XPG Pylon 550W

4K3680396225

Lab ID AD55001780

Certification ID 251780

Test Result Report ID: 21PS1780A

Certificate Issue Date: Jan 29, 2021

Scheme: ETA-EMI PSU

115V



230V



Scheme: LAMBDA PSU

115V



230V





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	XPG
Model	Pylon 550W
OEM/ODM	Channel Well Technology
Serial Number	4K3680396225
Product Specifications	
Manufacturer-Provided Information	
□□□□ (Vrms)	100-240
□□□□ (Arms)	8-4

□□□□ (Hz)	50-60
□□□□ (W)	550
Operating Temperature (Continuous Full Load) (°C)	
□□	ATX12V
□□□□	Fixed cables
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
□□	120mm Fluid Dynamic Bearing Fan (HA1225H12F-Z)
□□□□□	✗
Cybenetics Testing Information	
Lab ID	AD55001780
Date of receipt	Jan 8, 2021
Testing Date	Jan 20, 2021
Report Issued Date	Jan 29, 2021
Engineer Name	-
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

□□□□□
(Non-accredited measurements)

Native Cables				
□□	□□□□	□□□□□□	Gauge	In Cable Caps
ATX □□ 20+4 pin (660mm)	1	1	18-22AWG	□
4+4 pinEPS12V (670mm)	1	1	18AWG	□
6+2pin PCIe□□ (560mm+150mm)	1	2	18AWG	□
SATA□□ (560mm+150mm+150mm) / 4-pin Molex (+150mm)	1	3 / 1	18AWG	□
SATA□□ (560mm+150mm) / 4-pin Molex (+150mm) / FDD (+150mm)	1	2 / 1 / 1	18-20AWG	□

□□□□□				
AC Power Cord (1420mm) - C13 coupler	1	1	18AWG	-

□□□□

□		3.3V	5V	12V	5VSB	-12V
□□□□	□□	20	20	45.5	2.5	0.3
	□	110		546	12.5	3.6
□□□□□ (W)		550				

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)	84.938%
Average Noise Output (>1450 Load Combinations)	31.89dBA
PF□□□ (>1450 Load Combinations)	0.988
Efficiency With 10W (≤500W) or 2% (>500W) Load	62.839%
□□□□□□	0.0378W
Non-Accredited	
12V Ripple (Full Load)	40.85mV
5V Ripple (Full Load)	9.34mV
3.3V Ripple (Full Load)	14.34mV

5VSB Ripple (Full Load)	18.39mV
12V Load Regulation	1.04%
5V Load Regulation	0.40%
3.3V Load Regulation	0.66%
5VSB Load Regulation	2.58%
Inrush Current	31.990A

230V

Accredited		
□□□□ (>1450 load combinations)		87.136%
Average Noise Output (>1450 Load Combinations)		30.29dBA
PF□□□ (>1450 Load Combinations)		0.961
Efficiency With 10W (≤500W) or 2% (>500W) Load		-
□□□□□□		0.0772W
Non-Accredited		
12V Ripple (Full Load)		32.71mV
5V Ripple (Full Load)		8.91mV
3.3V Ripple (Full Load)		14.93mV
5VSB Ripple (Full Load)		18.11mV
12V Load Regulation		1.01%
5V Load Regulation		0.42%
3.3V Load Regulation		0.69%
5VSB Load Regulation		2.52%
Inrush Current		86.310A
□□□□ & PG□□		14.50ms
AC Loss to PWR_OK Hold Up Time		11.60ms
PWR_OK Inactive to DC Loss Delay		2.90ms
PSU Timings: T1 (20% / 100%)	30.0ms	30.0ms
PSU Timings: T3 (20% / 100%)	134.0ms	134.5ms
OPP (29.22°C / 41.40°C)	128.13%	121.76%

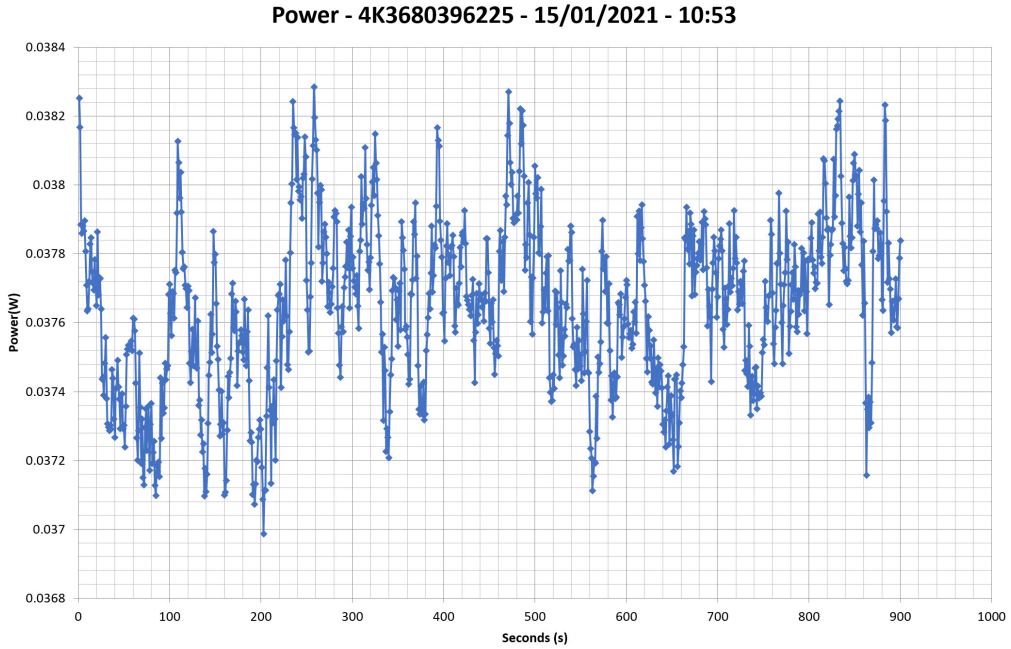
□□□□ & PG□□

Hold-Up Time (ms)	14.5
AC Loss to PWR_OK Hold Up Time (ms)	11.6
PWR_OK Inactive to DC Loss Delay (ms)	2.9

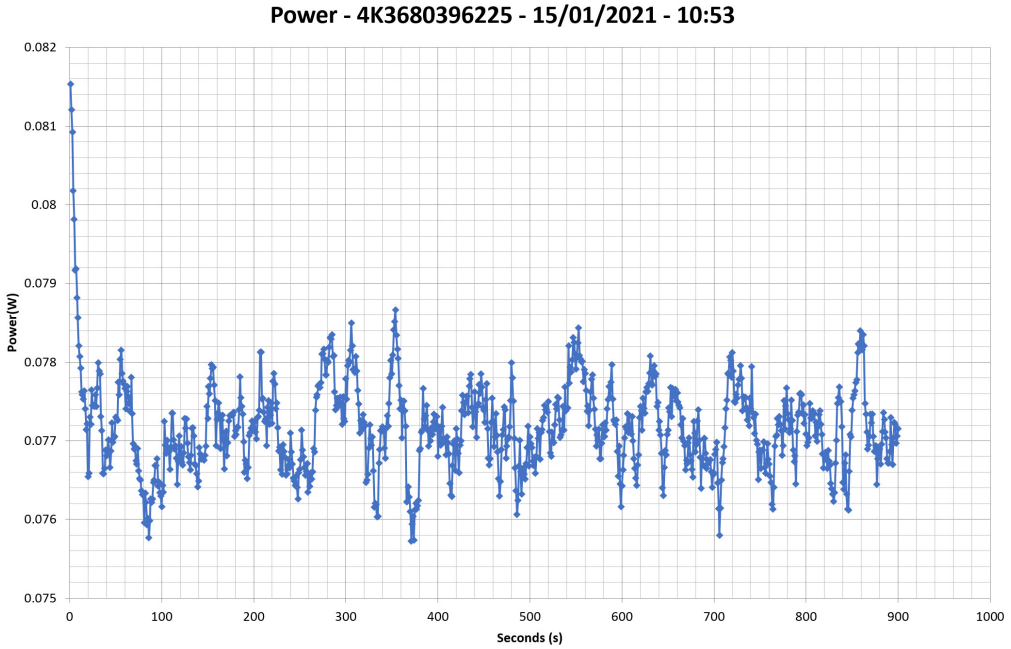
□□□□

Graphs

115V



230V



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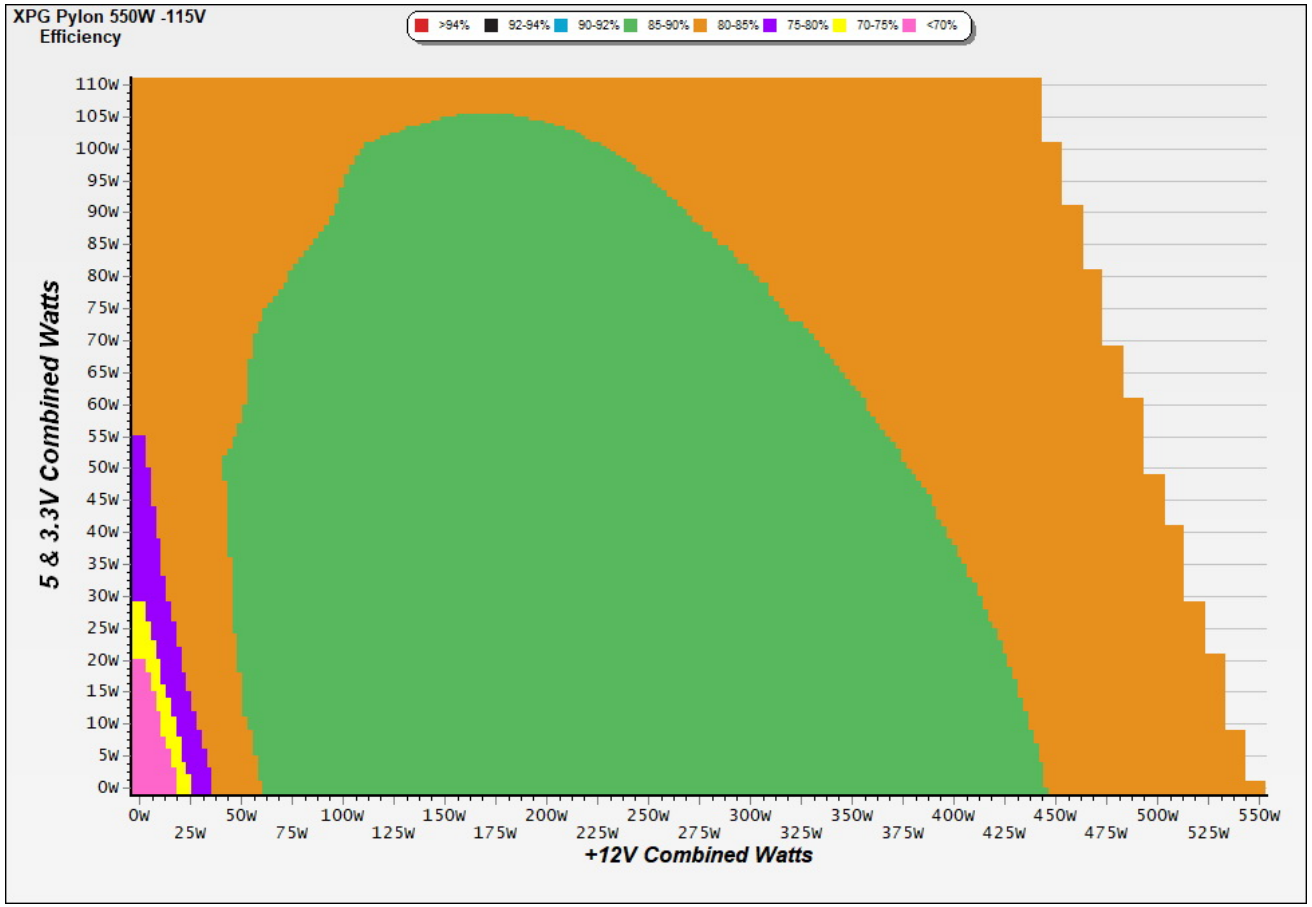
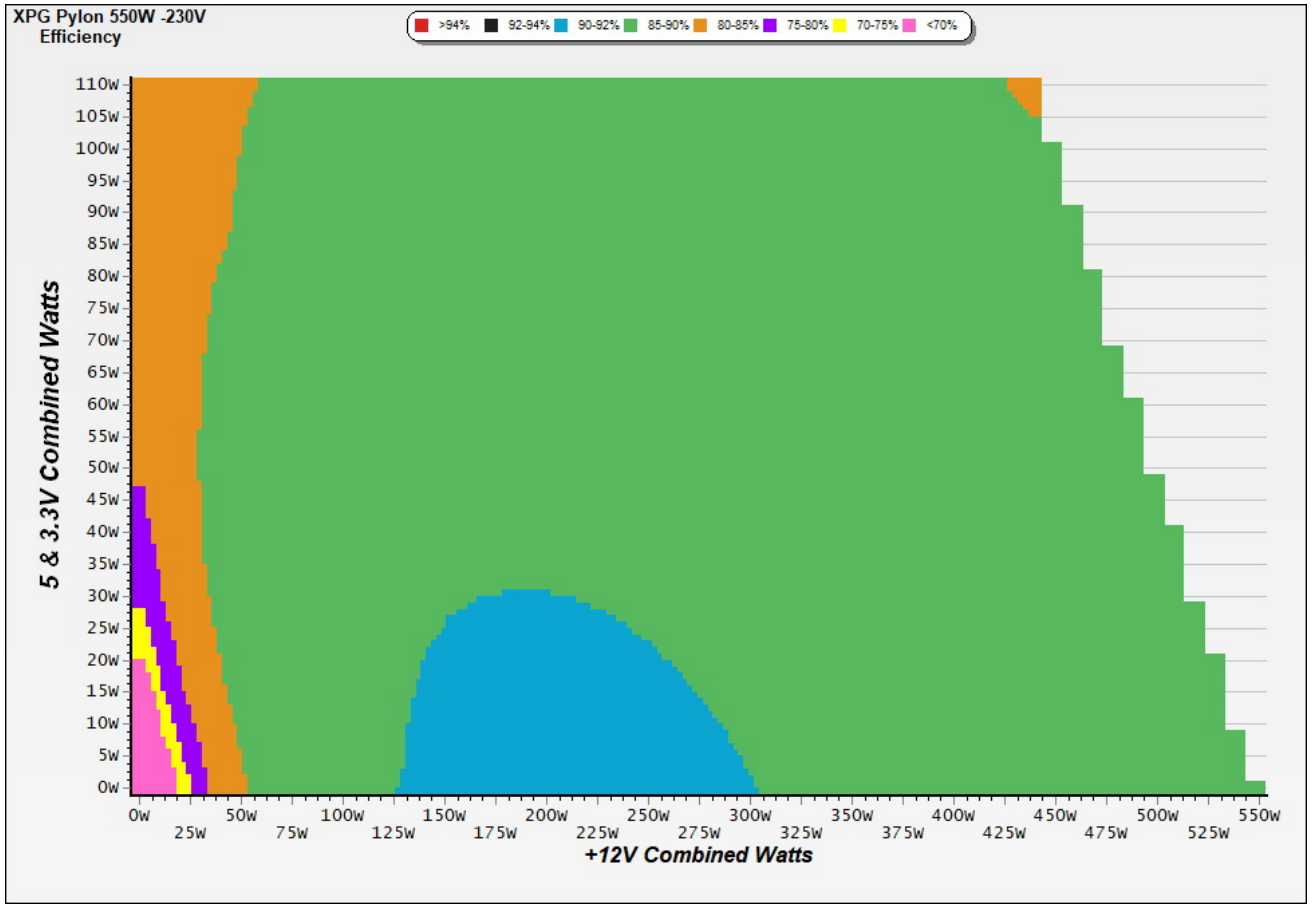
115V



□□

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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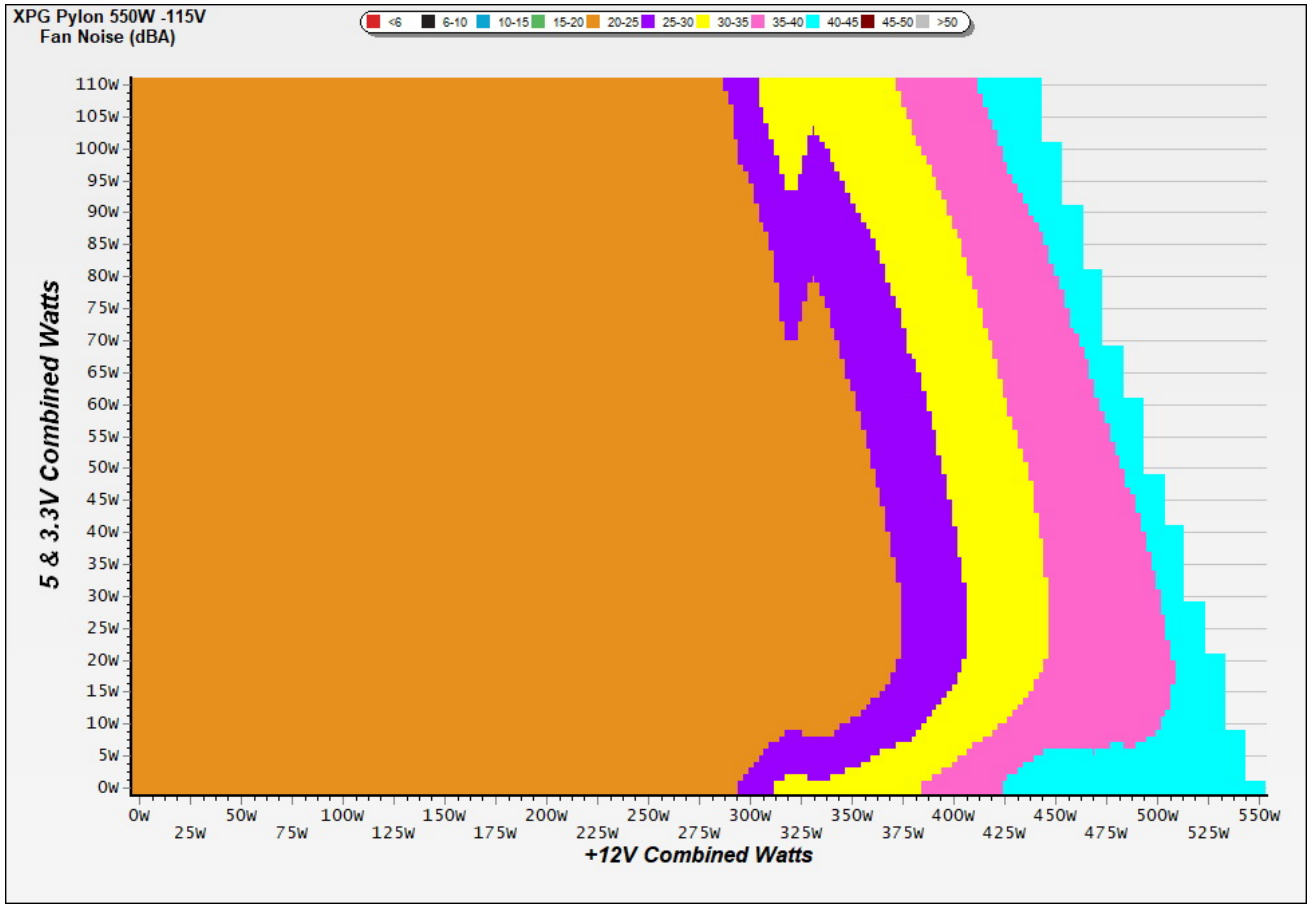
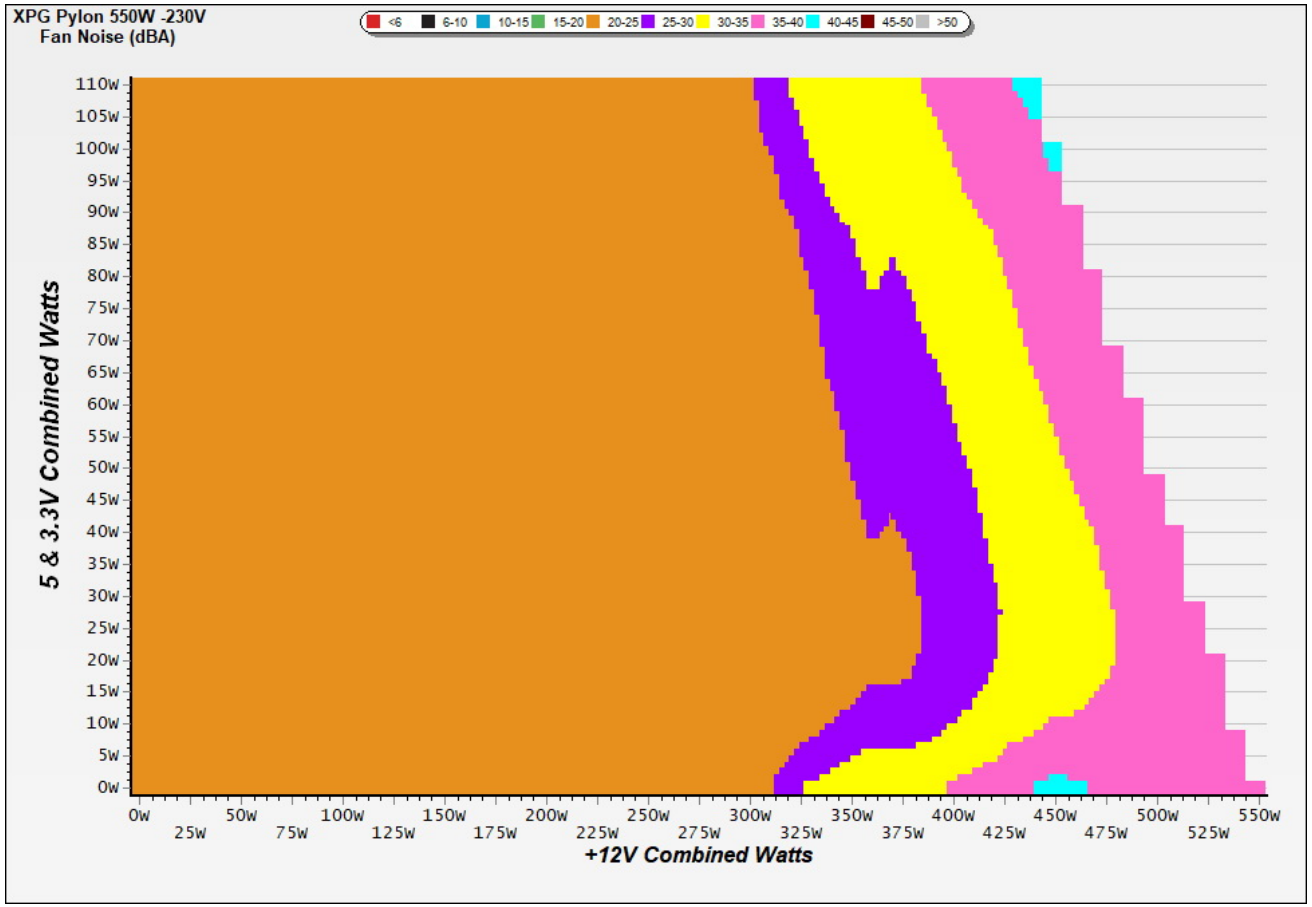
115V



□□

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%	864 RPM · 22.1 dB(A) · 35.5 °C	864 RPM · 22.1 dB(A) · 35.5 °C	**+0.0 dB(A)**
20%	866 RPM · 22.0 dB(A) · 35.9 °C	866 RPM · 22.0 dB(A) · 35.9 °C	**+0.0 dB(A)**
50%	882 RPM · 22.1 dB(A) · 37.2 °C	882 RPM · 22.1 dB(A) · 37.2 °C	**+0.0 dB(A)**
100%	2084 RPM · 45.4 dB(A) · 39.9 °C	2084 RPM · 45.4 dB(A) · 39.9 °C	**+0.0 dB(A)**

230V

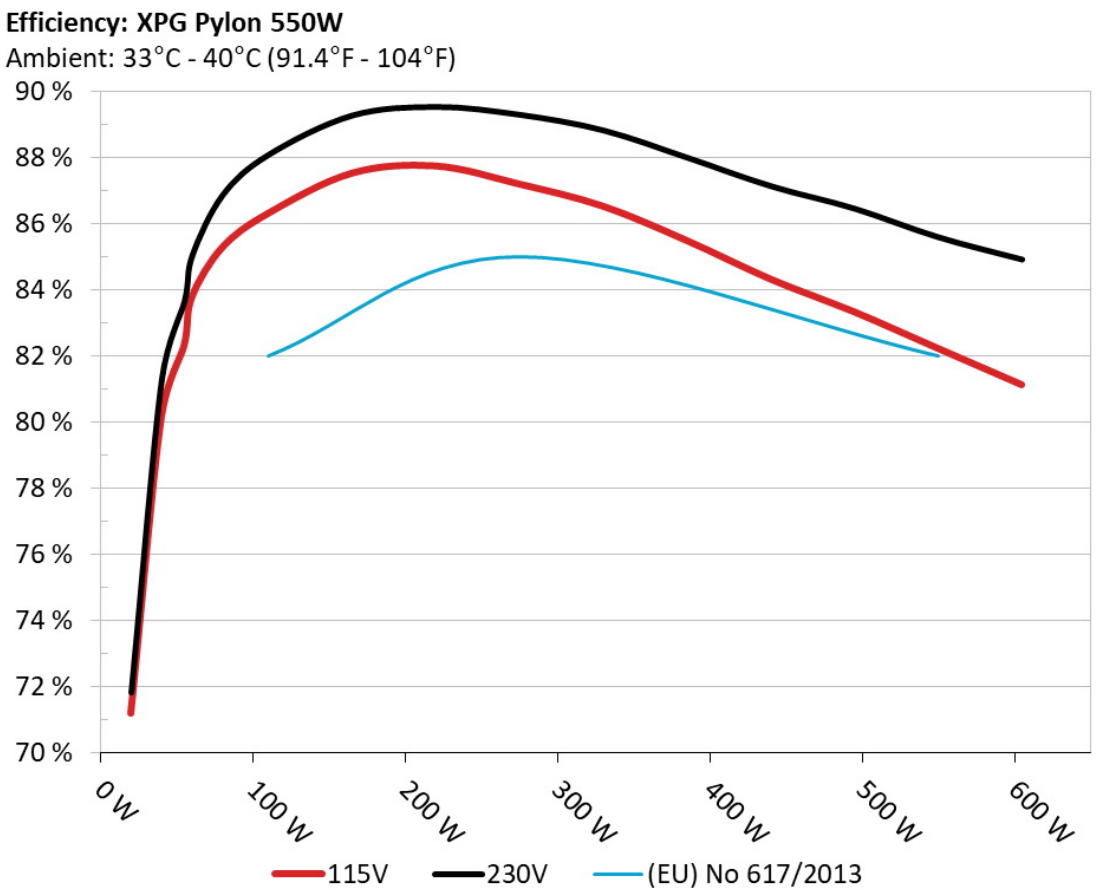
Load	Normal ambient fan · noise · intake	High ambient fan · noise · intake	Noise change
10%	873 RPM · 21.8 dB(A) · 35.8 °C	873 RPM · 21.8 dB(A) · 35.8 °C	**+0.0 dB(A)**
20%	878 RPM · 21.8 dB(A) · 36.1 °C	878 RPM · 21.8 dB(A) · 36.1 °C	**+0.0 dB(A)**
50%	889 RPM · 23.1 dB(A) · 37.9 °C	889 RPM · 23.1 dB(A) · 37.9 °C	**+0.0 dB(A)**
100%	2109 RPM · 45.8 dB(A) · 39.9 °C	2109 RPM · 45.8 dB(A) · 39.9 °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.

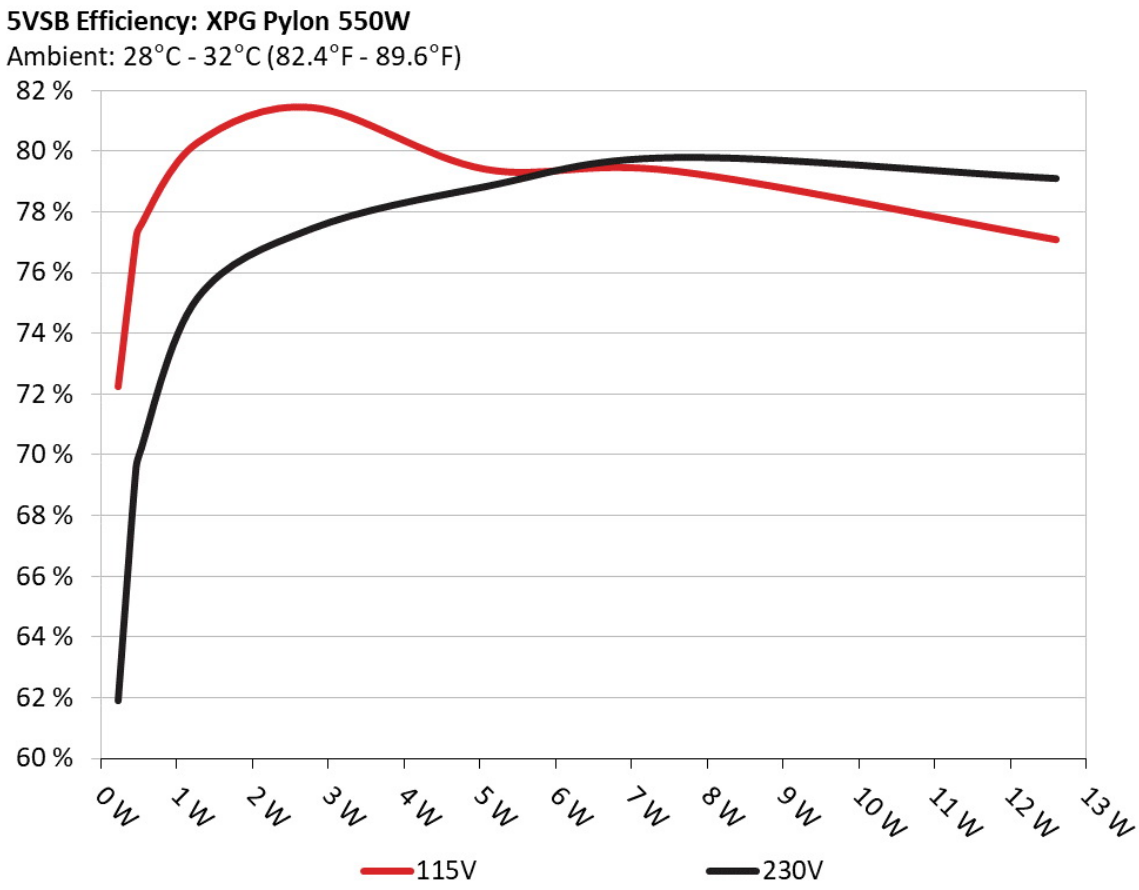
Informational. Not part of the ETA or LAMBDA rating.

Indicative Performance



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□□□□



□□

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	0.229	72.240%	0.037
	5.093V	0.317		115.16V
2	0.090A	0.458	76.975%	0.068
	5.092V	0.595		115.16V
3	0.550A	2.797	81.426%	0.277
	5.083V	3.435		115.15V
4	1.000A	5.075	79.396%	0.363
	5.074V	6.392		115.15V
5	1.500A	7.596	79.332%	0.414
	5.063V	9.575		115.12V
6	2.500A	12.610	77.078%	0.473
	5.043V	16.360		115.12V

230V

□□ #	5VSB	DC/AC (□)	□□	PF/AC □□
1	0.045A	0.229	61.892%	0.013
	5.093V	0.370		230.35V
2	0.090A	0.458	69.394%	0.023
	5.092V	0.660		230.34V
3	0.550A	2.796	77.452%	0.117
	5.083V	3.610		230.36V
4	1.000A	5.075	78.829%	0.188
	5.074V	6.438		230.37V
5	1.500A	7.596	79.790%	0.243
	5.063V	9.520		230.37V
6	2.501A	12.611	79.096%	0.315
	5.043V	15.944		230.35V

Supplementary Tests (For Reference)

10-110%□□□□

115V

□□ #	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
1	2.727A	1.983A	1.992A	0.988A	54.960	82.331%	864	22.1	35.50°C	0.963
	12.231V	5.045V	3.313V	5.063V	66.755				40.13°C	115.12V
2	6.476A	2.976A	2.991A	1.188A	110.031	86.325%	866	22.0	35.86°C	0.981
	12.218V	5.043V	3.310V	5.050V	127.462				41.37°C	115.09V
3	10.567A	3.473A	3.491A	1.390A	165.028	87.543%	872	21.8	36.45°C	0.987
	12.205V	5.041V	3.308V	5.038V	188.511				42.77°C	115.09V
4	14.666A	3.970A	3.995A	1.592A	220.034	87.763%	877	21.8	36.50°C	0.990
	12.193V	5.039V	3.305V	5.027V	250.714				43.53°C	115.09V
5	18.434A	4.966A	4.998A	1.796A	275.029	87.216%	882	22.1	37.23°C	0.992
	12.179V	5.036V	3.303V	5.014V	315.344				45.00°C	115.11V
6	22.210A	5.958A	6.000A	2.000A	330.019	86.546%	888	23.1	37.40°C	0.994
	12.166V	5.036V	3.301V	5.001V	381.323				45.83°C	115.09V
7	26.004A	6.950A	7.004A	2.207A	385.104	85.506%	1075	27.4	38.48°C	0.994
	12.152V	5.035V	3.299V	4.986V	450.385				47.94°C	115.10V
8	29.801A	7.952A	8.009A	2.414A	440.109	84.338%	1399	34.8	38.86°C	0.994
	12.137V	5.032V	3.296V	4.972V	521.842				48.82°C	115.13V
9	33.996A	8.453A	8.499A	2.418A	494.608	83.356%	1745	40.7	39.09°C	0.994
	12.122V	5.029V	3.294V	4.964V	593.370				49.80°C	115.10V
10	38.198A	8.956A	9.022A	2.523A	549.716	82.250%	2084	45.4	39.86°C	0.994
	12.108V	5.026V	3.292V	4.955V	668.347				51.18°C	115.13V
11	42.810A	8.959A	9.026A	2.527A	604.954	81.144%	2340	46.5	40.05°C	0.994
	12.094V	5.024V	3.290V	4.948V	745.528				52.68°C	115.11V
CL1	0.117A	13.000A	12.997A	0.000A	109.891	80.183%	904	22.8	37.82°C	0.982
	12.211V	5.044V	3.300V	5.046V	137.050				45.11°C	115.16V

CL2	45.520A	0.999A	1.001A	1.000A	564.530	82.962%	2073	45.1	39.52°C	0.994
	12.109V	5.030V	3.299V	5.001V	680.468				51.51°C	115.09V

The results above are not used in the certification process

230V

□□ #	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
1	2.726A	1.983A	1.993A	0.988A	54.952	83.660%	873	21.8	35.81°C	0.835
	12.231V	5.046V	3.312V	5.063V	65.685				40.53°C	230.20V
2	6.475A	2.976A	2.990A	1.188A	110.011	88.096%	878	21.8	36.09°C	0.926
	12.217V	5.044V	3.310V	5.049V	124.876				41.76°C	230.16V
3	10.566A	3.472A	3.494A	1.390A	165.008	89.290%	881	22.0	36.18°C	0.955
	12.204V	5.041V	3.307V	5.038V	184.801				42.71°C	230.20V
4	14.666A	3.970A	3.992A	1.592A	220.009	89.549%	884	22.5	37.29°C	0.968
	12.192V	5.039V	3.305V	5.027V	245.686				44.62°C	230.23V
5	18.432A	4.965A	4.997A	1.796A	275.001	89.313%	889	23.1	37.86°C	0.973
	12.179V	5.037V	3.303V	5.014V	307.908				45.68°C	230.23V
6	22.210A	5.959A	5.997A	2.000A	329.993	88.837%	893	22.9	37.95°C	0.978
	12.165V	5.036V	3.301V	5.001V	371.461				46.17°C	230.20V
7	26.003A	6.954A	7.004A	2.207A	385.079	88.011%	1083	27.7	38.17°C	0.983
	12.151V	5.035V	3.298V	4.986V	437.536				47.41°C	230.21V
8	29.796A	7.950A	8.010A	2.414A	440.036	87.146%	1419	35.3	39.06°C	0.986
	12.137V	5.032V	3.295V	4.973V	504.940				49.49°C	230.20V
9	33.986A	8.452A	8.502A	2.417A	494.517	86.471%	1710	40.5	39.36°C	0.988
	12.123V	5.029V	3.293V	4.966V	571.887				50.37°C	230.31V
10	38.191A	8.954A	9.023A	2.523A	549.654	85.602%	2109	45.8	39.86°C	0.989
	12.109V	5.026V	3.291V	4.955V	642.101				51.70°C	230.31V
11	42.799A	8.959A	9.029A	2.527A	604.856	84.926%	2341	46.5	40.27°C	0.990
	12.095V	5.023V	3.289V	4.949V	712.212				53.20°C	230.31V
CL1	0.116A	13.001A	12.998A	0.000A	109.887	82.058%	907	22.8	37.81°C	0.932
	12.210V	5.044V	3.300V	5.046V	133.914				45.13°C	230.33V

CL2	45.516A	1.001A	0.999A	1.000A	564.531	86.406%	2127	45.7	40.08°C	0.989
	12.110V	5.030V	3.299V	5.001V	653.350				51.70°C	230.31V

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 □□
1	1.213A	0.493A	0.498A	0.197A	19.988	71.203%	855	21.7	0.899
	12.239V	5.048V	3.316V	5.086V	28.072				115.12V
2	2.426A	0.991A	0.994A	0.394A	39.978	80.160%	859	21.8	0.949
	12.235V	5.046V	3.314V	5.079V	49.873				115.10V
3	3.643A	1.487A	1.493A	0.592A	60.007	83.790%	862	22.0	0.965
	12.231V	5.045V	3.313V	5.071V	71.616				115.09V
4	4.855A	1.983A	1.992A	0.790A	79.957	85.292%	864	22.1	0.975
	12.226V	5.044V	3.312V	5.064V	93.745				115.11V

The results above are not used in the certification process

230V

□□ #	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	PF/AC □□
1	1.212A	0.494A	0.498A	0.197A	19.981	71.799%	867	21.9	0.607
	12.239V	5.049V	3.316V	5.086V	27.829				230.26V
2	2.425A	0.991A	0.995A	0.394A	39.970	81.278%	871	21.8	0.769
	12.235V	5.048V	3.314V	5.078V	49.177				230.24V
3	3.642A	1.487A	1.495A	0.592A	60.000	85.042%	872	21.8	0.849
	12.230V	5.046V	3.313V	5.071V	70.553				230.20V
4	4.855A	1.982A	1.992A	0.790A	79.950	86.873%	873	21.8	0.891
	12.225V	5.045V	3.312V	5.064V	92.031				230.17V

The results above are not used in the certification process

□□□□

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	7.00mV	5.70mV	5.30mV	8.90mV	Pass
20% Load	8.30mV	6.00mV	5.20mV	9.10mV	Pass
30% Load	8.80mV	5.80mV	5.30mV	10.30mV	Pass
40% Load	9.30mV	6.30mV	5.70mV	9.80mV	Pass
50% Load	11.30mV	6.90mV	6.60mV	10.70mV	Pass
60% Load	14.30mV	7.00mV	6.70mV	21.60mV	Pass
70% Load	17.40mV	6.90mV	6.00mV	13.80mV	Pass
80% Load	23.10mV	8.60mV	12.80mV	18.50mV	Pass
90% Load	26.60mV	8.30mV	13.30mV	17.80mV	Pass
100% Load	40.90mV	9.30mV	14.30mV	18.40mV	Pass
110% Load	52.70mV	10.50mV	15.60mV	17.50mV	Pass
Crossload1	9.10mV	7.60mV	15.60mV	8.00mV	Pass
Crossload2	45.50mV	7.80mV	7.30mV	12.40mV	Pass

The results above are not used in the certification process

230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	7.20mV	5.30mV	5.20mV	8.40mV	Pass
20% Load	8.20mV	5.50mV	5.40mV	8.40mV	Pass
30% Load	8.70mV	5.90mV	5.20mV	11.10mV	Pass
40% Load	9.00mV	6.10mV	5.60mV	9.60mV	Pass
50% Load	10.90mV	6.40mV	6.00mV	10.90mV	Pass
60% Load	11.70mV	7.00mV	6.50mV	19.70mV	Pass
70% Load	15.00mV	6.50mV	6.00mV	13.00mV	Pass
80% Load	20.50mV	7.30mV	12.60mV	18.40mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
90% Load	25.40mV	8.00mV	13.50mV	19.50mV	Pass
100% Load	32.70mV	8.90mV	14.90mV	18.10mV	Pass
110% Load	49.20mV	10.30mV	15.60mV	17.70mV	Pass
Crossload1	9.20mV	8.40mV	14.70mV	8.60mV	Pass
Crossload2	43.50mV	7.50mV	7.20mV	11.70mV	Pass

The results above are not used in the certification process

XPG Pylon 550W

Top side

Power specifications label

本测试报告中包含的所有数据和图表均可在以下条件下由任何人使用：使用过程需提及测试结果由Cybenetics提供。
在任何情况下都应提供原始测试结果文档的网站链接

Cybenetics 提供自愿性认证计划：电源方面有 ETA (效率)、LAMBDA (噪声) 与 SAFE (安全与正确运行)；散热产品方面有 DELTA (机箱隔音) 与 PHI (风扇风量与静压)