Gamer Storm PF700X

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Lab ID GA70002728

Certification ID 252728

Test Result Report ID: 25PS2728A

Certificate Issue Date: Feb 5, 2025

230V

Scheme: ETA-EMI PSU



230V



Scheme: LAMBDA PSU



Aristeidis Bitziopoulos, Certification Body General Manager

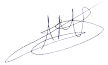
General Information

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	Gamer Storm
Model	PF700X
OEM/ODM	CE-Link
Serial Number	-
Product Specifications	
Manufacturer-Provided Information	
□□□□ (Vrms)	200-240
□□□□ (Arms)	5
□□□□ (Hz)	50-60

□□□□ (W)	700
Operating Temperature (Continuous Full Load) (°C)	
□□	ATX12V
□□□□	Fixed cables
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
□□	120mm Fluid Dynamic Bearing Fan (HA1225M12F-Z)
□□□□□	✗
Cybenetics Testing Information	
Lab ID	GA70002728
Date of receipt	Jan 23, 2025
Testing Date	Jan 30, 2025
Report Issued Date	Feb 5, 2025
Engineer Name	-
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

□□□□ (Non-accredited measurements)

□□□□				
□□	□□□□	□□□□□□	**Gauge**	In Cable Capacitors
ATX □□ 20+4 pin (560mm)	1	1	18-22AWG	□
4+4 pin EPS 12V □□ (610mm+150mm)	1	2	18AWG	□
6+2pin PCIe□□ (510mm+150mm)	2	4	18AWG	□
SATA□□ (460mm+150mm+150mm) / 4-pin Molex (+150mm)	2	6 / 2	18AWG	□

Protection Features(Manufacturer)

Over Power Protection	✓
Over Current (+12V) Protection	?

Over Temperature Protection	✓
Short Circuit Protection	✓
Surge Protection	✓
Inrush Current Protection	✓
Fan Failure Protection	✗

□□□□

□		3.3V	5V	12V	5VSB	-12V
□□□□	□□	18	18	58.3	3	0.3
	□	110		699.6	15	3.6
□□□□□ (W)		700				

Parts Description

General Data	
Manufacturer (OEM)	CE LINK
PCB Type	Single-Sided
Primary Side	
Transient Filter	4x Y caps, 2x X caps, 2x CM chokes, 1x MOV
Inrush Protection	1x NTC Thermistor M72 1.3D15 (1.3 ohm)
Bridge Rectifier(s)	1x GBU608 (800V, 6A @ 100°C)
APFC MOSFETs	1x Lonten LND20N50W (500V, 12.5A @ 100°C, Rds(on): 0.29Ohm)
APFC Boost Diode	1x Good-Ark MUR860F (600V, 8A @ 105°C)
Bulk Cap(s)	1x Teapo (420V, 470uF, 6-10,000h @ 105°C, TC)
Main Switchers	2x Lonten LND18N50 (500V, 13.5A @ 100°C, Rds(on): 0.28Ohm)
PFC/PWM Controller	Champion CM6800UX

Topology	Primary side: APFC, Double Forward Secondary side: Synchronous Rectification & DC-DC converters
Secondary Side	
+12V MOSFETs	3x HB043N06GC
5V & 3.3V	DC-DC Converters: 4x SLD3090T PWM Controller(s): 2x Anpec APW7164
Filtering Capacitors	Electrolytic: 13x Teapo (1-3,000h @ 105°C, SC) 1x Toshincon (@105°C, UCE) Polymer: 2x
Supervisor IC	IN1S3151-SAG
Fan Model	Hong Hua HA1225M12F-Z (120mm, 12V, 0.45A, Fluid Dynamic Bearing Fan)
5VSB	
Rectifier	1x Chongqing Pingwei PS1045L (45V, 10A) SBR
Standby PWM Controller	Esthome EST.2915HP

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 230V

Accredited	
□□□□ (>1450 load combinations)	87.479%
Average Noise Output (>1450 Load Combinations)	26.39dBA
PF□□□ (>1450 Load Combinations)	0.967
Efficiency With 10W (≤500W) or 2% (>500W) Load	61.529%
□□□□□□	0.1587W

Non-Accredited		
12V Ripple (Full Load)		72.37mV
5V Ripple (Full Load)		34.52mV
3.3V Ripple (Full Load)		28.99mV
5VSB Ripple (Full Load)		24.94mV
12V Load Regulation		0.36%
5V Load Regulation		2.55%
3.3V Load Regulation		3.72%
5VSB Load Regulation		4.44%
Inrush Current		231.700A
12V Transient Response (150%)		11.62V
5V Transient Response (150%)		4.929V
3.3V Transient Response (150%)		3.194V
5VSB Transient Response (150%)		4.973V
□□□□ & PG□□		13.40ms
AC Loss to PWR_OK Hold Up Time		12.10ms
PWR_OK Inactive to DC Loss Delay		1.30ms
PSU Timings: T1 (20% / 100%)	44.0ms	43.0ms
PSU Timings: T3 (20% / 100%)	126.0ms	125.0ms
12V OCP (28.4°C / 41.7°C)	77.20A (132.42%), 11.498V *High Ripple (175.43mV), Voltage Drop (11.266V@77.6A), Stopped	76.80A (131.73%), 11.412V *High Ripple(185.25mV), Voltage Drop (11.15V@77.2A), Stopped
5V OCP (28.4°C / 41.7°C)	27A (150.00%), 5.022V	25.6A (142.22%), 5.015V
3.3V OCP (28.4°C / 41.7°C)	28.5A (158.33%), 3.304V	28.1A (156.11%), 3.304V
5VSB OCP (28.4°C / 41.7°C)	5.5A (183.33%), 4.986V	5.3A (176.67%), 4.988V
OPP (29.27°C / 42.41°C)	127.23%	124.24%

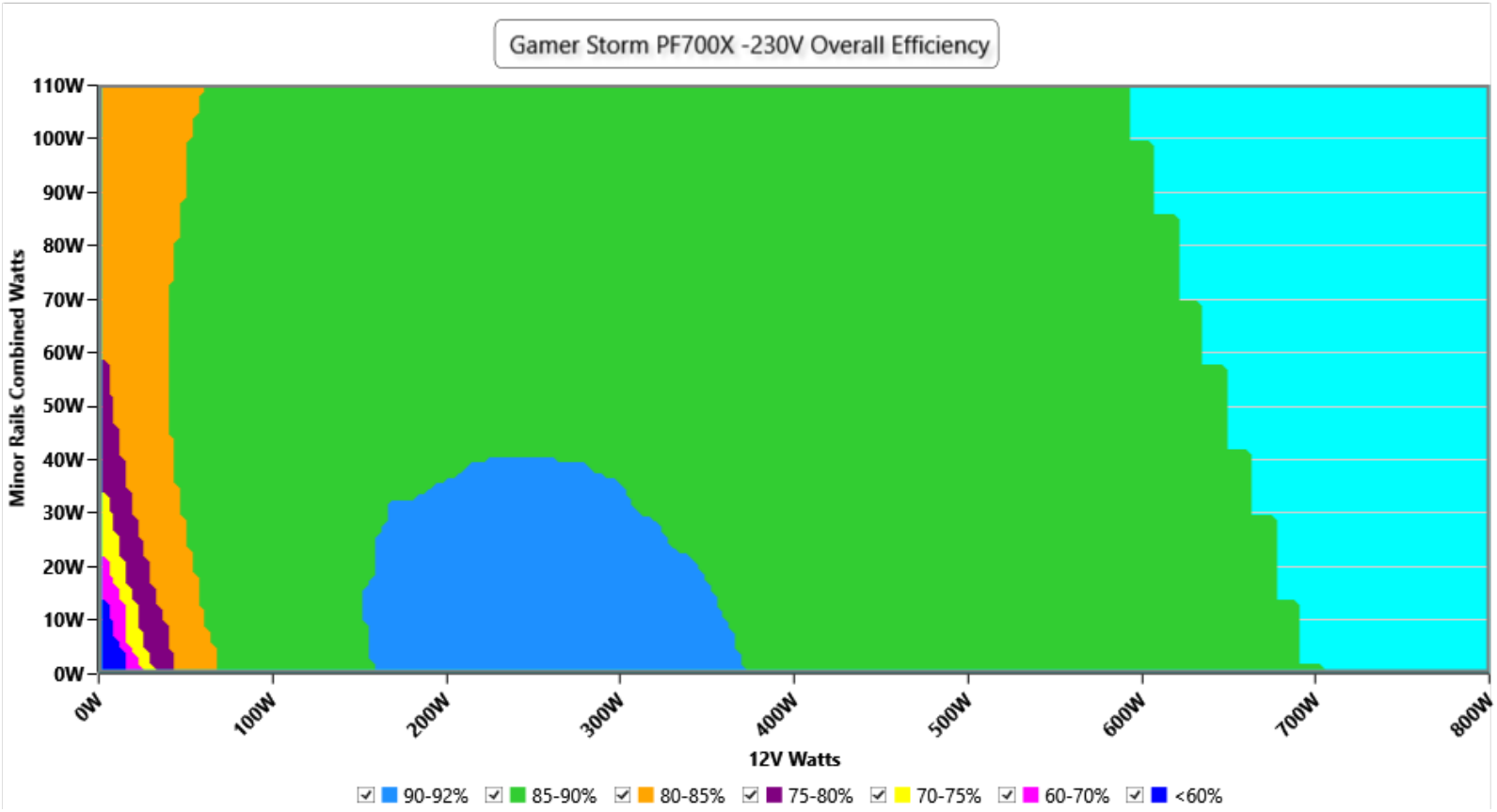
□□□□ & PG□□

Hold-Up Time (ms)	13.4
AC Loss to PWR_OK Hold Up Time (ms)	12.1
PWR_OK Inactive to DC Loss Delay (ms)	1.3

Tables 230V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	231.00 V	230.88 V	227.70 V	231.07 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	0.29 %	2.00 %	PASS
Real Power:	0.159 W	0.120 W	N/A	0.212 W	N/A	N/A
Apparent Power:	16.358 W	16.154 W	N/A	16.602 W	N/A	N/A
Power Factor:	0.011	N/A	N/A	N/A	N/A	N/A

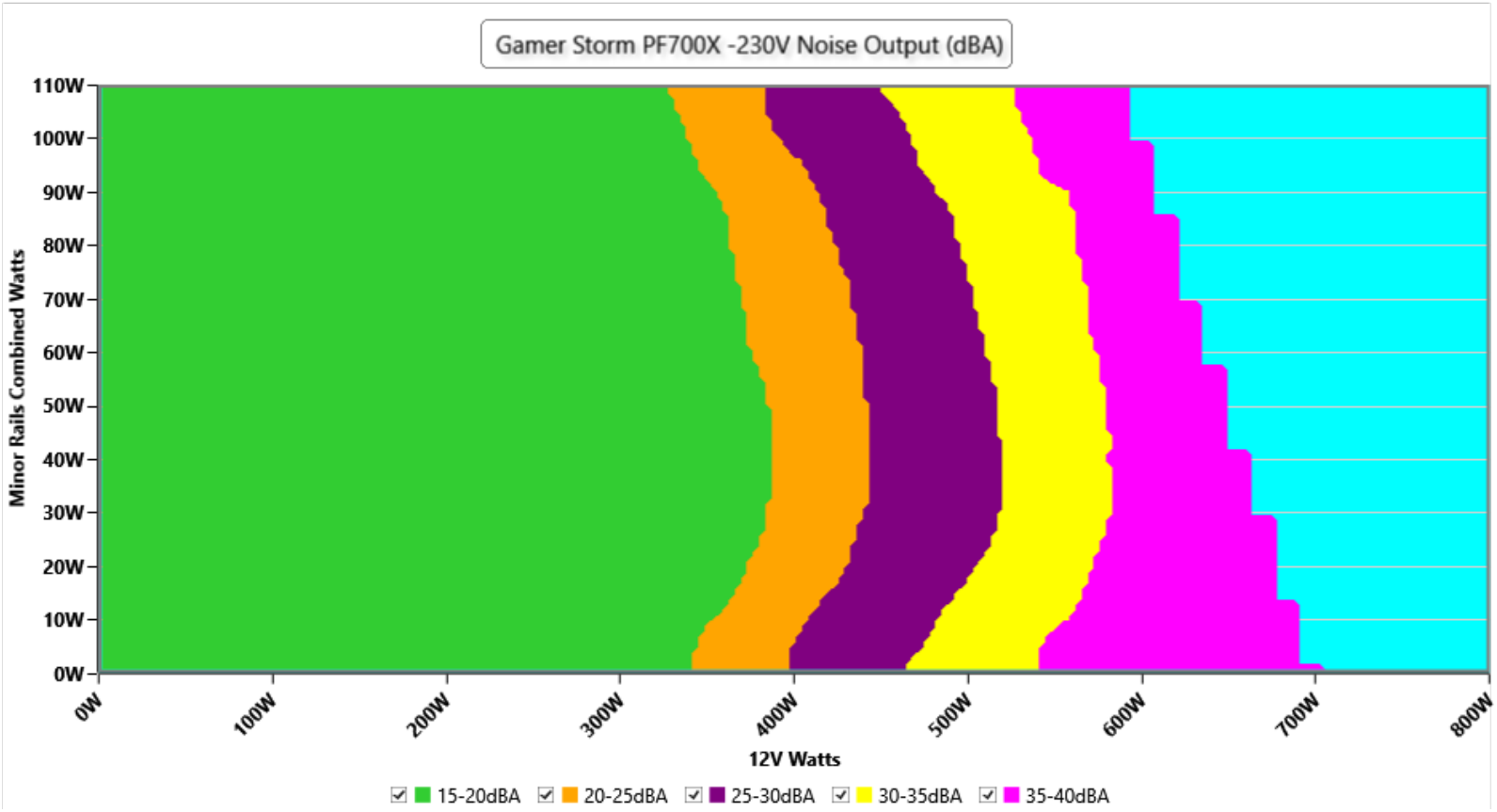
230V



□□

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



□□

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)

230V

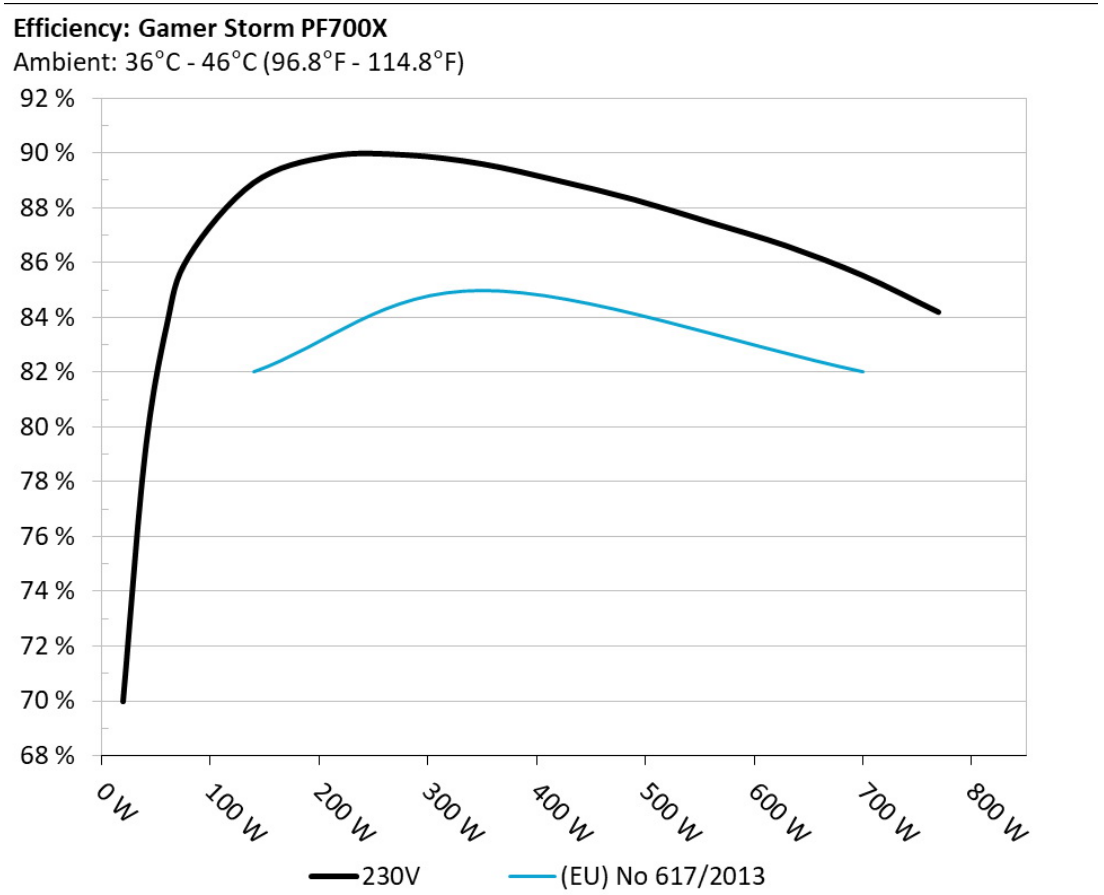
Load	Normal ambient fan · noise · intake	High ambient fan · noise · intake	Noise change
10%	758 RPM · 16.8 dB(A) · 30.6 °C	773 RPM · 17.5 dB(A) · 40.5 °C	**+0.7 dB(A)**
20%	764 RPM · 16.9 dB(A) · 31.0 °C	777 RPM · 17.6 dB(A) · 40.8 °C	**+0.7 dB(A)**
50%	774 RPM · 17.6 dB(A) · 30.9 °C	1177 RPM · 29.6 dB(A) · 42.4 °C	**+12.0 dB(A)**
100%	1576 RPM · 37.8 dB(A) · 30.3 °C	2004 RPM · 43.6 dB(A) · 45.7 °C	**+5.8 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.

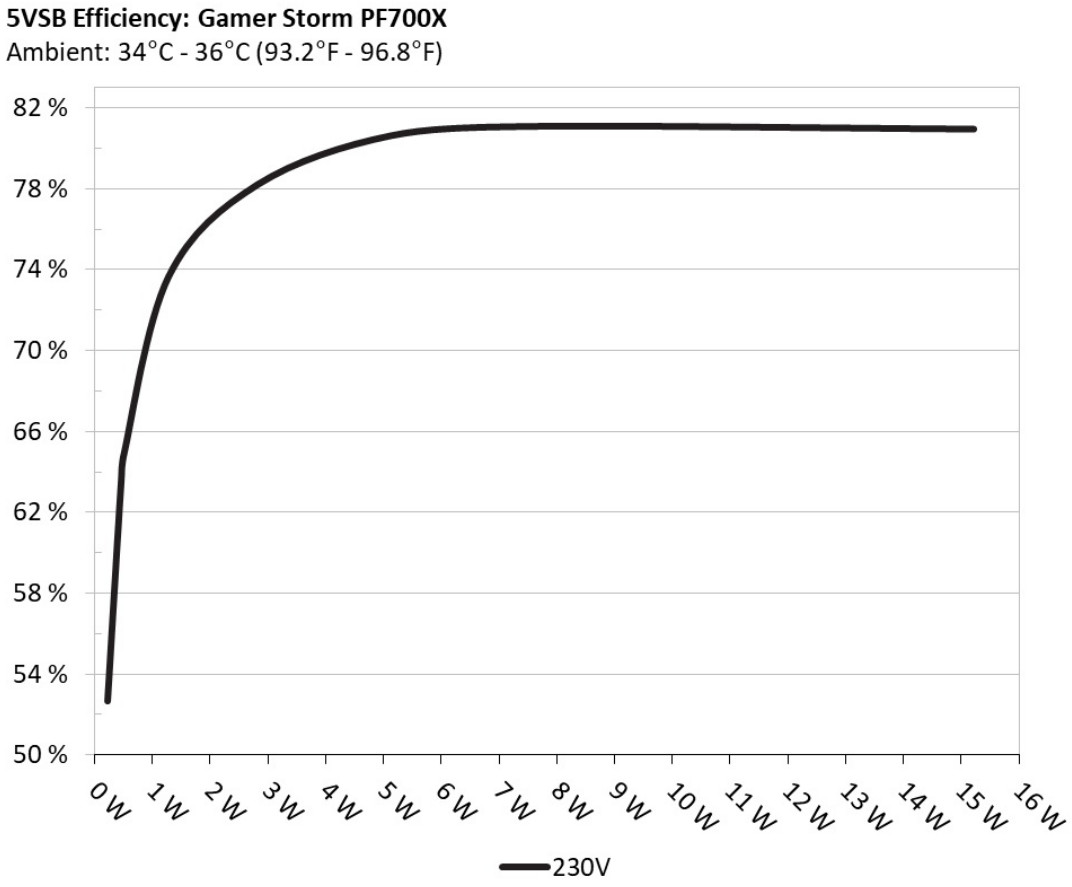
Informational. Not part of the ETA or LAMBDA rating.

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) 230V

□□ #	5VSB	DC/AC (□)	□□	PF/AC □□
1	0.045A	0.232W	52.671%	0.025
	5.157V	0.443W		229.89V

2	**0.09A**	0.464W	63.432%	0.041
	5.156V	0.733W		229.89V
3	**0.55A**	2.828W	78.222%	0.174
	5.142V	3.617W		229.88V
4	**1A**	5.129W	80.635%	0.243
	5.129V	6.361W		229.88V
5	**1.5A**	7.673W	81.098%	0.291
	5.115V	9.462W		229.89V
6	**3A**	15.211W	80.962%	0.357
	5.071V	18.789W		229.88V

Protection Features

OCP (Normal @ 28.4°C)	12V: 77.20A (132.42%), 11.498V *High Ripple (175.43mV), Voltage Drop (11.266V@77.6A), Stopped 5V: 27A (150.00%), 5.022V 3.3V: 28.5A (158.33%), 3.304V 5VSB: 5.5A (183.33%), 4.986V
OCP (Hot @ 41.7°C)	12V: 76.80A (131.73%), 11.412V *High Ripple(185.25mV), Voltage Drop (11.15V@77.2A), Stopped 5V: 25.6A (142.22%), 5.015V 3.3V: 28.1A (156.11%), 3.304V 5VSB: 5.3A (176.67%), 4.988V
OPP (Normal @ 29.3°C)	890.59W (127.23%)
OPP (Hot @ 42.4°C)	869.65W (124.24%)
OTP	✓ (116°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

Supplementary Tests (For Reference)

10-110%□□□□ 230V

□□	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
10%	**3.990A**	**1.965A**	**1.966A**	**0.977A**	70.007	84.46%	773	17.5	40.54°C	0.894
	12.131V	5.09V	3.358V	5.116V	82.887				42.57°C	229.88V
20%	**8.992A**	**2.955A**	**2.959A**	**1.177A**	139.949	88.917%	777	17.6	40.78°C	0.947
	12.127V	5.076V	3.346V	5.097V	157.391				43.4°C	229.87V
30%	**14.348A**	**3.455A**	**3.463A**	**1.379A**	209.995	89.886%	779	17.6	41.41°C	0.964
	12.123V	5.065V	3.335V	5.078V	233.625				44.2°C	229.86V
40%	**19.709A**	**3.958A**	**3.971A**	**1.581A**	280.045	89.933%	916	21.8	41.82°C	0.972
	12.118V	5.054V	3.325V	5.06V	311.394				45.79°C	229.84V
50%	**24.723A**	**4.96A**	**4.982A**	**1.786A**	350.008	89.605%	1177	29.6	42.42°C	0.977
	12.114V	5.041V	3.312V	5.04V	390.615				46.36°C	229.83V
60%	**29.731A**	**5.968A**	**6.003A**	**1.993A**	419.831	88.997%	1416	34.6	42.62°C	0.979
	12.110V	5.027V	3.299V	5.019V	471.74				47.26°C	229.82V
70%	**34.765A**	**6.982A**	**7.031A**	**2.201A**	489.943	88.303%	1644	38.5	43.01°C	0.982
	12.105V	5.014V	3.286V	4.999V	554.839				48.36°C	229.8V
80%	**39.804A**	**7.999A**	**8.066A**	**2.309A**	559.533	87.474%	1787	40.5	43.53°C	0.984
	12.100V	5V	3.273V	4.98V	639.658				48.84°C	229.79V
90%	**45.244A**	**8.52A**	**8.585A**	**2.418A**	629.752	86.614%	1981	43.5	44.56°C	0.986
	12.096V	4.987V	3.261V	4.963V	727.08				51.63°C	229.77V
100%	**50.425A**	**9.046A**	**9.142A**	**3.042A**	699.374	85.547%	2004	43.6	45.71°C	0.987
	12.091V	4.974V	3.249V	4.931V	817.538				54.39°C	229.76V
110%	**55.543A**	**10.086A**	**10.296A**	**3.053A**	769.576	84.2%	2008	43.6	46.02°C	0.987
	12.086V	4.956V	3.234V	4.914V	913.985				57.64°C	229.74V
CL1	**0.116A**	**13.155A**	**13.201A**	**0A**	111.295	80.531%	838	19.8	40.3°C	0.939
	12.128V	5.031V	3.311V	5.113V	138.205				45.43°C	229.87V
CL2	**0.114A**	**17.845A**	**0A**	**0A**	91.381	79.782%	768	17.2	41.19°C	0.926
	12.131V	5.043V	3.334V	5.13V	114.538				45.25°C	229.87V

CL3	**0.114A**	**0A**	**17.838A**	**0A**	60.796	74.701%	770	17.4	40.54°C	0.892
	12.131V	5.066V	3.33V	5.128V	81.388				44.31°C	229.87V
CL4	**57.878A**	**0A**	**0A**	**0.001A**	699.966	86.645%	2002	43.6	45.62°C	0.987
	12.094V	5.018V	3.289V	5.045V	807.863				52.06°C	229.76V

The results above are not used in the certification process

20-80□□□□ 230V

□□	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□ (RPM)	□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
20W	**1.224A**	**0.49A**	**0.49A**	**0.194A**	20.01	69.996%	763	16.9	36.2°C	0.704
	12.134V	5.101V	3.37V	5.15V	28.586				37.13°C	229.88V
40W	**2.695A**	**0.687A**	**0.686A**	**0.292A**	40.005	78.955%	766	17.1	37.13°C	0.823
	12.132V	5.098V	3.367V	5.143V	50.668				38.36°C	229.88V
60W	**4.166A**	**0.883A**	**0.883A**	**0.389A**	60.003	83.695%	769	17.3	38.08°C	0.875
	12.131V	5.095V	3.363V	5.137V	71.691				39.47°C	229.88V
80W	**5.632A**	**1.08A**	**1.08A**	**0.487A**	79.954	86.199%	772	17.5	39.19°C	0.907
	12.130V	5.092V	3.36V	5.13V	92.755				40.68°C	229.88V

The results above are not used in the certification process

□□□□ 230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	16.53mV	15.02mV	13.56mV	12.89mV	Pass
20% Load	19.85mV	17.42mV	14.07mV	12.38mV	Pass
30% Load	23.84mV	17.42mV	13.97mV	14.02mV	Pass
40% Load	26.19mV	16.66mV	14.79mV	15.14mV	Pass
50% Load	29.88mV	19.00mV	17.39mV	13.66mV	Pass
60% Load	35.81mV	21.81mV	17.49mV	16.47mV	Pass
70% Load	40.06mV	24.32mV	18.21mV	17.44mV	Pass
80% Load	46.14mV	26.46mV	20.87mV	18.16mV	Pass
90% Load	53.97mV	29.73mV	22.71mV	19.54mV	Pass
100% Load	72.37mV	34.52mV	28.99mV	24.94mV	Pass





Test	12V	5V	3.3V	5VSB	Pass/Fail
110% Load	81.80mV	36.68mV	30.90mV	25.80mV	Pass
Crossload1	21.42mV	23.60mV	24.23mV	15.94mV	Pass
Crossload2	18.42mV	21.82mV	15.30mV	15.55mV	Pass
Crossload3	18.21mV	20.03mV	22.10mV	15.04mV	Pass
Crossload4	77.17mV	33.36mV	24.61mV	24.89mV	Pass

The results above are not used in the certification process

Gamer Storm PF700X

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)