Super Flower Leadex VII PRO 850W

Serial Number S2404199009

Lab ID SF85002455

Certification ID 252455

Test Result Report ID: 24PS2455A

Certificate Issue Date: May 28, 2024

Scheme: ETA-EMI PSU

115V



230V



Scheme: LAMBDA PSU

115V



230V





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	Super Flower
Model	Leadex VII PRO 850W
OEM/ODM	Super Flower
Serial Number	S2404199009
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	100-240

Rated Current (Arms)	10
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	140mm Fluid Dynamic Bearing Fan (ZFF142512D)
Semi-Passive Operation	✓ (selectable)
Cybenetics Testing Information	
Lab ID	SF85002455
Date of receipt	Apr 23, 2024
Testing Date	May 28, 2024
Report Issued Date	May 28, 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 (590mm)	1	1	16-20AWG	No
4+4 pin EPS12V (700mm)	2	2	18AWG	No
6+2 pin PCIe (700mm)	4	4	16-18AWG	No
12+2 pin PCIe (700mm) (600W)	1	1	16-24AWG	No
SATA (555mm+130mm+130mm+130mm)	2	8	18AWG	No

Modular Cables				
4-pin Molex (550mm+150mm+150mm+150mm)	1	4	18AWG	No
AC Power Cord (1380mm) - 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	70.8	2.5	0.5
	Watts	100		849.6	12.5	6
Total Max. Power (W)		850				

Parts Description

Manufacturer (OEM)	Super Flower
PCB Type	Double-Sided
Transient Filter	4x Y caps, 3x X caps, 2x CM chokes, 1x MOV
Inrush Protection	1x NTC Thermistor SCK-0512 (5 Ohm @25°C) & Relay
Bridge Rectifier(s)	2x GBU15J (700V, 15A @100°C)
APFC MOSFETs	3x Infineon IPAW60R180P7S (650V, 11A @ 100°C, Rds(on): 0.180Ohm) & 1x SyncpowerSPN5003 FET (for reduced no-load consumption)
APFC Boost Diode	1x CREE C3D08065I (650V, 7.5A @ 135°C)
Bulk Cap(s)	1x Nippon Chemi-Con (400V, 820uF @ 105°C, CE)
Main Switchers	4x Infineon IPI50R199CP (550V, 11A @ 100°C, Rds(on): 0.199Ohm)

APFC Controller	Infineon ICE3PCS02G
Resonant Controller	Super Flower JTC113
Topology	Primary side: APFC, Full-Bridge & LLC converter Secondary side: Synchronous Rectification & DC-DC converters
+12V MOSFETs	8x RA54ACW35C
5V & 3.3V	DC-DC Converters: 4x Alpha & Omega GL3P15 PWM Controller(s): 2x ANPECAPW7073
Filtering Capacitors	Electrolytic: 5x Nippon Chemi-Con @ 105°C, (W), 1x Nippon Chemi-Con (2-5,000 @ 105°C,KZE) 5x Rubycon (6-10,000 @ 105°C, ZLH) Polymer: 1x Nippon Chemi-Con KMG 2x Nippon Chemi-Con KYA 1x Nippon Chemi-Con KY 1x Rubycon YXF, 7x Nippon Chemi-Con KRG 18x Nippon Chemicon
Supervisor IC	JTC113
Fan Model	ZIC ZFF142512D (140mm, 12V, 0.65A, Fluid Dynamic Bearing Fan)
Rectifiers	1x PFC PFR20L60CT SBR (60V, 20A)
Standby PWM Controller	29604

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)	90.666%
Average Noise Output (>1450 Load Combinations)	29.85dBA
Average PF (>1450 Load Combinations)	0.987

Efficiency With 10W (≤500W) or 2% (>500W) Load	68.278%
Standby Power Consumption	0.1033W
Non-Accredited	
12V Ripple (Full Load)	38.00mV
5V Ripple (Full Load)	25.30mV
3.3V Ripple (Full Load)	25.70mV
5VSB Ripple (Full Load)	16.20mV
12V Load Regulation	0.04%
5V Load Regulation	0.10%
3.3V Load Regulation	0.09%
5VSB Load Regulation	1.93%
Inrush Current	35.550A

230V

Accredited	
Average Efficiency (>1450 load combinations)	92.543%
Average Noise Output (>1450 Load Combinations)	27.68dBA
Average PF (>1450 Load Combinations)	0.947
Efficiency With 10W (≤500W) or 2% (>500W) Load	67.438%
Standby Power Consumption	0.1717W
Non-Accredited	
12V Ripple (Full Load)	38.20mV
5V Ripple (Full Load)	25.70mV
3.3V Ripple (Full Load)	25.70mV
5VSB Ripple (Full Load)	16.30mV
12V Load Regulation	0.05%
5V Load Regulation	0.12%
3.3V Load Regulation	0.09%
5VSB Load Regulation	1.95%
Inrush Current	67.820A
12V Transient Response (200%)	11.55V
5V Transient Response (200%)	4.984V

3.3V Transient Response (200%)		3.212V
5VSB Transient Response (200%)		5.020V
Hold-Up Time & PWR_OK Signal		29.20ms
AC Loss to PWR_OK Hold Up Time		25.30ms
PWR_OK Inactive to DC Loss Delay		3.90ms
PSU Timings: T1 (20% / 100%)	104.0ms	104.0ms
PSU Timings: T3 (20% / 100%)	119.0ms	119.0ms
OPP (26.72°C / 42.48°C)	133.25%	133.26%

Hold-Up Time & PWR_OK Signal

Hold-Up Time (ms)	29.2
AC Loss to PWR_OK Hold Up Time (ms)	25.3
PWR_OK Inactive to DC Loss Delay (ms)	3.9

Stromverbrauch im Ruhezustand

Tables

115V

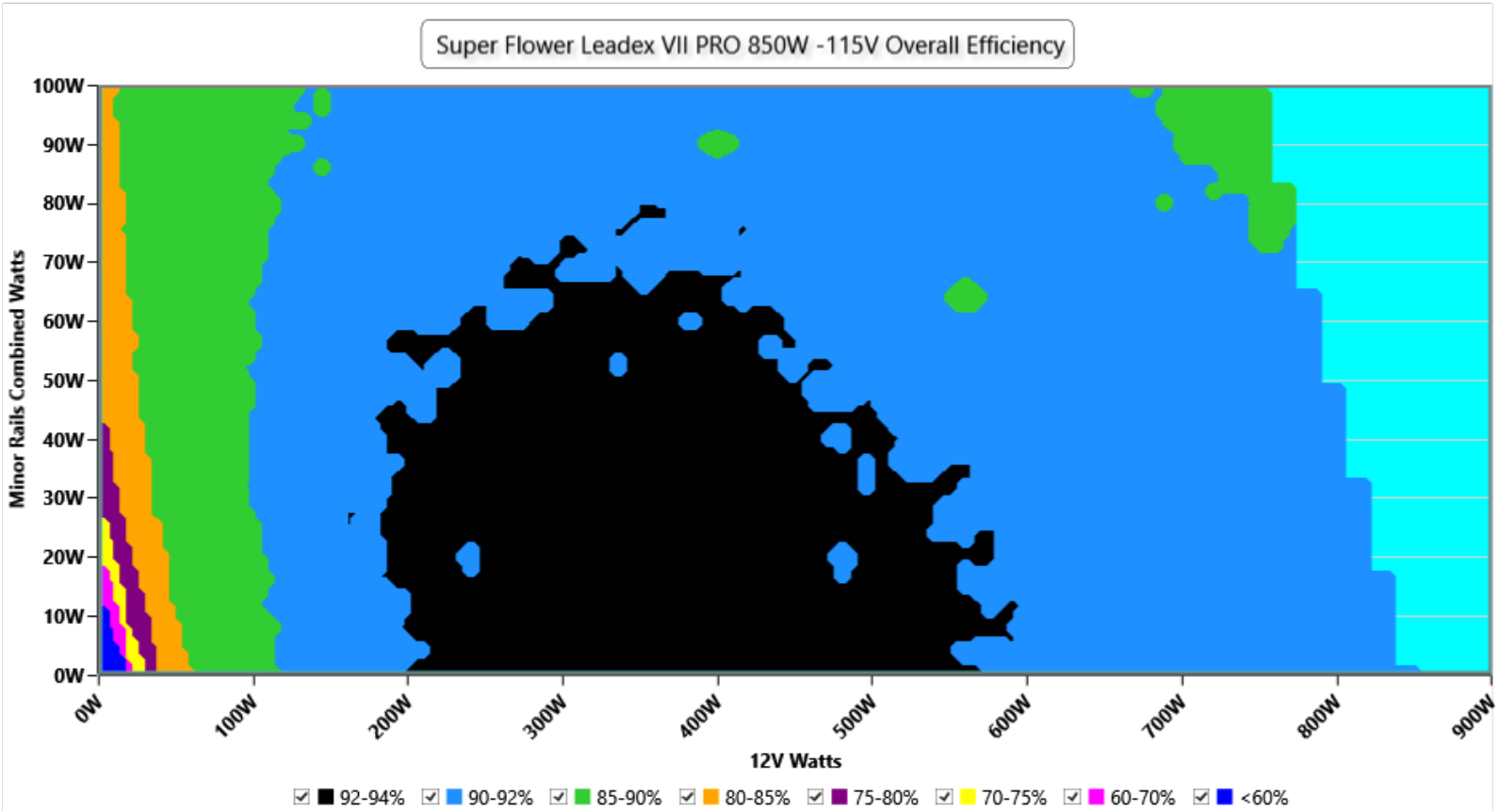
Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	114.84 V	114.76 V	113.85 V	114.94 V	116.15 V	PASS
Mains Frequency:	60.00 Hz	59.96 Hz	59.40 Hz	60.04 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.422	1.420	1.340	1.425	1.490	PASS
Mains Voltage THD:	0.15 %	0.11 %	N/A	0.27 %	2.00 %	PASS
Real Power:	0.103 W	0.012 W	N/A	0.152 W	N/A	N/A
Apparent Power:	9.830 W	9.805 W	N/A	9.851 W	N/A	N/A
Power Factor:	0.014	N/A	N/A	N/A	N/A	N/A

230V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	231.01 V	230.91 V	227.70 V	231.08 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	1.419	1.490	PASS
Mains Voltage THD:	0.17 %	0.14 %	N/A	0.27 %	2.00 %	PASS
Real Power:	0.172 W	0.127 W	N/A	0.231 W	N/A	N/A
Apparent Power:	33.711 W	33.330 W	N/A	34.107 W	N/A	N/A
Power Factor:	0.005	N/A	N/A	N/A	N/A	N/A

Efficiency Graph

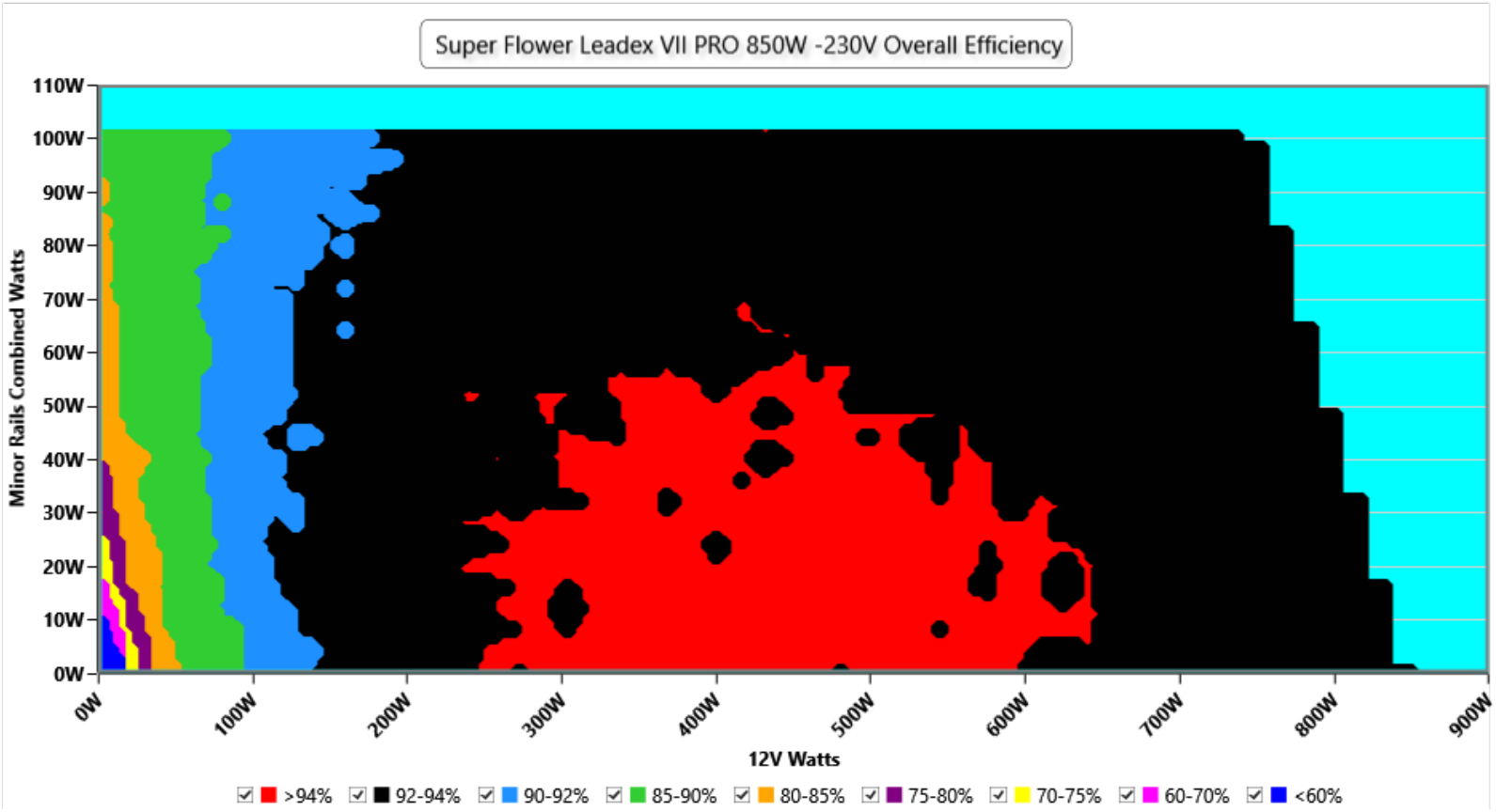
115V



INFO

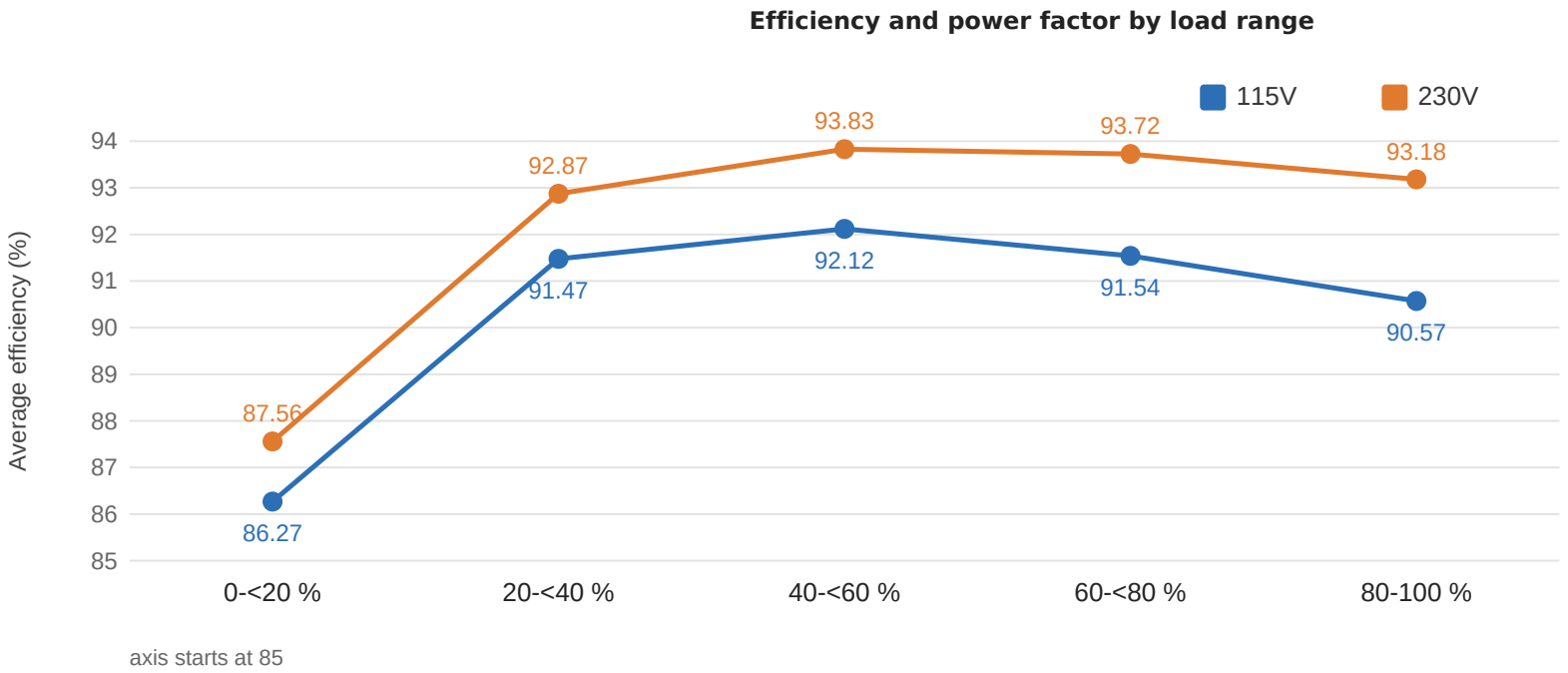
This graph depicts the PSU`s efficiency throughout its entire operational range. For the generation of the efficiency and noise graphs we set our loaders to auto mode through our custom-made software before trying thousands of possible load combinations

230V

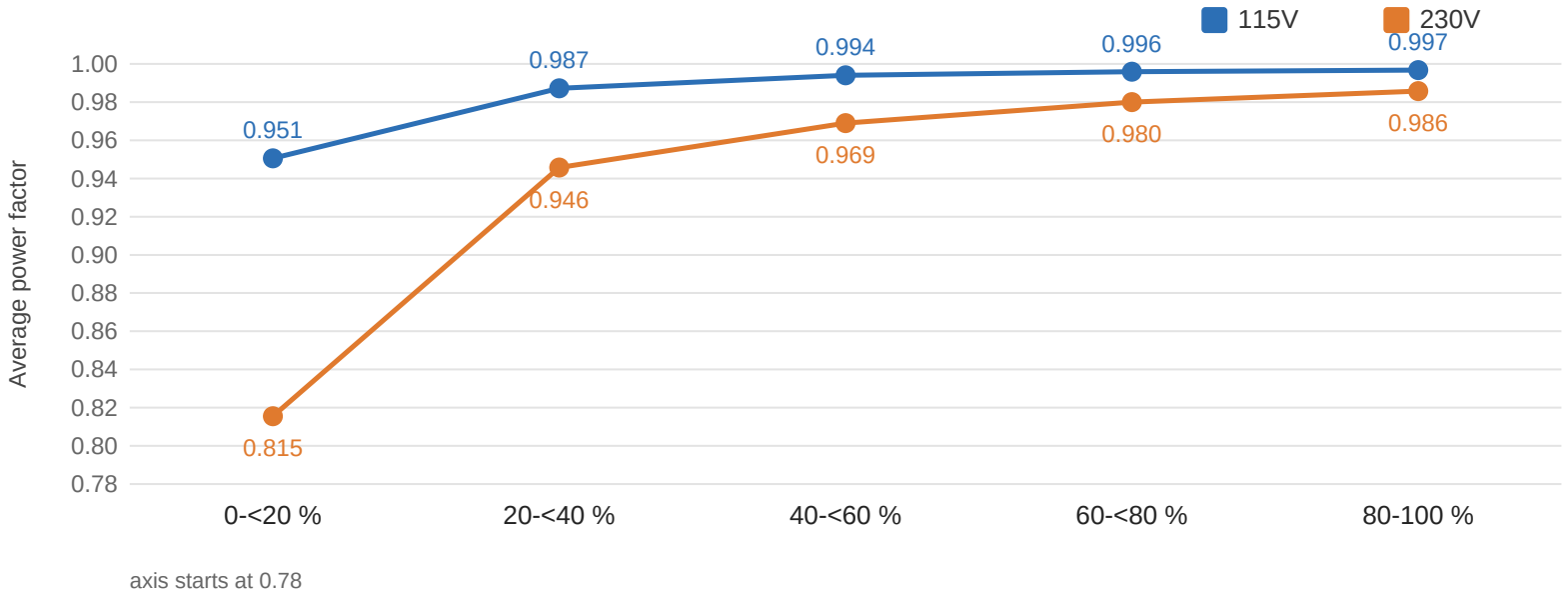


INFO

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 85



axis starts at 0.78

Load range	Points	Efficiency 115V	Efficiency 230V	PF 115V	PF 230V
0-<20 %	228 / 228	86.27%	87.56%	0.951	0.815
20-<40 %	331 / 331	91.47%	92.87%	0.987	0.946
40-<60 %	327 / 327	92.12%	93.83%	0.994	0.969
60-<80 %	333 / 333	91.54%	93.72%	0.996	0.980
80-100 %	334 / 334	90.57%	93.18%	0.997	0.986
70-100 % (High-Load)	503 / 502	90.83%	93.33%	0.997	0.985
All (published average)	1553 / 1553	90.67%	92.54%	0.987	0.947

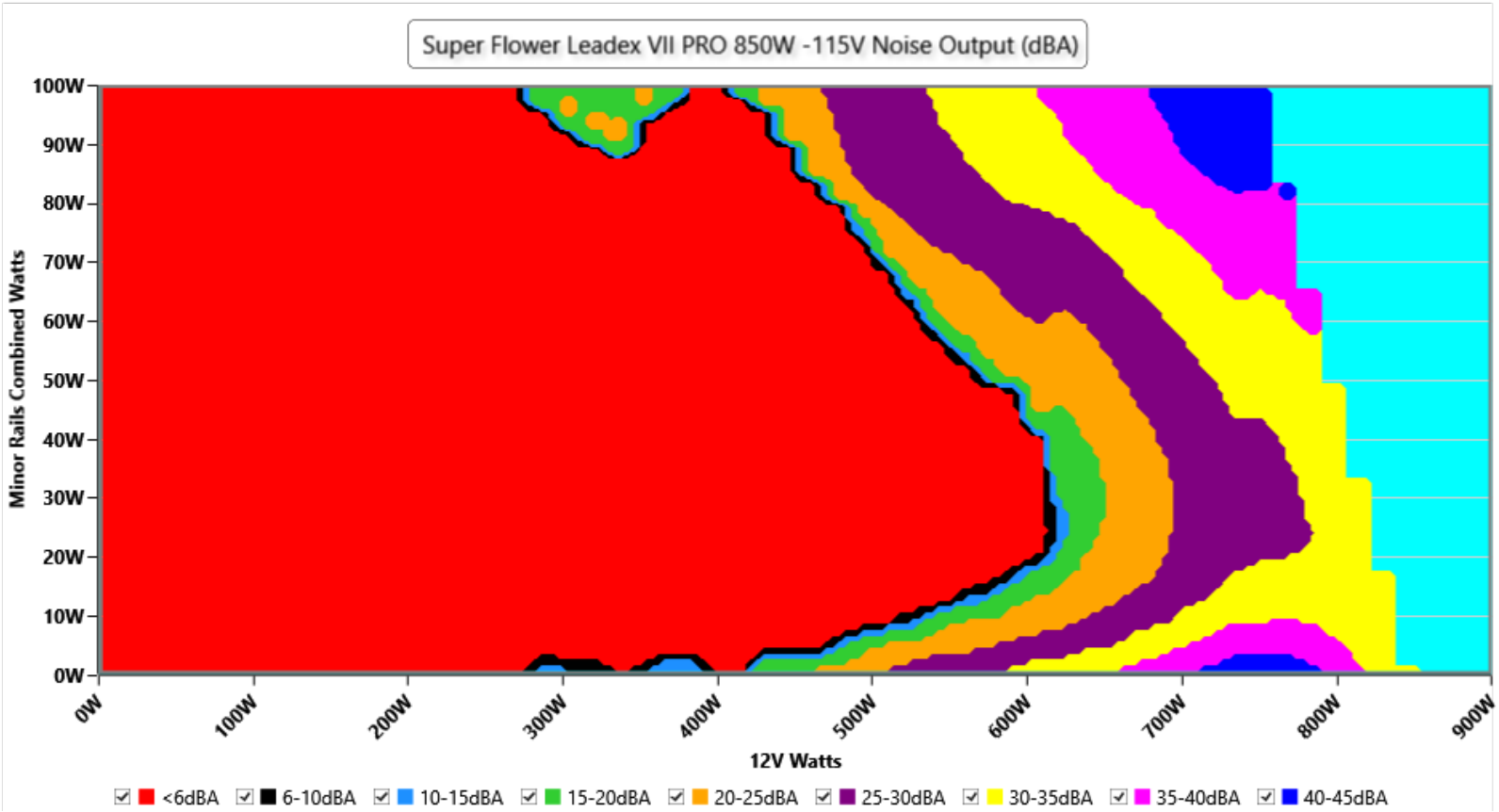
INFO

The average efficiency and power factor in five ranges of load. Calculated from the 1553 (115V) and 1553 (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

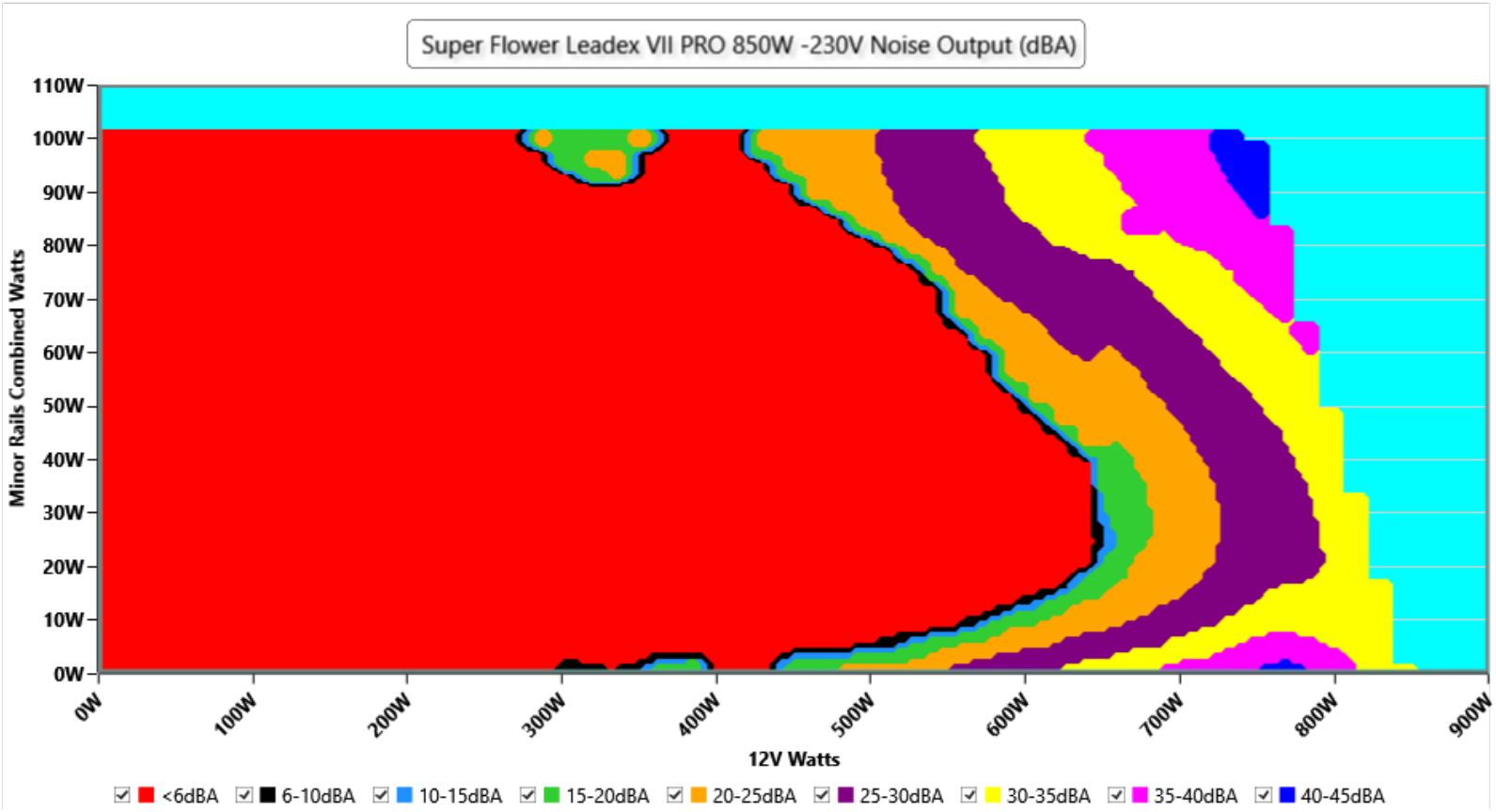
115V



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

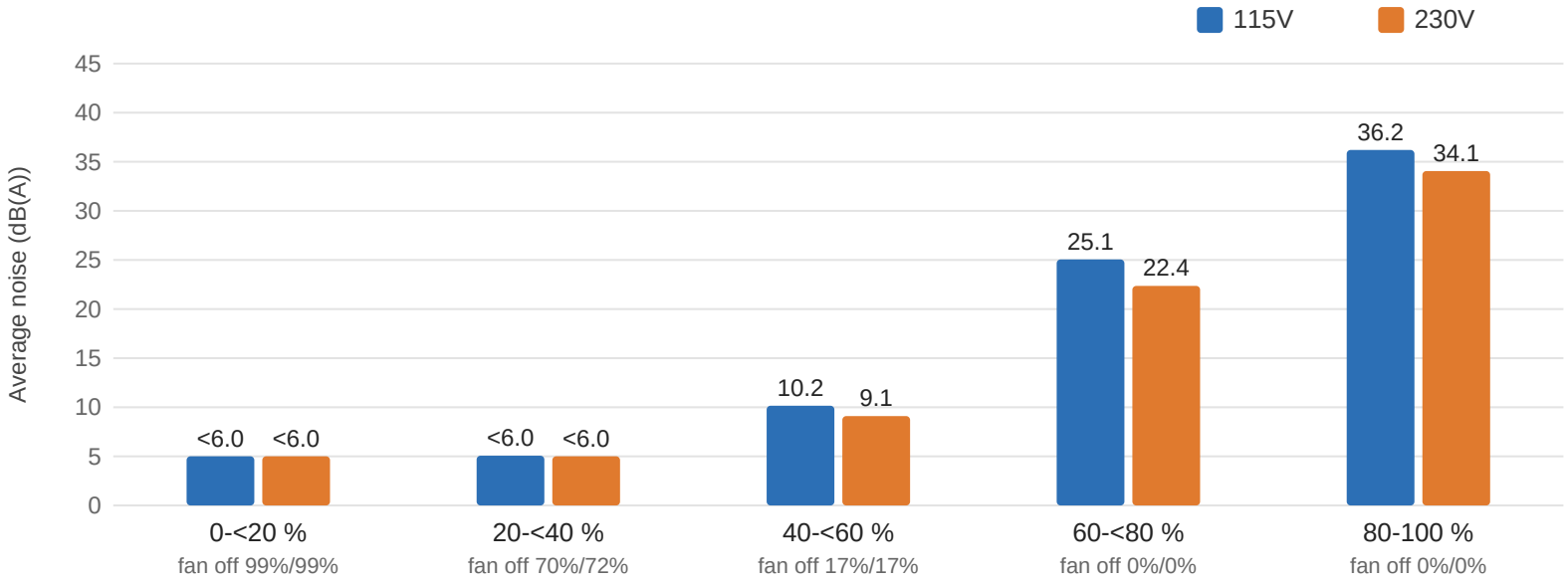
The PSU`s noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

Noise by load range

High-Load Index (70-100 % load)

Noise **34.7 dB(A)** at 115V and **32.5 dB(A)** at 230V · loudest point 43.1 dB(A)

Efficiency 90.83% / 93.33% · power factor 0.997 / 0.985 (115V / 230V)



Load range	Noise 115V avg (loudest)	Noise 230V avg (loudest)	Fan off 115V / 230V
0-<20 %	<6.0 (<6.0)	<6.0 (<6.0)	99% / 99%
20-<40 %	<6.0 (12.5)	<6.0 (6.7)	70% / 72%
40-<60 %	10.2 (23.5)	9.1 (21.4)	17% / 17%
60-<80 %	25.1 (36.3)	22.4 (34.7)	0% / 0%
80-100 %	36.2 (43.1)	34.1 (43.1)	0% / 0%
70-100 % (High-Load)	34.7 (43.1)	32.5 (43.1)	0% / 0%
All (published average)	29.9 (43.1)	27.7 (43.1)	33% / 34%

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 1553 (115V) and 1553 (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". Below 6 dB(A), the floor of our sound meter, the table and the chart show <6.0. In the averages a stopped fan counts as 5 dB(A),

as in the published average.

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) · 44.4 °C	0 RPM · <6.0 dB(A) · 44.4 °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%	371 RPM · <6.0 dB(A) · 42.2 °C	371 RPM · <6.0 dB(A) · 42.2 °C	<6.0 in both
100%	1669 RPM · 48.0 dB(A) · 45.7 °C	1669 RPM · 48.0 dB(A) · 45.7 °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) · 44.7 °C	0 RPM · <6.0 dB(A) · 44.7 °C	fan off in both
20%	0 RPM · <6.0 dB(A) · 45.2 °C	0 RPM · <6.0 dB(A) · 45.2 °C	fan off in both
50%	538 RPM · 14.6 dB(A) · 42.3 °C	538 RPM · 14.6 dB(A) · 42.3 °C	**+0.0 dB(A)**
100%	1658 RPM · 47.8 dB(A) · 45.7 °C	1658 RPM · 47.8 dB(A) · 45.7 °C	**+0.0 dB(A)**

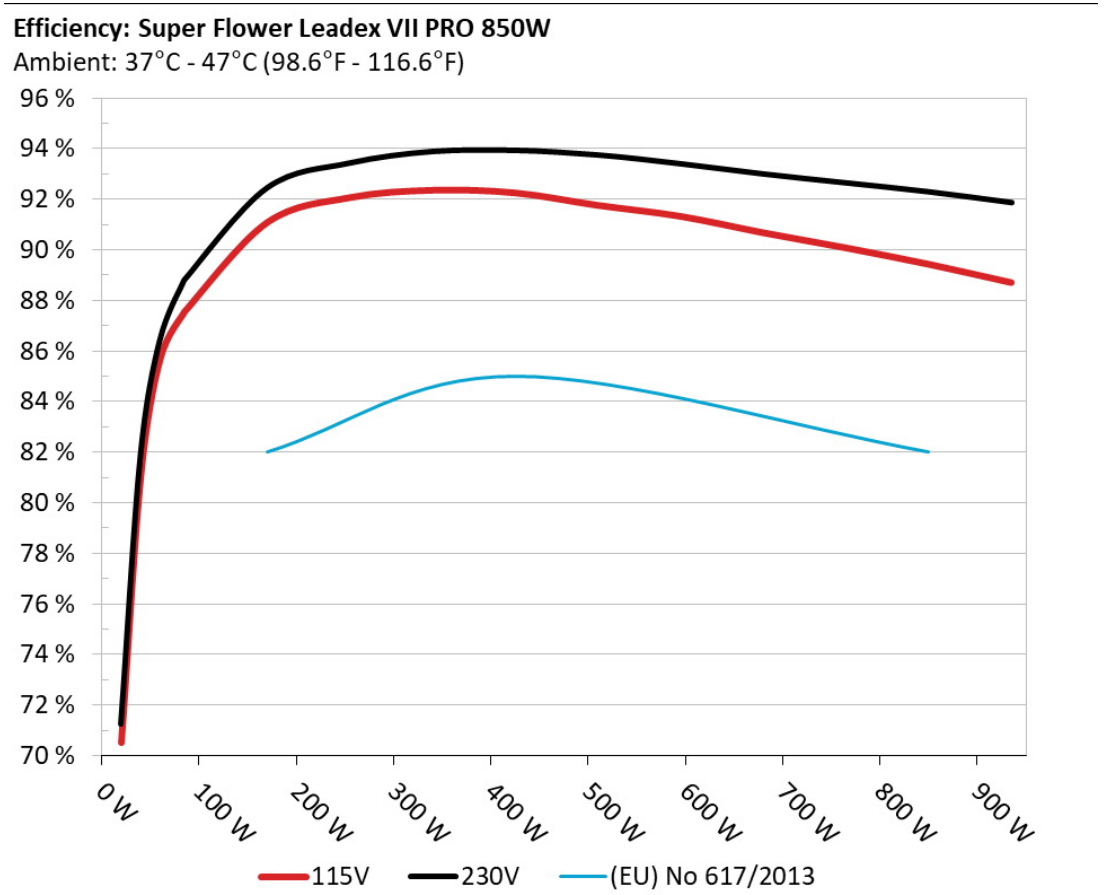
INFO

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: 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

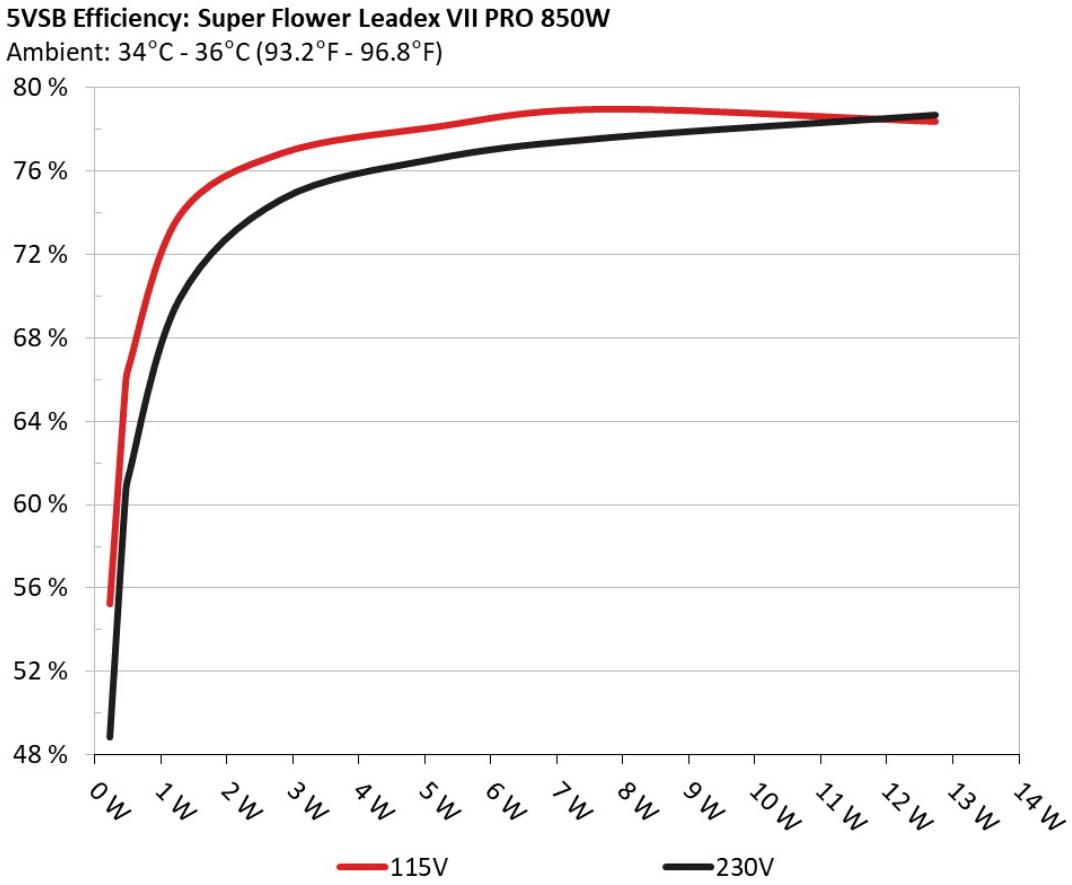
Efficiency under high ambient temperature



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**	0.231W	55.245%	0.042
	5.134V	0.418W		114.85V
2	**0.09A**	0.462W	65.503%	0.07
	5.134V	0.705W		114.84V
3	**0.55A**	2.819W	76.816%	0.276
	5.126V	3.67W		114.84V
4	**1A**	5.118W	78.07%	0.363
	5.118V	6.556W		114.83V
5	**1.5A**	7.665W	78.938%	0.415
	5.11V	9.71W		114.83V
6	**2.5A**	12.729W	78.352%	0.466
	5.092V	16.246W		114.84V

230V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	**0.045A**	0.231W	48.856%	0.014
	5.134V	0.473W		229.84V
2	**0.09A**	0.462W	60.231%	0.023
	5.133V	0.768W		229.84V
3	**0.55A**	2.819W	74.634%	0.108
	5.126V	3.777W		229.84V
4	**1A**	5.118W	76.568%	0.177
	5.118V	6.685W		229.83V
5	**1.5A**	7.665W	77.574%	0.23
	5.109V	9.882W		229.84V
6	**2.5A**	12.73W	78.692%	0.308
	5.092V	16.178W		229.84V

Protection Features

Protection Features	
OCP (Cold @ 27°C)	12V: 94.6A (133.62%), 12.093V 5V: 24.2A (121%), 5.032V 3.3V: 26.1A (130.5%), 3.365V 5VSB: 4.7A (188%), 5.05V
OCP (Hot @ 43°C)	12V: 94.2A (133.05%), 12.097V 5V: 24A (120%), 5.033V 3.3V: 25.8A (129%), 3.367V 5VSB: 4.7A (188%), 5.046V
OPP (Cold @ 27°C)	1132.65W (133.25%)
OPP (Hot @ 42°C)	1132.74W (133.26%)
OTP	✓ (145°C @ secondary side)
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 Thermistor & 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
	5.245A	**1.981A**	**1.96A**	**0.979A**	85.005	87.367%	0	<6.0	44.42°C	0.947
	12.088V	5.049V	3.366V	5.109V	97.296				40.17°C	114.82V
	11.504A	**2.971A**	**2.94A**	**1.177A**	169.939	91.069%	0	<6.0	45.39°C	0.977
	12.086V	5.049V	3.367V	5.1V	186.605				40.83°C	114.79V
	18.114A	**3.465A**	**3.43A**	**1.375A**	254.942	92.054%	0	<6.0	46.17°C	0.988
	12.084V	5.05V	3.368V	5.091V	276.98				41.16°C	114.77V
	24.726A	**3.96A**	**3.919A**	**1.575A**	340.026	92.344%	371	<6.0	41.89°C	0.992
	12.085V	5.05V	3.368V	5.081V	368.222				47.45°C	114.73V
	30.972A	**4.951A**	**4.9A**	**1.775A**	424.804	92.241%	371	<6.0	42.18°C	0.994
	12.085V	5.049V	3.368V	5.072V	460.546				48.25°C	114.72V
	37.196A	**5.943A**	**5.88A**	**1.975A**	509.346	91.749%	736	25.4	42.81°C	0.995
	12.086V	5.048V	3.367V	5.063V	555.192				49.36°C	114.68V
	43.485A	**6.936A**	**6.861A**	**2.176A**	594.672	91.315%	962	33.0	43.07°C	0.996
	12.086V	5.047V	3.367V	5.054V	651.217				50.13°C	114.65V
	49.775A	**7.927A**	**7.841A**	**2.279A**	679.493	90.669%	1221	41.8	43.68°C	0.996
	12.086V	5.045V	3.367V	5.047V	749.406				51.68°C	114.63V
	56.462A	**8.424A**	**8.316A**	**2.381A**	764.921	90.068%	1461	46.6	44.72°C	0.997
	12.087V	5.045V	3.367V	5.039V	849.274				53.8°C	114.59V
	63.079A	**8.919A**	**8.821A**	**2.484A**	849.638	89.424%	1669	48.0	45.68°C	0.997
	12.087V	5.045V	3.367V	5.031V	950.153				55.79°C	114.57V
	69.428A	**9.911A**	**9.889A**	**2.488A**	935.015	88.697%	1850	51.9	46.53°C	0.997
	12.088V	5.045V	3.367V	5.025V	1054.195				57.4°C	114.53V
	0.115A	**11.942A**	**11.796A**	**0A**	101.293	83.644%	683	22.8	40.81°C	0.96
	12.091V	5.041V	3.366V	5.119V	121.117				48.19°C	114.8V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
	0.114A	**19.834A**	**0A**	**0A**	101.346	82.696%	629	19.8	40.57°C	0.961
	12.090V	5.04V	3.369V	5.118V	122.591				48.23°C	114.8V
	0.114A	**0A**	**19.594A**	**0A**	67.38	77.158%	791	27.8	40.5°C	0.948
	12.091V	5.051V	3.368V	5.122V	87.315				45.36°C	114.81V
	70.303A	**0A**	**0A**	**0A**	849.477	90.362%	1423	44.9	45.99°C	0.997
	12.083V	5.053V	3.371V	5.08V	940.096				53.1°C	114.57V

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
	5.244A	**1.98A**	**1.96A**	**0.979A**	85.001	88.656%	0	<6.0	44.69°C	0.796
	12.090V	5.049V	3.367V	5.11V	95.87				40.49°C	229.84V
	11.502A	**2.971A**	**2.94A**	**1.177A**	169.928	92.458%	0	<6.0	45.22°C	0.912
	12.087V	5.049V	3.367V	5.1V	183.77				40.72°C	229.82V
	18.113A	**3.465A**	**3.43A**	**1.375A**	254.933	93.446%	0	<6.0	46.1°C	0.95
	12.084V	5.05V	3.368V	5.091V	272.796				41.03°C	229.81V
	24.725A	**3.96A**	**3.919A**	**1.575A**	340.017	93.901%	371	<6.0	41.71°C	0.962
	12.086V	5.05V	3.368V	5.081V	362.094				47.27°C	229.8V
	30.969A	**4.952A**	**4.899A**	**1.775A**	424.786	93.946%	538	14.6	42.32°C	0.97
	12.086V	5.049V	3.368V	5.072V	452.148				48.4°C	229.78V
	37.196A	**5.945A**	**5.88A**	**1.975A**	509.334	93.766%	728	26.2	42.83°C	0.975
	12.085V	5.047V	3.367V	5.063V	543.208				49.38°C	229.77V
	43.487A	**6.937A**	**6.862A**	**2.177A**	594.679	93.416%	975	33.6	43.23°C	0.981
	12.086V	5.046V	3.367V	5.054V	636.605				50.25°C	229.75V
	49.779A	**7.929A**	**7.842A**	**2.279A**	679.514	93.014%	1229	42.1	43.72°C	0.983
	12.086V	5.044V	3.366V	5.046V	730.559				51.79°C	229.74V
	56.465A	**8.426A**	**8.317A**	**2.382A**	764.946	92.66%	1471	46.4	44.35°C	0.986
	12.086V	5.044V	3.366V	5.038V	825.512				53.43°C	229.72V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
	63.083A	**8.921A**	**8.822A**	**2.485A**	849.665	92.31%	1658	47.8	45.65°C	0.987
	12.087V	5.044V	3.367V	5.031V	920.449				55.8°C	229.71V
	69.433A	**9.914A**	**9.891A**	**2.488A**	935.022	91.882%	1842	51.4	46.85°C	0.99
	12.087V	5.043V	3.367V	5.024V	1017.595				57.77°C	229.69V
	0.116A	**11.945A**	**11.796A**	**0A**	101.296	84.905%	703	23.6	41.78°C	0.85
	12.090V	5.04V	3.365V	5.118V	119.321				47.69°C	229.83V
	0.114A	**19.84A**	**0A**	**0A**	101.34	84.001%	632	19.9	40.99°C	0.853
	12.090V	5.038V	3.368V	5.119V	120.649				47.61°C	229.84V
	0.114A	**0A**	**19.595A**	**0A**	67.382	78.212%	801	28.2	40.61°C	0.76
	12.090V	5.051V	3.368V	5.122V	86.143				45.19°C	229.84V
	70.310A	**0A**	**0A**	**0A**	849.505	93.194%	1394	44.8	44.98°C	0.988
	12.082V	5.052V	3.371V	5.079V	911.56				50.68°C	229.71V

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	1.228A	0.495A	0.49A	0.195A	20.003	70.521%	0	<6.0	39.72°C	0.799
	12.088V	5.047V	3.365V	5.128V	28.359				36.61°C	114.84V
40W	2.704A	0.693A	0.686A	0.293A	40.003	81.066%	0	<6.0	40.84°C	0.904
	12.088V	5.048V	3.365V	5.125V	49.346				37.52°C	114.84V
60W	4.180A	0.891A	0.882A	0.391A	60.003	85.688%	0	<6.0	42.42°C	0.95
	12.088V	5.048V	3.366V	5.122V	70.033				38.79°C	114.83V
80W	5.652A	1.089A	1.078A	0.488A	79.952	87.549%	0	<6.0	43.24°C	0.946
	12.088V	5.048V	3.366V	5.119V	91.326				39.24°C	114.82V

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	1.228A	0.495A	0.49A	0.195A	19.994	71.274%	0	<6.0	39.74°C	0.472
	12.090V	5.047V	3.365V	5.129V	28.065				36.67°C	229.85V
40W	2.704A	0.693A	0.686A	0.293A	39.996	81.854%	0	<6.0	40.52°C	0.618
	12.089V	5.047V	3.365V	5.125V	48.857				37.23°C	229.84V
60W	4.180A	0.891A	0.882A	0.39A	59.996	86.442%	0	<6.0	41.93°C	0.721
	12.089V	5.048V	3.365V	5.122V	69.422				38.42°C	229.84V
80W	5.650A	1.089A	1.078A	0.488A	79.934	88.818%	0	<6.0	43.02°C	0.777
	12.089V	5.048V	3.366V	5.119V	89.992				39.23°C	229.84V

The results above are not used in the certification process

Ripple Measurements

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	19.7 mV	16.6 mV	15.4 mV	12.0 mV	Pass
20% Load	21.0 mV	17.8 mV	18.5 mV	12.2 mV	Pass
30% Load	22.0 mV	17.9 mV	17.8 mV	11.6 mV	Pass
40% Load	22.5 mV	18.8 mV	18.1 mV	11.3 mV	Pass
50% Load	25.4 mV	18.7 mV	20.2 mV	11.4 mV	Pass
60% Load	27.5 mV	21.4 mV	20.9 mV	12.7 mV	Pass
70% Load	26.8 mV	20.8 mV	21.2 mV	12.9 mV	Pass
80% Load	28.7 mV	22.8 mV	23.2 mV	14.4 mV	Pass
90% Load	29.6 mV	23.3 mV	24.6 mV	13.0 mV	Pass
100% Load	38.0 mV	25.3 mV	25.7 mV	16.2 mV	Pass
110% Load	39.2 mV	26.5 mV	28.1 mV	17.8 mV	Pass
Crossload 1	27.4 mV	17.7 mV	20.2 mV	30.5 mV	Pass
Crossload 2	23.9 mV	22.3 mV	17.4 mV	23.9 mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
Crossload 3	19.9 mV	16.6 mV	19.9 mV	19.9 mV	Pass
Crossload 4	39.1 mV	24.2 mV	24.2 mV	25.9 mV	Pass

The results above are not used in the certification process

230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	22.2 mV	18.7 mV	17.9 mV	12.3 mV	Pass
20% Load	22.6 mV	16.6 mV	16.3 mV	12.0 mV	Pass
30% Load	21.5 mV	16.7 mV	17.0 mV	11.9 mV	Pass
40% Load	23.3 mV	18.5 mV	18.2 mV	11.2 mV	Pass
50% Load	23.8 mV	18.5 mV	20.3 mV	11.4 mV	Pass
60% Load	25.9 mV	20.3 mV	19.9 mV	12.5 mV	Pass
70% Load	27.8 mV	22.4 mV	24.0 mV	12.1 mV	Pass
80% Load	28.9 mV	21.8 mV	22.5 mV	12.1 mV	Pass
90% Load	31.2 mV	24.0 mV	23.7 mV	13.9 mV	Pass
100% Load	38.5 mV	25.7 mV	25.7 mV	16.3 mV	Pass
110% Load	40.5 mV	27.3 mV	27.8 mV	16.9 mV	Pass
Crossload 1	26.3 mV	17.1 mV	19.6 mV	30.9 mV	Pass
Crossload 2	22.7 mV	21.9 mV	17.6 mV	24.1 mV	Pass
Crossload 3	19.8 mV	16.3 mV	20.3 mV	21.5 mV	Pass
Crossload 4	38.0 mV	24.3 mV	23.5 mV	26.6 mV	Pass

The results above are not used in the certification process

Super Flower Leadex VII PRO 850W



Top side



Power specifications label

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CYBENETICS LTD Syrou 6, Latsia, 2231, Nicosia Cyprus

www.cybenetics.com - info@cybenetics.com