3V: 25.1A (125.5%), 3.327V 5VSB: 4A (133.33%), 4.987V
OCP (Hot) @ 41.7°C)	12V: 75.6A (106.73%), 12.027V 5V: 25.1A (125.5%), 5.072V 3.3V: 24.9A (124.5%), 3.327V 5VSB: 4A (133.33%), 4.993V
OCP (Cold @ 27.1°C)	1032.61W (121.48%)
OCP (Hot @ 41.9°C)	992.59W (116.77%)
OTP	✓ (134°C @ Heat Sink)
SCP	12V to Earth: ✓ 5V to Earth: ✓ 3.3V to Earth: ✓ 5VSB to Earth: ✓ -12V to Earth: ✓
PWR_OK	Proper Operation
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%	**5.252A**	**1.955A**	**1.962A**	**0.986A**	85.001	87.543%	747	16.8	40.14°C	0.965
	12.071V	5.115V	3.364V	5.071V	97.097				41.95°C	114.83V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
20%	**11.525A**	**2.937A**	**2.95A**	**1.185A**	169.932	90.815%	749	16.9	40.85°C	0.976
	12.063V	5.107V	3.355V	5.062V	187.119				43.07°C	114.8V
30%	**18.155A**	**3.431A**	**3.449A**	**1.386A**	254.935	91.728%	751	16.9	41.14°C	0.976
	12.056V	5.101V	3.348V	5.052V	277.927				44.49°C	114.77V
40%	**24.799A**	**3.926A**	**3.95A**	**1.587A**	340.022	91.863%	755	17	41.82°C	0.977
	12.050V	5.094V	3.341V	5.042V	370.139				46.3°C	114.75V
50%	**31.083A**	**4.915A**	**4.95A**	**1.789A**	424.832	91.46%	787	17.4	42.44°C	0.98
	12.043V	5.087V	3.333V	5.032V	464.494				48.49°C	114.71V
60%	**37.350A**	**5.907A**	**5.955A**	**1.992A**	509.36	90.99%	958	22.7	42.66°C	0.983
	12.036V	5.08V	3.325V	5.022V	559.801				49.92°C	114.69V
70%	**43.692A**	**6.903A**	**6.965A**	**2.195A**	594.685	90.417%	1079	26.4	43.39°C	0.985
	12.029V	5.072V	3.317V	5.012V	657.712				51.97°C	114.66V
80%	**50.042A**	**7.899A**	**7.979A**	**2.298A**	679.491	89.877%	1154	29	43.85°C	0.987
	12.022V	5.064V	3.308V	5.004V	756.02				54.29°C	114.62V
90%	**56.799A**	**8.404A**	**8.483A**	**2.402A**	764.921	89.233%	1264	31	44.85°C	0.987
	12.015V	5.057V	3.301V	4.996V	857.221				56.49°C	114.6V
100%	**63.296A**	**8.911A**	**9.019A**	**3.016A**	849.731	88.484%	1522	36.3	45.21°C	0.988
	12.007V	5.05V	3.293V	4.975V	960.332				57.62°C	114.56V
110%	**69.680A**	**9.917A**	**10.139A**	**3.019A**	934.296	87.637%	1827	41.9	46.17°C	0.989
	11.998V	5.042V	3.284V	4.969V	1066.093				59.06°C	114.53V
CL1	**0.115A**	**11.827A**	**11.881A**	**0A**	101.292	84.819%	851	20.2	40.27°C	0.973
	12.073V	5.09V	3.341V	5.097V	119.424				47.31°C	114.81V
CL2	**0.115A**	**19.664A**	**0A**	**0A**	101.386	83.524%	848	20.2	41.6°C	0.973
	12.073V	5.085V	3.357V	5.098V	121.384				45.6°C	114.81V
CL3	**0.115A**	**0A**	**19.784A**	**0A**	67.382	79.081%	791	17.6	40.09°C	0.964
	12.070V	5.103V	3.336V	5.094V	85.207				44.13°C	114.84V
CL4	**70.729A**	**0A**	**0A**	**0.001A**	849.551	89.046%	1635	38.1	45.28°C	0.988
	12.012V	5.071V	3.313V	5.06V	954.062				56.22°C	114.58V

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%	**5.253A**	**1.955A**	**1.962A**	**0.986A**	85.003	88.748%	744	16.7	40.26°C	0.817
	12.070V	5.117V	3.364V	5.071V	95.785				41°C	229.93V
20%	**11.527A**	**2.936A**	**2.95A**	**1.186A**	169.938	92.359%	748	16.8	40.63°C	0.91
	12.062V	5.109V	3.356V	5.061V	183.995				41.93°C	229.92V
30%	**18.158A**	**3.43A**	**3.449A**	**1.386A**	254.942	93.352%	749	16.9	41.17°C	0.939
	12.055V	5.103V	3.349V	5.051V	273.103				43.09°C	229.9V
40%	**24.804A**	**3.925A**	**3.95A**	**1.587A**	340.031	93.683%	751	16.9	41.62°C	0.952
	12.047V	5.096V	3.342V	5.041V	362.961				44.3°C	229.89V
50%	**31.090A**	**4.913A**	**4.95A**	**1.789A**	424.841	93.518%	783	17.2	42.39°C	0.96
	12.040V	5.089V	3.333V	5.031V	454.283				46.5°C	229.87V
60%	**37.359A**	**5.905A**	**5.955A**	**1.992A**	509.377	93.27%	937	21.9	42.84°C	0.965
	12.033V	5.082V	3.325V	5.021V	546.133				48.1°C	229.86V
70%	**43.704A**	**6.9A**	**6.966A**	**2.196A**	594.701	92.963%	1022	24.6	43.44°C	0.969
	12.026V	5.074V	3.317V	5.01V	639.718				48.96°C	229.85V
80%	**50.054A**	**7.896A**	**7.981A**	**2.299A**	679.513	92.6%	1187	29.2	43.74°C	0.972
	12.019V	5.066V	3.308V	5.002V	733.815				50.36°C	229.83V
90%	**56.812A**	**8.402A**	**8.484A**	**2.403A**	764.947	92.228%	1592	37.8	44.49°C	0.974
	12.013V	5.059V	3.3V	4.995V	829.414				51.8°C	229.82V
100%	**63.314A**	**8.908A**	**9.021A**	**3.017A**	849.761	91.748%	1686	39.7	45.64°C	0.975
	12.005V	5.051V	3.292V	4.973V	926.192				53.13°C	229.81V
110%	**69.701A**	**9.914A**	**10.141A**	**3.02A**	934.347	91.242%	1701	40	46.49°C	0.977
	11.995V	5.043V	3.283V	4.967V	1024.045				53.79°C	229.79V
CL1	**0.115A**	**11.822A**	**11.881A**	**0A**	101.296	85.978%	818	18.4	40.42°C	0.855
	12.071V	5.092V	3.341V	5.096V	117.819				47.43°C	229.92V
CL2	**0.115A**	**19.655A**	**0A**	**0A**	101.388	84.693%	785	17.3	41.02°C	0.857
	12.071V	5.088V	3.357V	5.097V	119.714				45.99°C	229.93V
CL3	**0.115A**	**0A**	**19.787A**	**0A**	67.383	79.814%	787	17.4	40.42°C	0.79
	12.068V	5.106V	3.335V	5.093V	84.427				44.19°C	229.93V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
CL4	**70.747A**	**0A**	**0A**	**0.001A**	849.492	92.466%	1425	34.2	45.97°C	0.975
	12.008V	5.074V	3.313V	5.058V	918.701				51.61°C	229.81V

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	**1.231A**	**0.488A**	**0.49A**	**0.196A**	19.996	71.88%	736	16.5	36.46°C	0.855
	12.064V	5.12V	3.37V	5.095V	27.82				37.04°C	114.86V
40W	**2.710A**	**0.684A**	**0.686A**	**0.295A**	39.997	81.726%	737	16.5	37.11°C	0.928
	12.062V	5.118V	3.369V	5.091V	48.941				38.04°C	114.84V
60W	**4.186A**	**0.879A**	**0.882A**	**0.393A**	59.997	85.553%	741	16.6	38.43°C	0.947
	12.072V	5.117V	3.367V	5.088V	70.131				39.58°C	114.84V
80W	**5.659A**	**1.075A**	**1.078A**	**0.492A**	79.937	87.704%	743	16.7	39.67°C	0.964
	12.071V	5.117V	3.366V	5.085V	91.146				40.89°C	114.83V

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	**1.231A**	**0.488A**	**0.489A**	**0.196A**	19.999	72.54%	734	16.4	36.81°C	0.459
	12.063V	5.122V	3.371V	5.094V	27.569				37.29°C	229.94V
40W	**2.710A**	**0.684A**	**0.686A**	**0.295A**	39.998	82.519%	736	16.5	37.78°C	0.642
	12.062V	5.121V	3.369V	5.09V	48.474				38.4°C	229.93V
60W	**4.186A**	**0.879A**	**0.882A**	**0.393A**	59.998	86.68%	738	16.5	38.86°C	0.741
	12.072V	5.12V	3.367V	5.087V	69.217				39.39°C	229.93V
80W	**5.659A**	**1.075A**	**1.078A**	**0.492A**	79.942	88.823%	740	16.6	39.11°C	0.803
	12.070V	5.119V	3.366V	5.084V	90				40.24°C	229.93V

The results above are not used in the certification process

Ripple Measurements

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	15.5 mV	9.5 mV	10.2 mV	9.3 mV	Pass
20% Load	16.2 mV	10.5 mV	11.2 mV	10.0 mV	Pass
30% Load	13.8 mV	9.4 mV	10.6 mV	12.1 mV	Pass
40% Load	13.3 mV	23.6 mV	23.9 mV	11.7 mV	Pass
50% Load	13.4 mV	23.7 mV	20.7 mV	12.4 mV	Pass
60% Load	13.5 mV	13.3 mV	14.7 mV	13.8 mV	Pass
70% Load	15.1 mV	12.7 mV	14.5 mV	14.2 mV	Pass
80% Load	19.8 mV	17.0 mV	20.4 mV	15.8 mV	Pass
90% Load	14.4 mV	13.5 mV	17.3 mV	15.3 mV	Pass
100% Load	21.8 mV	14.2 mV	18.5 mV	19.8 mV	Pass
110% Load	22.7 mV	14.0 mV	19.5 mV	21.2 mV	Pass
Crossload 1	23.1 mV	10.0 mV	11.5 mV	7.2 mV	Pass
Crossload 2	16.2 mV	12.0 mV	9.9 mV	7.3 mV	Pass
Crossload 3	13.3 mV	9.1 mV	11.9 mV	7.0 mV	Pass
Crossload 4	21.3 mV	13.9 mV	18.2 mV	15.6 mV	Pass

The results above are not used in the certification process

230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	16.4 mV	9.0 mV	9.3 mV	9.6 mV	Pass
20% Load	17.1 mV	10.9 mV	10.9 mV	10.0 mV	Pass
30% Load	14.0 mV	9.2 mV	10.5 mV	12.1 mV	Pass
40% Load	12.9 mV	24.2 mV	25.0 mV	11.8 mV	Pass
50% Load	13.5 mV	24.5 mV	21.5 mV	12.2 mV	Pass
60% Load	12.9 mV	13.7 mV	15.2 mV	14.9 mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
70% Load	13.4 mV	11.9 mV	14.4 mV	13.4 mV	Pass
80% Load	13.6 mV	12.3 mV	15.4 mV	14.4 mV	Pass
90% Load	14.3 mV	12.1 mV	16.2 mV	14.9 mV	Pass
100% Load	22.3 mV	13.2 mV	18.8 mV	17.6 mV	Pass
110% Load	22.3 mV	14.5 mV	19.4 mV	18.3 mV	Pass
Crossload 1	23.7 mV	10.6 mV	12.2 mV	6.8 mV	Pass
Crossload 2	18.4 mV	12.9 mV	9.4 mV	6.5 mV	Pass
Crossload 3	15.3 mV	8.9 mV	11.3 mV	6.7 mV	Pass
Crossload 4	22.3 mV	13.2 mV	18.9 mV	15.4 mV	Pass

The results above are not used in the certification process

FSP Technology VITA GM 850W



Top side



Power specifications label

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