



Super Flower Leadex Gold 1000W

Serial Number S1709199001

Lab ID 180

Certification ID 25180

Test Result Report ID: 19PS180A

Certificate Issue Date: Sep 23, 2018

115V

230V

Scheme: ETA-EMI PSU



115V

230V



Scheme: LAMBDA PSU

A handwritten signature in blue ink, appearing to read "A. Bitziopoulos".

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	Super Flower
Model	Leadex Gold 1000W
OEM/ODM	Super Flower
Serial Number	S1709199001
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	15
Rated Frequency (Hz)	50-60

Rated Power (W)	1000
Operating Temperature (Continuous Full Load) (°C)	
Type	ATX12V
Cable Design	Fully Modular
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
Cooling	140mm Double Ball-Bearing Fan (RL4Z-B1402512EH)
Semi-Passive Operation	✓ (selectable)
Cybenetics Testing Information	
Lab ID	180
Date of receipt	Sep 7, 2018
Testing Date	Sep 20, 2018
Report Issued Date	Sep 23, 2018
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
ATX connector 20+4 pin (580mm)	1	1	18-20AWG
4+4 pin EPS12V (700mm)	1	1	18-20AWG
8 pin EPS12V (700mm)	1	1	18-20AWG
6+2 pin PCIe (600mm+150mm)	4	8	18-20AWG
SATA (550mm+100mm+100mm)	4	12	18AWG
4 pin Molex (550mm+100mm+100mm+100mm)	1	4	18AWG

Power Specifications

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	24	24	83.3	3	0.5
	Watts	120		999.6	15	6
Total Max. Power (W)		1000				

Test Results

Temperature & Compliance Info

Temperature Range (°C /°F)	28-32 / 82.4-89.6
ErP Lot 3/6 Ready	ErP Lot 3/6 2010: ✓ ErP Lot 3/6 2013: Partially ErP Lot 3/6 2014, CEC: Failed
(EU) No 617/2013 Compliance	✓

Performance Summary

115V

Accredited	
Average Efficiency (>1450 load combinations)	89.726%
Average Noise Output (>1450 Load Combinations)	37.77dBA
Average PF (>1450 Load Combinations)	0.979
Efficiency With 10W (≤500W) or 2% (>500W) Load	61.427%
Standby Power Consumption	0.1304W
Non-Accredited	
12V Ripple (Full Load)	7.96mV
5V Ripple (Full Load)	5.92mV
3.3V Ripple (Full Load)	5.94mV
5VSB Ripple (Full Load)	5.54mV
12V Load Regulation	0.36%

5V Load Regulation	0.40%
3.3V Load Regulation	0.48%
5VSB Load Regulation	2.45%
Inrush Current	40.741A

230V

Accredited		
Average Efficiency (>1450 load combinations)	91.553%	
Average Noise Output (>1450 Load Combinations)	36.26dBA	
Average PF (>1450 Load Combinations)	0.933	
Efficiency With 10W (≤500W) or 2% (>500W) Load	-	
Standby Power Consumption	0.2785W	
Non-Accredited		
12V Ripple (Full Load)	7.50mV	
5V Ripple (Full Load)	6.13mV	
3.3V Ripple (Full Load)	6.09mV	
5VSB Ripple (Full Load)	5.48mV	
12V Load Regulation	0.35%	
5V Load Regulation	0.40%	
3.3V Load Regulation	0.51%	
5VSB Load Regulation	2.41%	
Inrush Current	84.833A	
Hold-Up Time & PWR_OK Signal	23.90ms	
AC Loss to PWR_OK Hold Up Time	19.90ms	
PWR_OK Inactive to DC Loss Delay	4.00ms	
OPP (0.00°C / 0.00°C)	-	-

Hold-Up Time & PWR_OK Signal

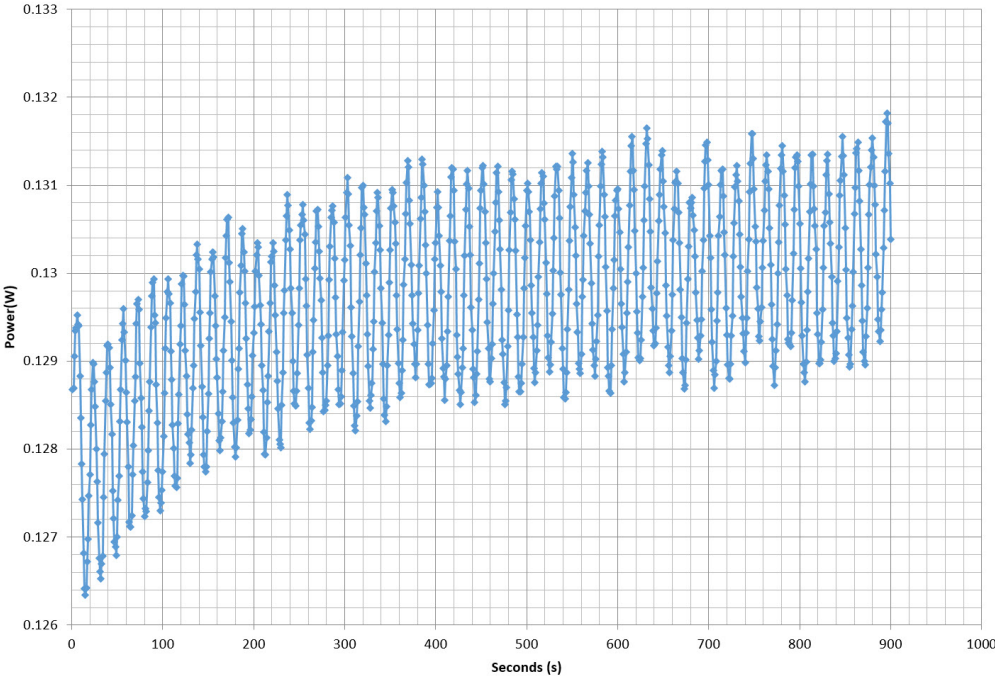
Hold-Up Time (ms)	23.9
AC Loss to PWR_OK Hold Up Time (ms)	19.9

Vampire Power

Graphs

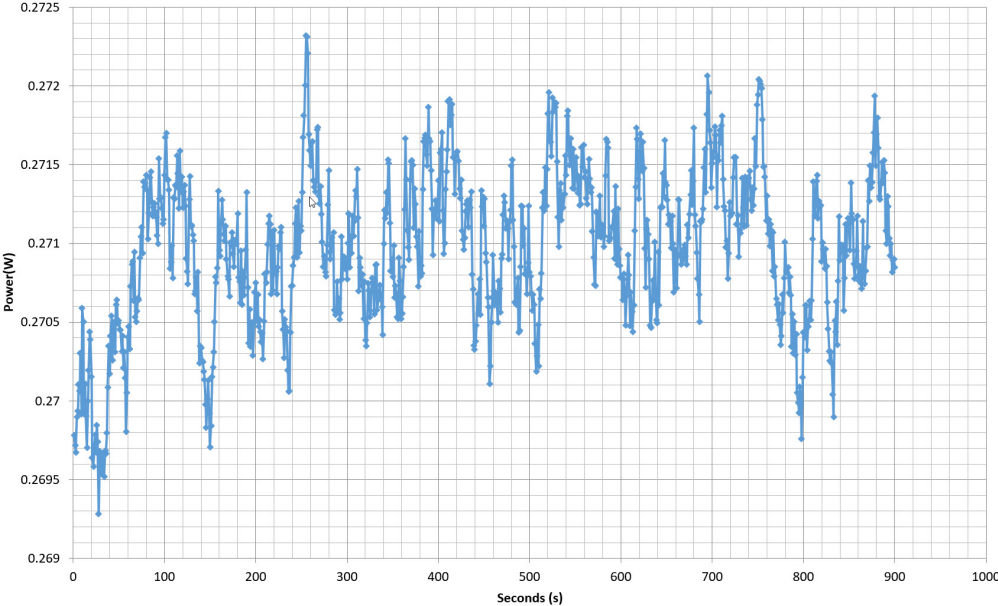
115V

Power - S1709199001 - 22/09/2017 - 10:20



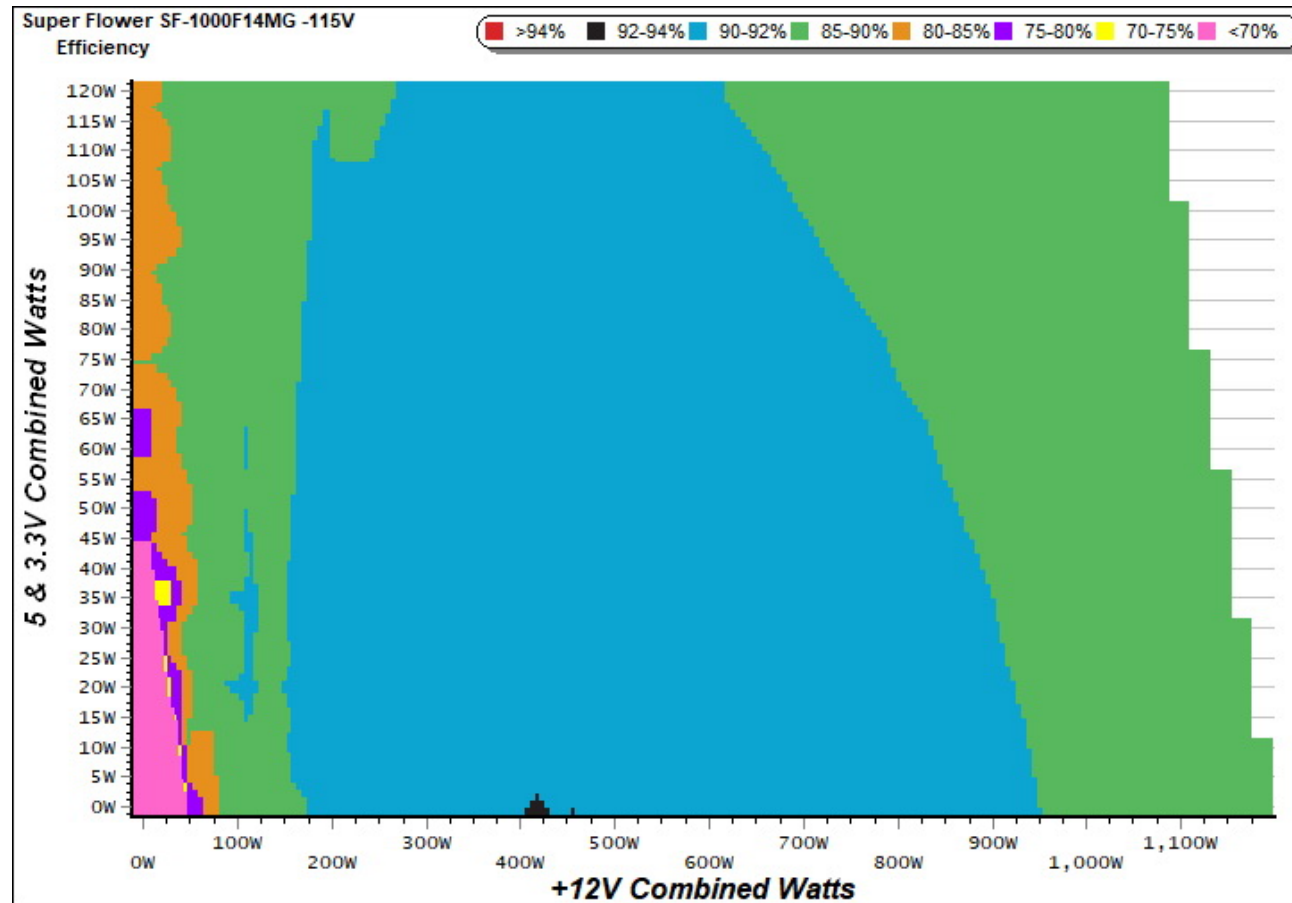
230V

Power - S1709199001 - 14/03/2019 - 10:42



Efficiency Graph

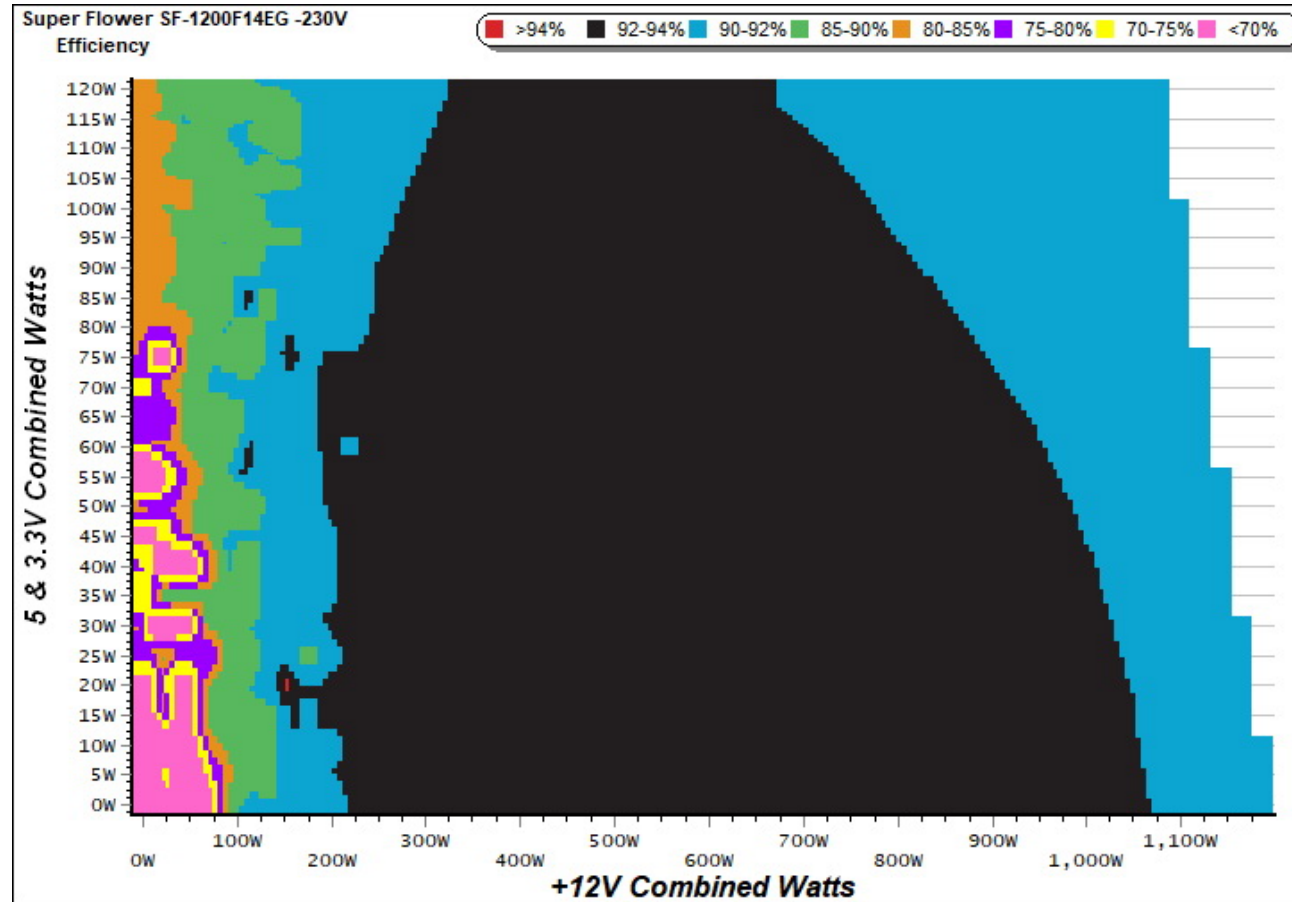
115V



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

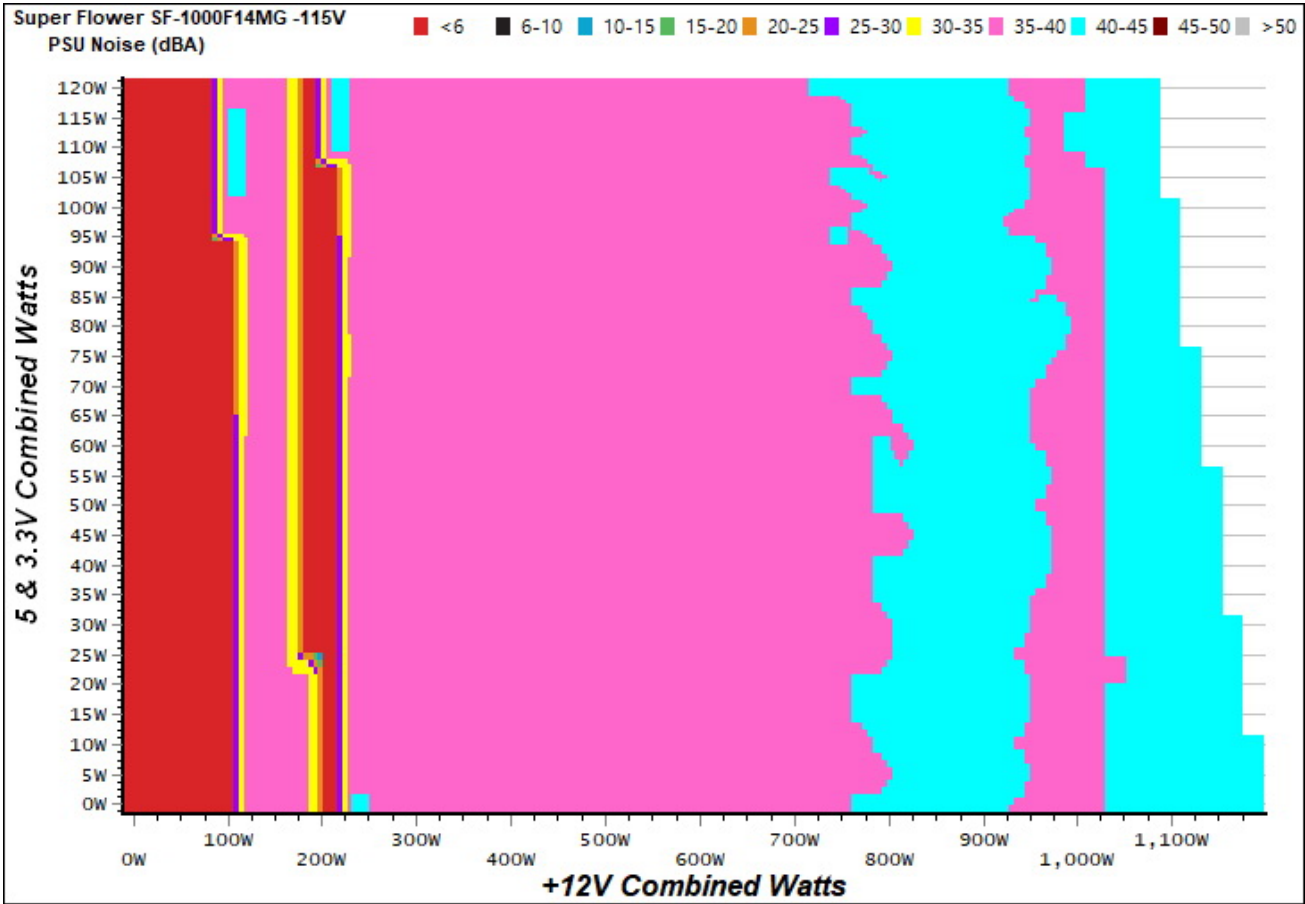


INFO

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.

Noise Graph

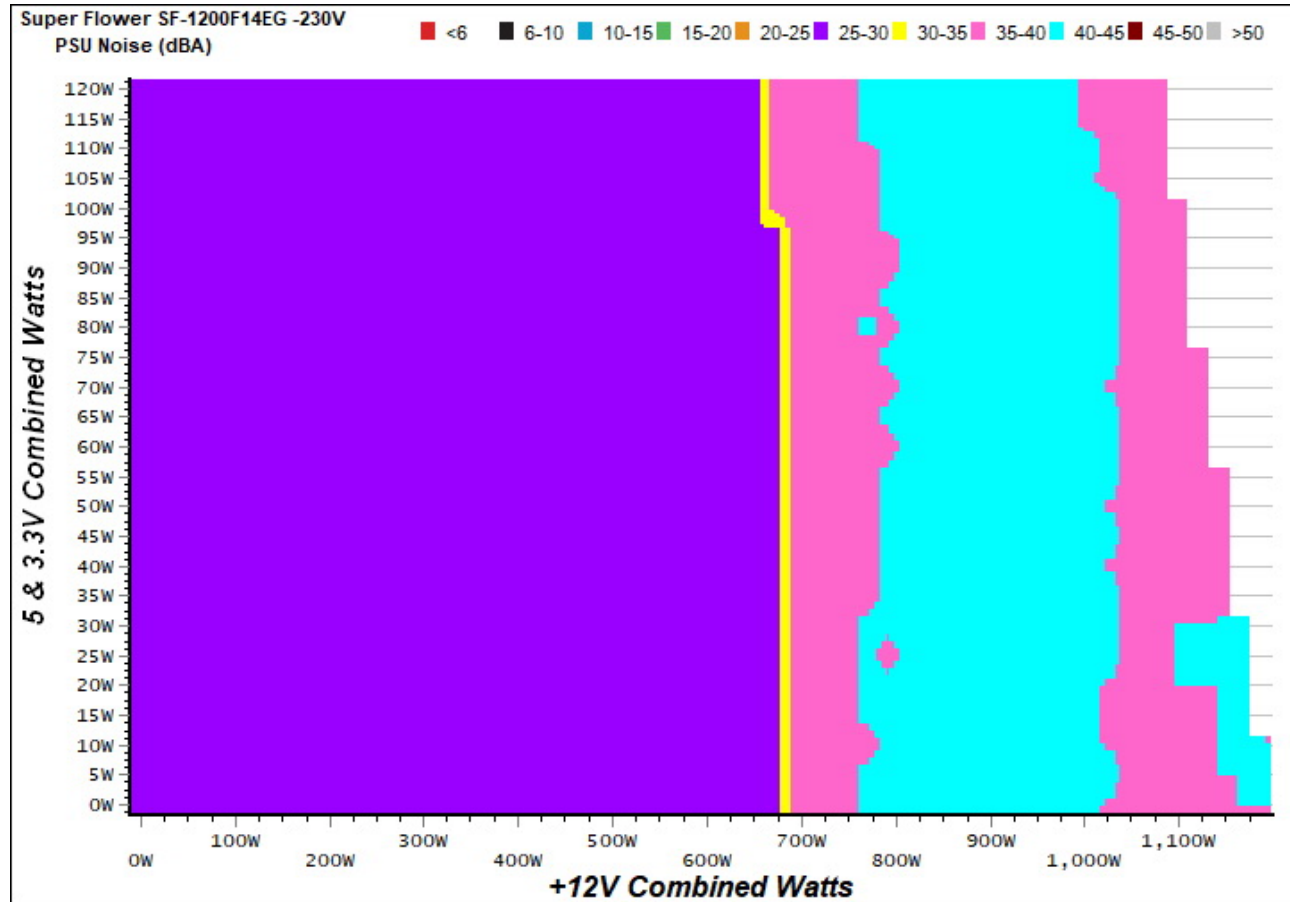
115V



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

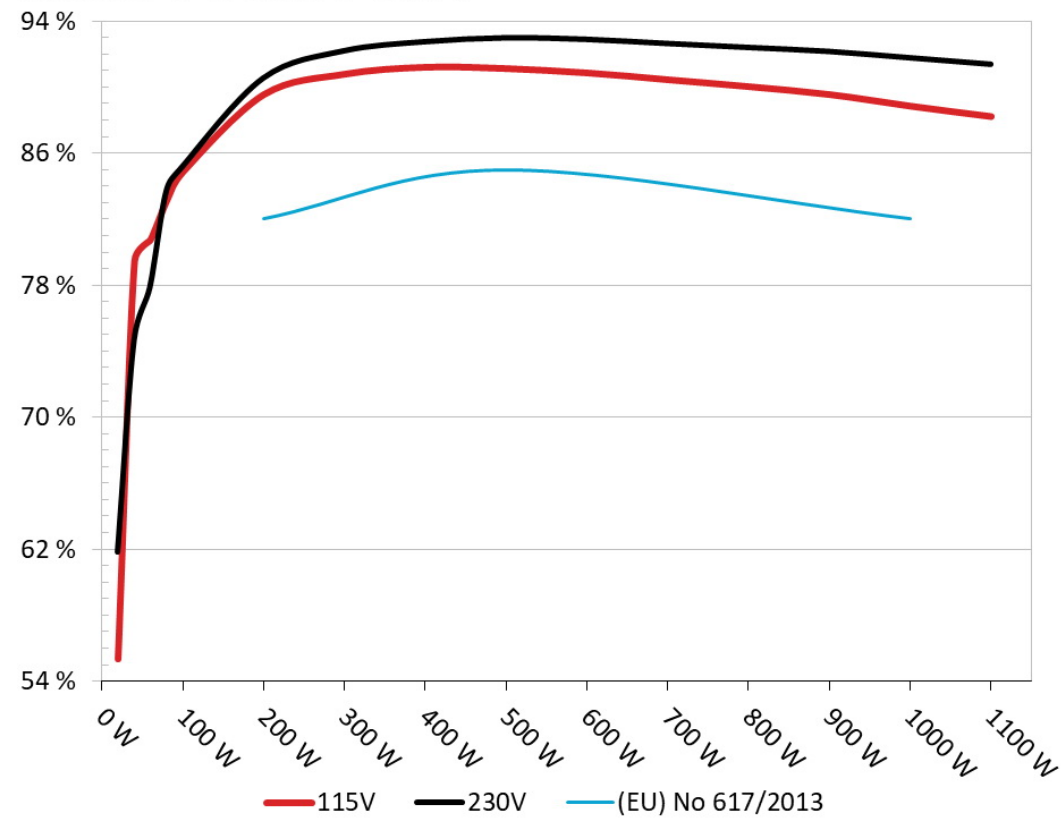
The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails.

Indicative Performance

Efficiency under high ambient temperature

Efficiency: Super Flower SF-1000F14MG

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



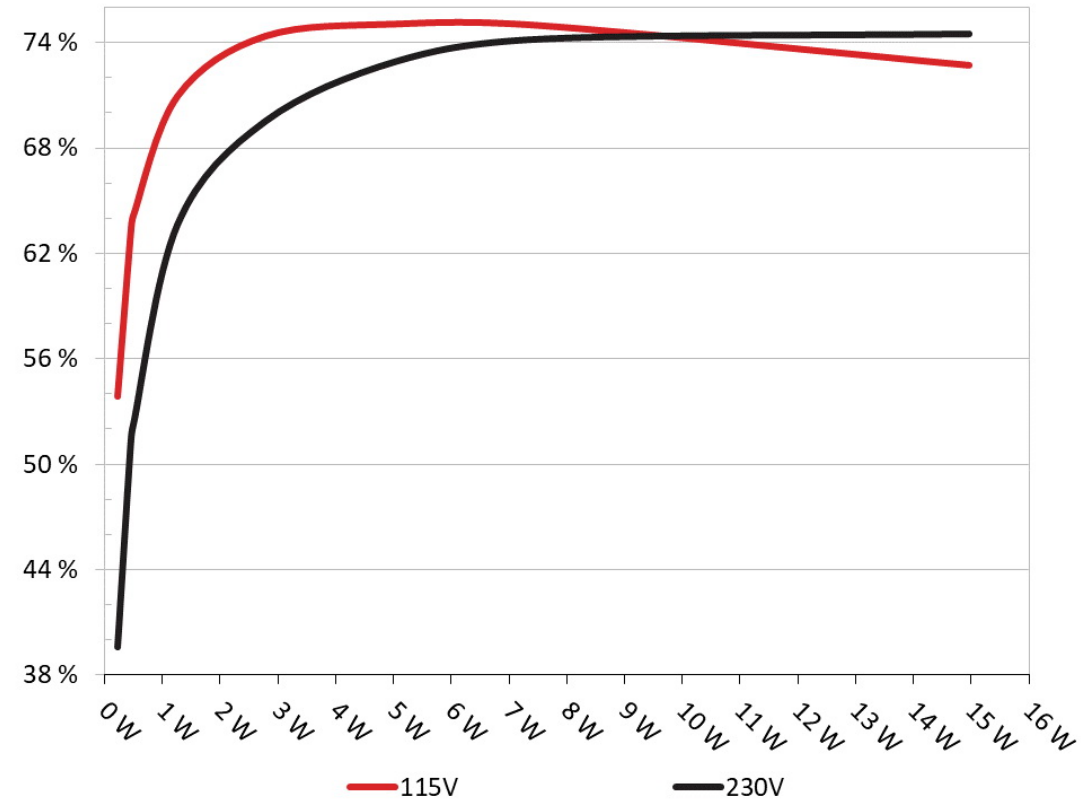
INFO

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: Super Flower SF-1000F14MG

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.

5VSB Efficiency (ERP LOT 3/6 & CEC)

115V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.229	53.882%	0.038
	5.074V	0.425		115.39V
2	0.090A	0.457	63.209%	0.063
	5.073V	0.723		115.39V
3	0.550A	2.784	74.359%	0.258
	5.060V	3.744		115.39V
4	1.000A	5.048	75.052%	0.355
	5.047V	6.726		115.38V
5	1.500A	7.551	74.963%	0.411
	5.034V	10.073		115.38V
6	3.000A	14.966	72.710%	0.483
	4.989V	20.583		115.37V

230V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.229	39.965%	0.024
	5.076V	0.573		230.28V
2	0.090A	0.457	51.464%	0.036
	5.075V	0.888		230.28V
3	0.550A	2.784	69.496%	0.147
	5.061V	4.006		230.28V
4	1.000A	5.049	72.836%	0.222
	5.048V	6.932		230.28V
5	1.500A	7.552	74.083%	0.280
	5.034V	10.194		230.28V
6	3.000A	14.965	74.246%	0.368
	4.988V	20.156		230.28V

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
1	6.490A	1.992A	1.991A	0.992A	100.107	84.890%	1698	41.0	38.21°C	0.790
	12.095V	5.022V	3.317V	5.042V	117.925				40.16°C	115.24V
2	13.970A	2.989A	2.983A	1.193A	199.804	89.563%	1706	41.2	38.43°C	0.994
	12.089V	5.024V	3.319V	5.032V	223.088				40.54°C	115.11V
3	21.791A	3.483A	3.465A	1.394A	299.305	90.799%	1720	41.6	38.75°C	0.991
	12.083V	5.025V	3.319V	5.022V	329.635				41.14°C	115.08V
4	29.683A	3.981A	3.977A	1.596A	399.725	91.226%	1770	41.8	39.13°C	0.993
	12.078V	5.026V	3.320V	5.013V	438.170				41.87°C	115.24V
5	37.202A	4.973A	4.969A	1.800A	499.809	91.145%	1842	42.6	40.13°C	0.994
	12.077V	5.029V	3.322V	5.002V	548.367				43.19°C	115.24V
6	44.700A	5.965A	5.957A	2.004A	599.975	90.881%	1842	42.6	40.90°C	0.994
	12.084V	5.031V	3.325V	4.992V	660.180				44.43°C	115.24V
7	52.137A	6.956A	6.943A	2.208A	699.713	90.471%	1880	44.5	41.77°C	0.995
	12.095V	5.034V	3.327V	4.982V	773.411				45.72°C	115.24V
8	59.635A	7.944A	7.929A	2.414A	800.240	90.048%	1940	45.8	42.88°C	0.995
	12.104V	5.037V	3.330V	4.971V	888.686				47.59°C	115.24V
9	67.458A	8.440A	8.411A	2.417A	899.577	89.575%	2000	45.9	44.20°C	0.995
	12.112V	5.037V	3.330V	4.967V	1004.276				49.46°C	115.24V
10	75.100A	8.934A	8.919A	3.035A	1000.001	88.868%	2080	46.2	45.63°C	0.996
	12.121V	5.038V	3.330V	4.944V	1125.271				51.49°C	115.24V
11	83.293A	8.937A	8.927A	3.038A	1099.998	88.238%	2143	48.8	46.76°C	0.996
	12.129V	5.037V	3.329V	4.939V	1246.620				53.49°C	115.24V
CL1	0.167A	14.002A	14.001A	0.000A	120.207	82.273%	2050	45.7	44.36°C	0.895
	12.093V	5.069V	3.372V	5.060V	146.108				49.73°C	115.19V

CL2	83.353A	1.002A	1.002A	1.000A	1023.727	89.307%	2050	45.7	45.26°C	0.996
	12.122V	5.007V	3.294V	5.005V	1146.305				50.89°C	115.24V

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
1	8.131A	1.992A	1.988A	0.992A	119.897	88.967%	1129	29.9	39.89°C	0.625
	12.091V	5.017V	3.316V	5.039V	134.766				42.16°C	230.21V
2	17.278A	2.989A	2.982A	1.194A	239.645	92.319%	1130	29.9	40.46°C	0.970
	12.082V	5.017V	3.318V	5.027V	259.585				43.16°C	230.23V
3	26.775A	3.488A	3.461A	1.397A	359.216	92.552%	1748	41.6	41.23°C	0.982
	12.072V	5.016V	3.319V	5.014V	388.123				44.21°C	230.24V
4	36.343A	3.989A	3.973A	1.600A	479.629	92.942%	1771	41.8	41.91°C	0.987
	12.064V	5.013V	3.319V	5.002V	516.051				45.28°C	230.25V
5	45.519A	4.986A	4.965A	1.805A	599.810	92.846%	1805	42.6	42.41°C	0.988
	12.068V	5.013V	3.321V	4.988V	646.027				46.22°C	230.26V
6	54.664A	5.984A	5.956A	2.011A	719.922	92.543%	1829	42.8	42.95°C	0.990
	12.076V	5.013V	3.324V	4.975V	777.929				47.11°C	230.27V
7	63.768A	6.982A	6.944A	2.218A	839.672	92.222%	1863	43.7	43.21°C	0.990
	12.084V	5.013V	3.326V	4.961V	910.489				48.22°C	230.29V
8	72.925A	7.980A	7.930A	2.426A	960.208	91.771%	1915	45.7	43.82°C	0.990
	12.092V	5.013V	3.328V	4.948V	1046.314				49.81°C	230.26V
9	82.413A	8.482A	8.413A	2.429A	1079.533	91.273%	1966	45.9	44.43°C	0.990
	12.098V	5.011V	3.328V	4.940V	1182.752				50.82°C	230.27V
10	91.736A	8.985A	8.924A	3.053A	1199.996	90.658%	2046	45.6	45.95°C	0.990
	12.103V	5.009V	3.329V	4.914V	1323.652				52.77°C	230.27V
11	101.623A	8.992A	8.925A	3.059A	1320.055	90.003%	2047	45.6	46.63°C	0.990
	12.107V	5.005V	3.327V	4.906V	1466.677				53.73°C	230.28V
CL1	0.155A	14.002A	14.001A	0.000A	119.795	82.465%	1854	43.2	42.26°C	0.630
	12.089V	5.056V	3.366V	5.051V	145.267				46.32°C	230.31V

CL2	100.019A	1.003A	0.998A	1.000A	1223.899	91.026%	1963	45.9	45.80°C	0.990
	12.104V	4.983V	3.296V	4.981V	1344.559				52.54°C	230.29V

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])	PF/AC Volts
1	1.194A	0.499A	0.483A	0.197A	19.545	55.373%	0	<6.0	0.310
	12.097V	5.016V	3.312V	5.068V	35.297				115.36V
2	2.454A	0.997A	0.995A	0.395A	39.980	79.474%	0	<6.0	0.537
	12.095V	5.018V	3.314V	5.060V	50.306				115.33V
3	3.644A	1.494A	1.477A	0.594A	59.476	80.751%	1698	41.0	0.664
	12.096V	5.020V	3.315V	5.054V	73.654				115.30V
4	4.900A	1.992A	1.989A	0.793A	79.874	83.142%	1680	40.5	0.736
	12.096V	5.022V	3.317V	5.048V	96.069				115.27V

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])	PF/AC Volts
1	1.181A	0.497A	0.480A	0.197A	19.373	68.713%	1122	29.7	0.466
	12.101V	5.016V	3.312V	5.068V	28.194				230.19V
2	2.435A	0.995A	0.994A	0.395A	39.747	74.060%	1125	29.8	0.530
	12.099V	5.017V	3.314V	5.061V	53.669				230.30V
3	3.626A	1.493A	1.474A	0.594A	59.244	83.352%	1126	29.8	0.529
	12.097V	5.018V	3.315V	5.054V	71.077				230.40V
4	4.886A	1.992A	1.986A	0.793A	79.683	82.721%	1127	29.8	0.573
	12.095V	5.019V	3.317V	5.047V	96.327				230.36V

The results above are not used in the certification process

Ripple Measurements

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	3.9 mV	3.5 mV	2.5 mV	2.9 mV	Pass
20% Load	3.9 mV	4.0 mV	2.8 mV	3.1 mV	Pass
30% Load	4.6 mV	3.9 mV	3.2 mV	3.3 mV	Pass
40% Load	5.3 mV	5.2 mV	3.9 mV	3.6 mV	Pass
50% Load	5.6 mV	4.9 mV	3.8 mV	4.0 mV	Pass
60% Load	5.9 mV	4.8 mV	4.2 mV	4.2 mV	Pass
70% Load	6.3 mV	4.9 mV	4.5 mV	4.4 mV	Pass
80% Load	7.1 mV	5.6 mV	5.5 mV	4.6 mV	Pass
90% Load	7.5 mV	5.5 mV	5.8 mV	4.6 mV	Pass
100% Load	8.0 mV	5.9 mV	5.9 mV	5.5 mV	Pass
110% Load	8.3 mV	6.2 mV	6.9 mV	5.9 mV	Pass
Crossload 1	3.7 mV	5.8 mV	5.0 mV	19.6 mV	Pass
Crossload 2	7.7 mV	4.4 mV	4.2 mV	3.7 mV	Pass

The results above are not used in the certification process

230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	8.5 mV	6.2 mV	9.9 mV	7.1 mV	Pass
20% Load	4.5 mV	5.4 mV	9.6 mV	7.8 mV	Pass
30% Load	4.9 mV	5.1 mV	11.2 mV	7.6 mV	Pass
40% Load	5.4 mV	5.9 mV	9.9 mV	7.5 mV	Pass
50% Load	5.4 mV	4.0 mV	10.5 mV	8.3 mV	Pass
60% Load	5.6 mV	4.6 mV	11.2 mV	8.4 mV	Pass
70% Load	6.1 mV	4.8 mV	11.4 mV	8.9 mV	Pass
80% Load	6.6 mV	5.1 mV	12.7 mV	9.4 mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
90% Load	6.9 mV	4.7 mV	12.6 mV	10.2 mV	Pass
100% Load	9.4 mV	5.6 mV	17.5 mV	10.3 mV	Pass
110% Load	9.7 mV	6.0 mV	17.7 mV	10.4 mV	Pass
Crossload 1	9.5 mV	4.7 mV	16.4 mV	25.0 mV	Pass
Crossload 2	8.4 mV	5.6 mV	17.7 mV	8.7 mV	Pass

The results above are not used in the certification process

Super Flower Leadex Gold 1000W



Top side

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 LTD Syrou 6, Latsia, 2231, Nicosia Cyprus

**SUPER[®]
FLOWER**

Model NO / 型号:

SF-1200F14EG

Switching power supply

交流式电源供应器

AC INPUT 交流输入	200Vac-240Vac 15A 60Hz/50Hz				
DC OUTPUT 直流输出	+3.3V	+5V	+12V	-12V	+5VSB
Max output current	24A	24A	99.9A	0.5A	3.0A
Max Combined Wattage 额定功率	120W	1198.8W	6W	15W	
	1200W				

82+

SF-1200F14EG
(200V-240V: **1200W**)

AC INPUT 交流输入	100Vac-240Vac 15A 60Hz/50Hz				
DC OUTPUT 直流输出	+3.3V	+5V	+12V	-12V	+5VSB
Max output current	24A	24A	83.3A	0.5A	3.0A
Max Combined Wattage 额定功率	120W	999.6W	6W	15W	
	1000W				

SF-1000F14MG
(100V-240V: **1000W**)

CAUTION HAZARDOUS Do not remove this cover! Trained service people only! No serviceable components inside!
VORSICHT GEFAHRZONE Abdeckungen unter keinen Umständen abnehmen! Reparaturen nur durch ausgebildetes Personal! Es sind keine zu wartenden Bauteile vorhanden! **ATTENTION DANGERUEX** Ne retirez pas le couvercle! Personnel de service formé! Aucun composant réparable! **警告** 勿擅自打开机壳, 未经授权人员不得维修! 内部有高压危险, 仅用于由合格2000V及以下地区安全使用!

FULL RANGE ACTIVE PFC

S1709199001

制造商: 锦华电脑有限公司 Made in China-中国制造

Power specifications label

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

www.cybenetics.com - info@cybenetics.com