



Gamer Storm PQ650G

Serial Number

Lab ID GA65002446

Certification ID 252446

Test Result Report ID: 24PS2446A

Certificate Issue Date: Sep 26, 2024

Scheme: ETA-EMI PSU

115V

A yellow hexagonal label with a lightning bolt icon, 'CYBENETICS' text, and 'GOLD' in the center.

230V

A yellow hexagonal label with a lightning bolt icon, 'CYBENETICS' text, 'GOLD' in the center, and '230v' at the bottom.

115V

A green hexagonal label with a speaker icon, 'CYBENETICS' text, and 'A-' in the center.

230V

A green hexagonal label with a speaker icon, 'CYBENETICS' text, 'A-' in the center, and '230v' at the bottom.

Scheme: LAMBDA PSU

A blue rectangular label with a lightning bolt icon, 'CYBENETICS' text, 'ATX 3.1' in the center, and 'PASS' in a black box on the right.

Outside Validation Scope

A handwritten signature in blue ink, consisting of several loops and a long horizontal stroke.

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	PQ650G
OEM/ODM	Helly Technology
Serial Number	
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	10

Rated Frequency (Hz)	50-60
Rated Power (W)	650
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 (HA1225M12F-Z)
Semi-Passive Operation	X
Cybenetics Testing Information	
Lab ID	GA65002446
Date of receipt	Sep 4, 2024
Testing Date	Sep 15, 2024
Report Issued Date	Sep 26, 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 (595mm)	1	1	18AWG	No
4+4 pin EPS12V (700mm)	2	2	16AWG	No
6+2 pin PCIe (600mm+120mm)	3	3	16AWG	No
12+4 pin PCIe (650mm) (600W)	1	1	16-24AWG	No
SATA (455mm+120mm+120mm+120mm)	2	8	18AWG	No
4-pin Molex (450mm+120mm+120mm+120mm)	1	4	18AWG	No

Protection Features(Manufacturer)

Under Voltage Protection	✓
Over Power Protection	✓
Over Current (+12V) Protection	✓
Over Temperature Protection	✓
Short Circuit Protection	✓
Surge Protection	✓
Inrush Current Protection	✓

Power Specifications

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	20	20	54	2.5	0.3
	Watts	100		648	12.5	3.6
Total Max. Power (W)		650				

Parts Description

General Data	
Manufacturer (OEM)	Helly Technology
PCB Type	Double-Sided
Primary Side	
Transient Filter	4x Y caps, 3x X caps, 2x CM chokes, 1x MOV
Inrush Protection	1x NTC Thermistor MF72 10D-20 (10 Ohm @25°C) & Relay
Bridge Rectifier(s)	1x
APFC MOSFETs	2x Convert CS20N50FF (500V, 20A @ 25°C, Rds(on): 0.27Ohm)
APFC Boost Diode	1x WeEN BYC8X-600P (600V, 16A @ 75 °C)
Bulk Cap(s)	1x Nichicon (400V, 470uF @ 105°C, GN(M))
Main Switchers	2x Fuxin Semiconductor FXN25N50F (500V, 13.7A @ 100°C, Rds(on): 0.260hm)
APFC Controller	Champion CM6500UNX
Resonant Controller	Champion CM6901T6X
Topology	Primary side: APFC, Half-Bridge & LLC converter Secondary side: Synchronous Rectification & DC-DC converters

Secondary Side	
+12V MOSFETs	4x Fuxin Semiconductor FXN0204C (40V, 210A @ 100°C, Rds(on): 2.0mOhm)
5V & 3.3V	DC-DC Converters: 2x XSEMI XP3NA3R4MT (30V, 46A @ 100°C, Rds(on): 3.4mOhm) 2x Rectron Semiconductor 3N5R0 (30V, 19.7A @ @ 70°C, Rds(on): 5mOhm) PWM Controller(s): 2x ANPEC APW7073
Filtering Capacitors	Electrolytic: 3x Nippon Chemi-Con (2-5,000 @ 105°C, KZE) 2x Nippon Chemi-Con (4-10,000 @ 105°C, KY), 1x Rubycon (4-10,000 @ 105°C, YXJ) 1x Rubycon (4-10,000 @ 105°C, YXF) 1x Rubycon (3-6,000 @ 105°C,ZLQ) Polymer: 31x Apaq. 4x Jamicon
Supervisor IC	Weltrend WT7527RA (OVD, PGO, UVD, OCD)
Fan Model	Hong Hua HA1225M12F-Z (120mm, 12V, 0.45A, 2050 RPM, Fluid Dynamic Bearing)
5VSB	
High Side Rectifier	P6SMB (220V, 1A)
Standby PWM Controller	Excelliance MOS EM8569C

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)	88.546%

Average Noise Output (>1450 Load Combinations)	25.81dBA
Average PF (>1450 Load Combinations)	0.987
Efficiency With 10W ($\leq$ 500W) or 2% (>500W) Load	62.603%
Standby Power Consumption	0.0442W
Non-Accredited	
12V Ripple (Full Load)	33.33mV
5V Ripple (Full Load)	18.87mV
3.3V Ripple (Full Load)	22.60mV
5VSB Ripple (Full Load)	12.41mV
12V Load Regulation	0.39%
5V Load Regulation	0.57%
3.3V Load Regulation	1.12%
5VSB Load Regulation	2.90%
Inrush Current	33.170A

230V

Accredited	
Average Efficiency (>1450 load combinations)	90.746%
Average Noise Output (>1450 Load Combinations)	25.90dBA
Average PF (>1450 Load Combinations)	0.950
Efficiency With 10W ($\leq$ 500W) or 2% (>500W) Load	60.793%
Standby Power Consumption	0.0971W
Non-Accredited	
12V Ripple (Full Load)	36.58mV
5V Ripple (Full Load)	16.91mV
3.3V Ripple (Full Load)	23.11mV
5VSB Ripple (Full Load)	12.32mV
12V Load Regulation	0.39%
5V Load Regulation	0.53%
3.3V Load Regulation	1.12%
5VSB Load Regulation	2.92%
Inrush Current	59.600A

12V Transient Response (200%)	11.62V	
5V Transient Response (200%)	4.994V	
3.3V Transient Response (200%)	3.218V	
5VSB Transient Response (200%)	4.991V	
Hold-Up Time & PWR_OK Signal	20.50ms	
AC Loss to PWR_OK Hold Up Time	17.60ms	
PWR_OK Inactive to DC Loss Delay	2.90ms	
PSU Timings: T1 (20% / 100%)	59.0ms	59.0ms
PSU Timings: T3 (20% / 100%)	125.0ms	120.0ms
OPP (27.86°C / 42.85°C)	150.06%	141.57%

Hold-Up Time & PWR_OK Signal

Hold-Up Time (ms)	20.5
AC Loss to PWR_OK Hold Up Time (ms)	17.6
PWR_OK Inactive to DC Loss Delay (ms)	2.9

Vampire Power

Tables

115V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	115.06 V	115.02 V	113.85 V	115.10 V	116.15 V	PASS
Mains Frequency:	60.00 Hz	59.99 Hz	59.40 Hz	60.01 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	0.18 %	2.00 %	PASS
Real Power:	0.044 W	0.010 W	N/A	0.066 W	N/A	N/A
Apparent Power:	8.067 W	7.932 W	N/A	8.222 W	N/A	N/A
Power Factor:	0.008	N/A	N/A	N/A	N/A	N/A

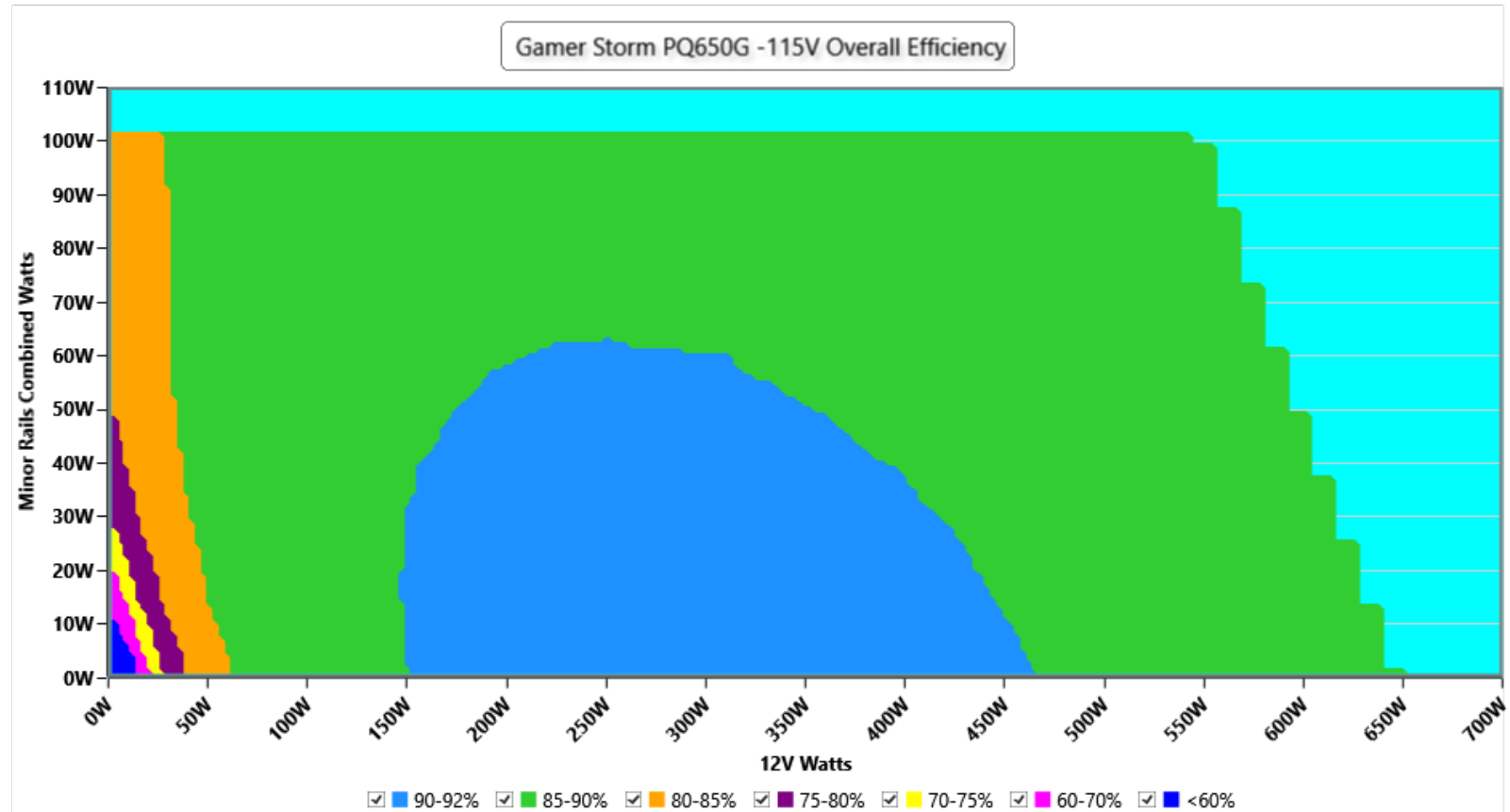
230V

Detailed Results

	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	231.00 V	230.89 V	227.70 V	231.06 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	0.26 %	2.00 %	PASS
Real Power:	0.097 W	0.085 W	N/A	0.127 W	N/A	N/A
Apparent Power:	26.315 W	26.067 W	N/A	26.559 W	N/A	N/A
Power Factor:	0.004	N/A	N/A	N/A	N/A	N/A

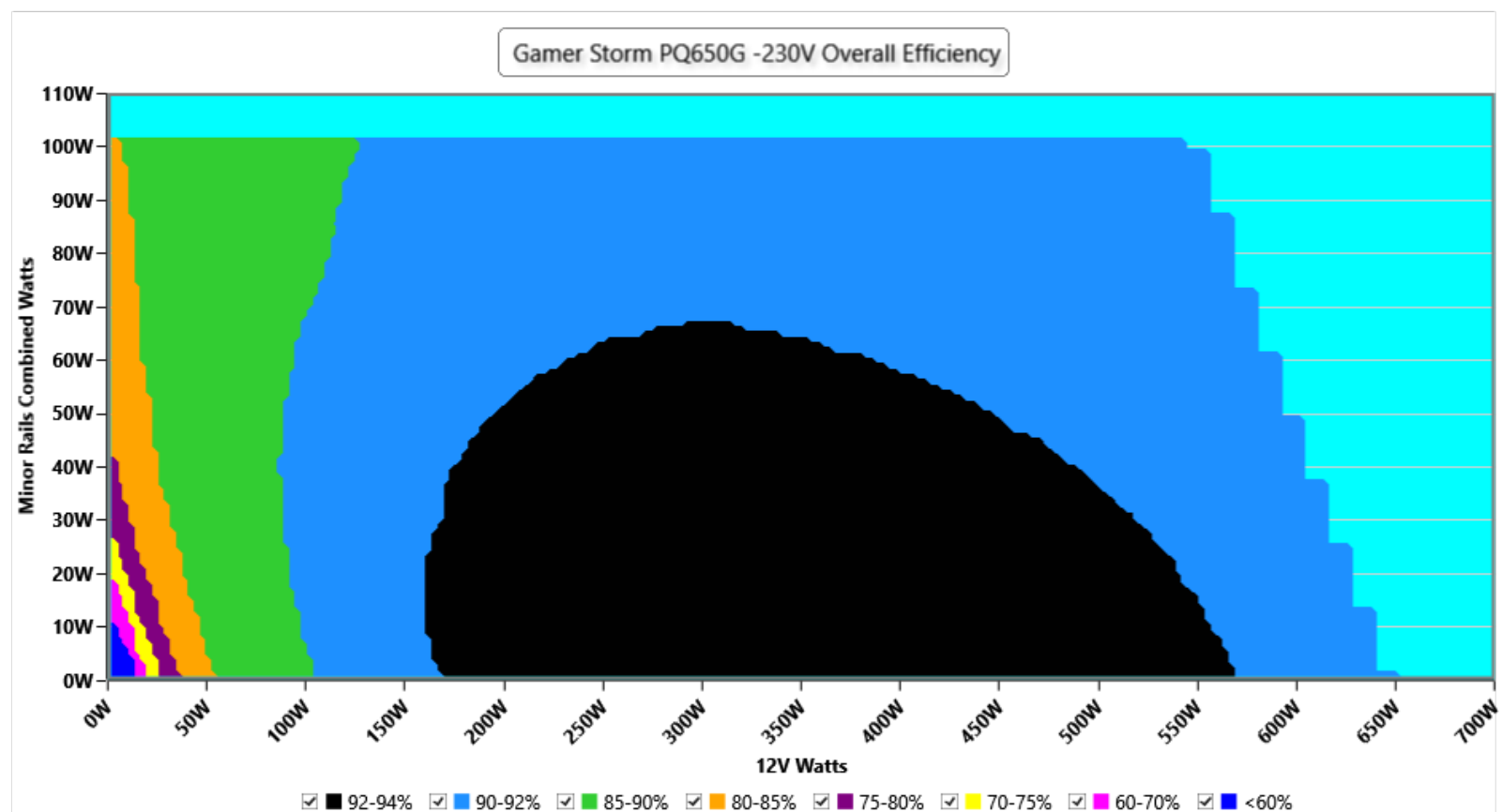
Efficiency Graph

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

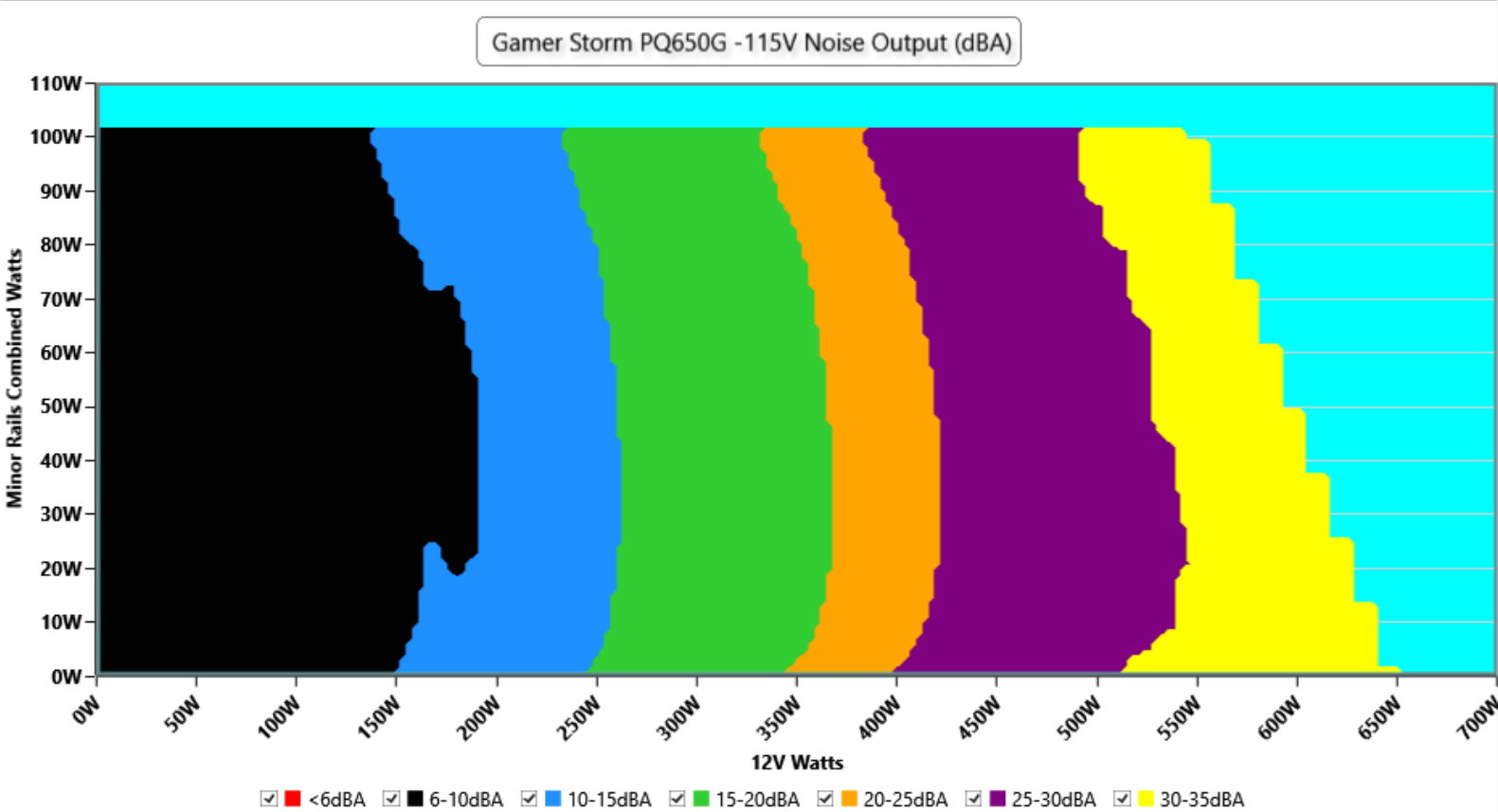


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This graph depicts the PSU's efficiency throughout its entire operational range. For the generation of the efficiency and noise graphs we set our loaders to auto mode through our custom-made software before trying thousands of possible load combinations

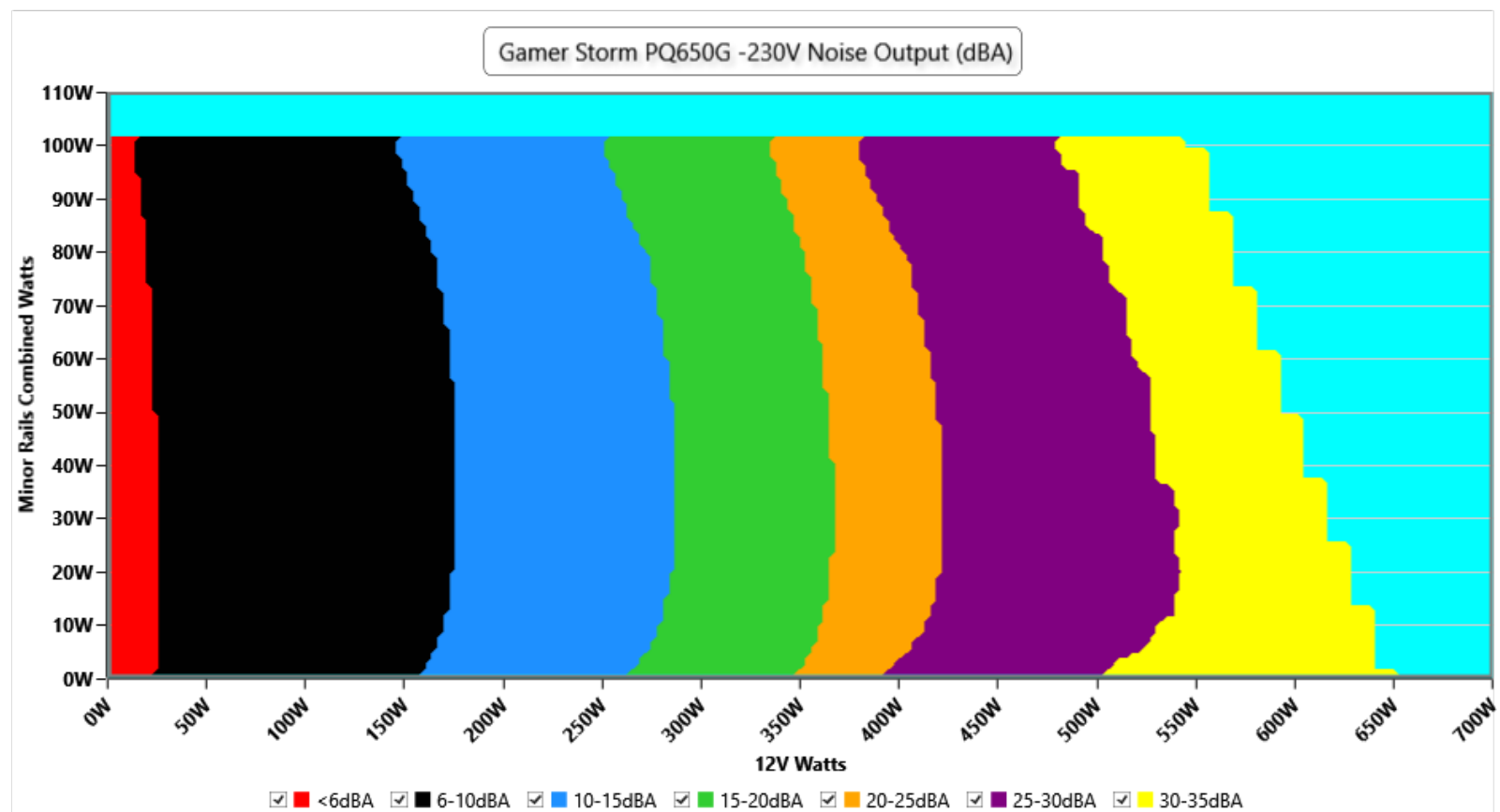
Noise Graph

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



INFO

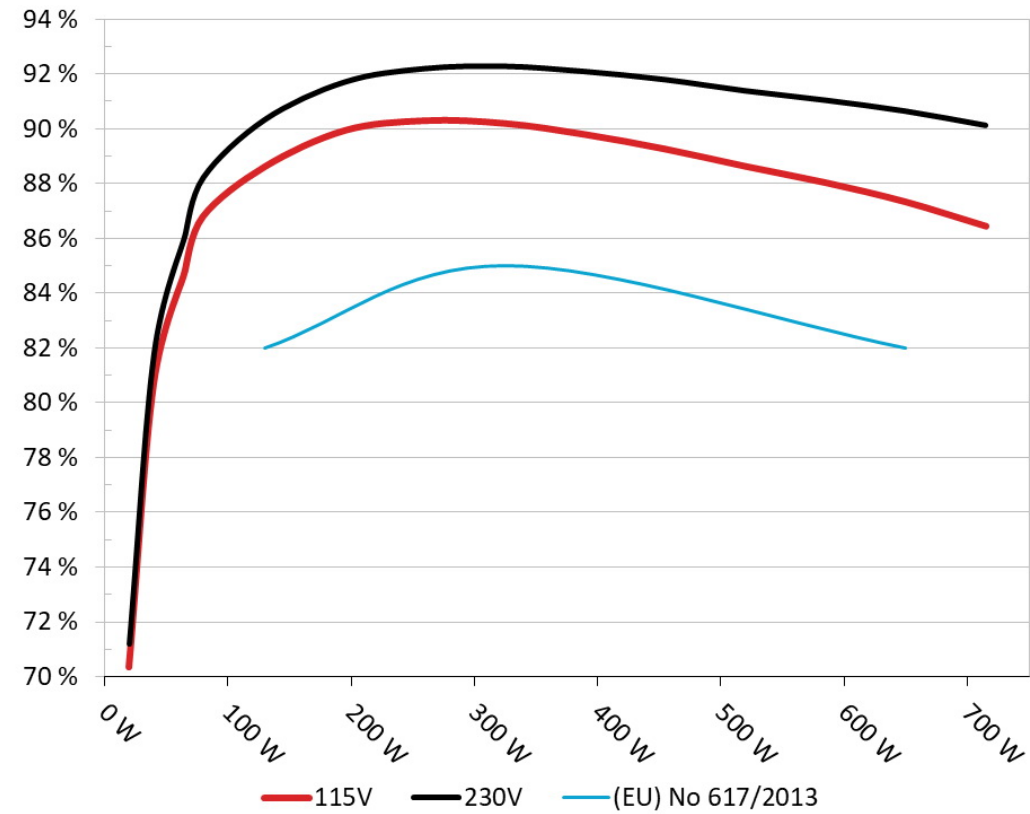
The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

Indicative Performance

Efficiency under high ambient temperature

Efficiency: Gamer Storm PQ650G

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



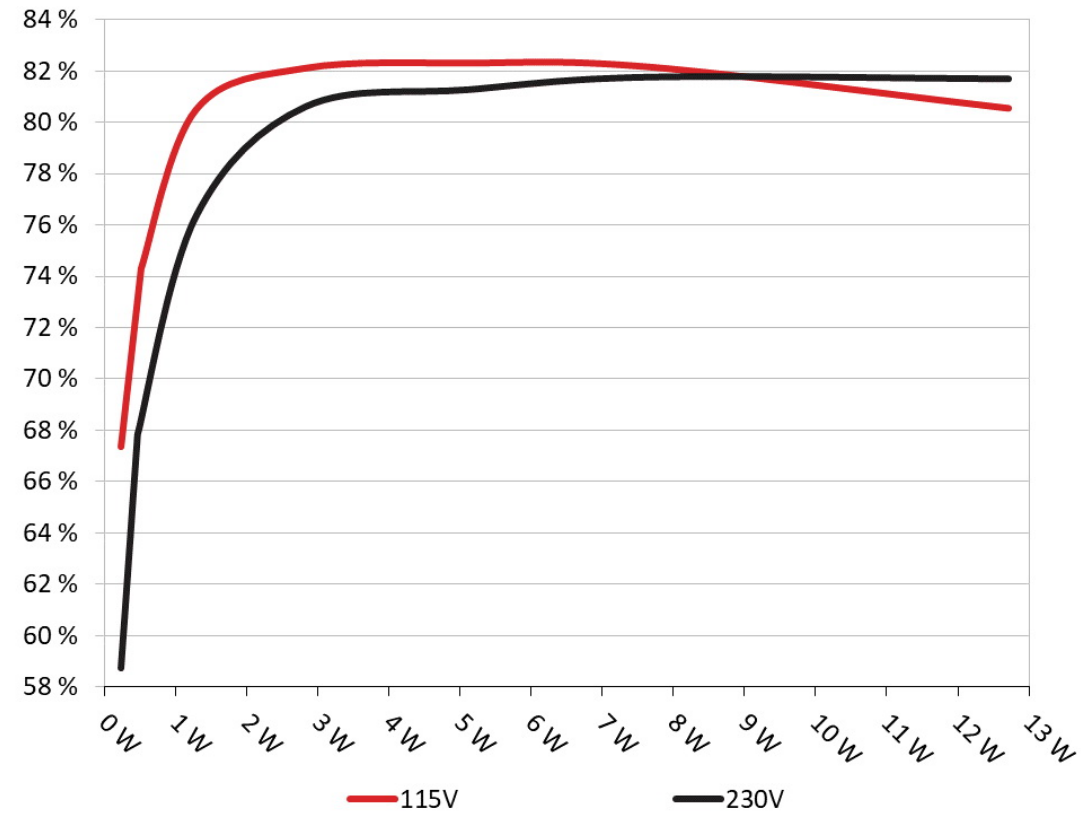
INFO

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: Gamer Storm PQ650G

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	0.232W	67.347%	0.044
	5.154V	0.345W		114.86V
2	0.09A	0.464W	74.293%	0.078
	5.152V	0.624W		114.86V
3	0.55A	2.827W	82.089%	0.32
	5.139V	3.444W		114.85V
4	1A	5.127W	82.288%	0.424
	5.126V	6.23W		114.84V
5	1.5A	7.669W	82.132%	0.471
	5.112V	9.337W		114.84V
6	2.5A	12.71W	80.526%	0.523
	5.083V	15.784W		114.83V

230V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.232W	58.753%	0.015
	5.153V	0.395W		229.86V
2	0.09A	0.464W	67.488%	0.026
	5.152V	0.688W		229.85V
3	0.55A	2.827W	80.621%	0.125
	5.139V	3.506W		229.85V
4	1A	5.127W	81.287%	0.206
	5.126V	6.307W		229.84V
5	1.5A	7.669W	81.773%	0.274
	5.112V	9.379W		229.84V
6	2.5A	12.71W	81.705%	0.347
	5.084V	15.556W		229.84V

Protection Features

Protection Features	
OCP (Cold @ 27°C)	12V: 81.2A (150.37%), 11.934V 5V: 28.6A (143%), 5.072V 3.3V: 28.5A (142.5%), 3.281V 5VSB: 3.9A (156%), 5.042V
OCP (Hot @ 42°C)	12V: 79.6A (147.41%), 11.973V 5V: 29.2A (146%), 5.07V 3.3V: 28.9A (144.5%), 3.28V 5VSB: 3.9A (156%), 5.037V
OPP (Cold @ 28°C)	975.4W (150.06%)
OPP (Hot @ 43°C)	920.23W (141.57%)
OTP	✓ (152°C @ +12V 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 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
10%	3.559A	1.961A	1.974A	0.977A	65.005	84.563%	708	13.8	40.12°C	0.974
	12.196V	5.1V	3.343V	5.116V	76.873				44.37°C	114.82V
20%	8.124A	2.943A	2.965A	1.176A	129.941	88.604%	763	16.1	40.76°C	0.972
	12.190V	5.097V	3.34V	5.102V	146.651				45.32°C	114.8V
30%	13.039A	3.435A	3.462A	1.376A	194.943	89.932%	832	18.8	41.26°C	0.983
	12.186V	5.095V	3.337V	5.089V	216.769				46.3°C	114.78V
40%	17.965A	3.927A	3.959A	1.577A	260.034	90.292%	910	21.7	41.6°C	0.989
	12.181V	5.093V	3.334V	5.075V	287.992				47.19°C	114.76V
50%	22.547A	4.913A	4.955A	1.779A	325.034	90.19%	1006	25.0	42.43°C	0.992
	12.176V	5.089V	3.33V	5.061V	360.385				48.48°C	114.74V
60%	27.084A	5.9A	5.954A	1.982A	389.418	89.789%	1108	26.8	42.75°C	0.993
	12.170V	5.086V	3.326V	5.047V	433.703				49.32°C	114.71V
70%	31.702A	6.888A	6.955A	2.186A	454.741	89.257%	1293	31.3	43.13°C	0.994
	12.164V	5.082V	3.322V	5.032V	509.471				50.14°C	114.69V
80%	36.323A	7.875A	7.957A	2.291A	519.509	88.628%	1517	35.3	43.73°C	0.995
	12.158V	5.079V	3.318V	5.021V	586.169				51.89°C	114.66V
90%	41.341A	8.372A	8.446A	2.395A	584.903	88.026%	1656	37.9	44.54°C	0.996
	12.153V	5.076V	3.315V	5.011V	664.461				53.69°C	114.64V
100%	46.293A	8.868A	8.966A	2.5A	649.617	87.329%	1855	40.8	45.67°C	0.996
	12.149V	5.074V	3.312V	5V	743.872				55.82°C	114.62V
110%	50.991A	9.859A	10.066A	2.505A	715.036	86.436%	1878	40.9	46.66°C	0.997
	12.144V	5.071V	3.308V	4.991V	827.249				57.58°C	114.59V
CL1	0.114A	11.848A	11.975A	0A	101.288	82.802%	944	22.7	41.96°C	0.97
	12.188V	5.081V	3.315V	5.124V	122.324				47.83°C	114.81V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
CL2	0.113A	19.672A	0A	0A	101.335	81.952%	852	19.9	40.64°C	0.97
	12.189V	5.081V	3.337V	5.13V	123.652				46.01°C	114.8V
CL3	0.113A	0A	19.974A	0A	67.38	75.878%	830	18.8	40.76°C	0.978
	12.188V	5.097V	3.304V	5.13V	88.801				45.81°C	114.82V
CL4	53.417A	0A	0A	0A	649.502	88.285%	1781	39.6	45.16°C	0.996
	12.159V	5.094V	3.337V	5.086V	735.69				52.27°C	114.62V

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%	3.558A	1.96A	1.974A	0.977A	64.996	85.918%	695	13.9	40.22°C	0.817
	12.195V	5.1V	3.344V	5.117V	75.649				44.42°C	229.83V
20%	8.122A	2.942A	2.964A	1.176A	129.915	90.34%	737	15.2	40.85°C	0.915
	12.189V	5.097V	3.34V	5.103V	143.806				45.39°C	229.82V
30%	13.037A	3.434A	3.461A	1.375A	194.91	91.717%	826	18.7	41.33°C	0.947
	12.185V	5.096V	3.337V	5.09V	212.511				46.39°C	229.81V
40%	17.962A	3.926A	3.958A	1.576A	259.991	92.205%	901	21.2	41.83°C	0.958
	12.180V	5.094V	3.335V	5.076V	281.973				47.33°C	229.8V
50%	22.544A	4.911A	4.954A	1.778A	324.98	92.287%	1003	25.0	42.36°C	0.967
	12.175V	5.09V	3.331V	5.062V	352.14				48.38°C	229.79V
60%	27.070A	5.897A	5.953A	1.981A	389.249	92.099%	1119	27.2	42.62°C	0.973
	12.170V	5.087V	3.326V	5.048V	422.64				49.17°C	229.78V
70%	31.687A	6.886A	6.953A	2.185A	454.566	91.805%	1304	31.8	43.39°C	0.975
	12.165V	5.083V	3.322V	5.034V	495.142				50.54°C	229.78V
80%	36.311A	7.873A	7.955A	2.29A	519.386	91.398%	1518	35.3	43.7°C	0.978
	12.159V	5.08V	3.318V	5.022V	568.271				51.71°C	229.76V
90%	41.334A	8.37A	8.445A	2.395A	584.852	91.052%	1686	38.4	44.69°C	0.98
	12.154V	5.077V	3.315V	5.011V	642.325				53.78°C	229.75V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
100%	46.295A	8.867A	8.966A	2.5A	649.617	90.655%	1863	40.9	45.72°C	0.982
	12.149V	5.075V	3.312V	5V	716.581				55.76°C	229.74V
110%	50.996A	9.859A	10.066A	2.505A	715.06	90.134%	1872	40.9	46.8°C	0.984
	12.144V	5.072V	3.308V	4.991V	793.326				57.73°C	229.73V
CL1	0.114A	11.847A	11.974A	0A	101.29	84.394%	952	22.9	40.91°C	0.9
	12.188V	5.081V	3.315V	5.125V	120.021				46.55°C	229.82V
CL2	0.113A	19.67A	0A	0A	101.338	83.486%	857	20.0	40.68°C	0.9
	12.189V	5.081V	3.338V	5.13V	121.383				45.23°C	229.83V
CL3	0.113A	0A	19.972A	0A	67.38	77.069%	819	18.4	40.13°C	0.85
	12.188V	5.096V	3.304V	5.13V	87.428				44.76°C	229.83V
CL4	53.420A	0A	0A	0A	649.495	91.561%	1759	39.2	45.8°C	0.982
	12.158V	5.094V	3.338V	5.087V	709.36				49.05°C	229.74V

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	1.218A	0.49A	0.493A	0.194A	19.999	70.335%	551	7.2	36.53°C	0.88
	12.196V	5.103V	3.349V	5.145V	28.434				39.61°C	114.83V
40W	2.680A	0.686A	0.69A	0.292A	40.001	80.663%	600	9.3	37.58°C	0.949
	12.196V	5.103V	3.348V	5.14V	49.589				40.93°C	114.83V
60W	4.144A	0.882A	0.887A	0.39A	60.001	84.736%	642	11.2	38.42°C	0.965
	12.195V	5.102V	3.347V	5.135V	70.811				42.05°C	114.82V
80W	5.602A	1.078A	1.085A	0.487A	79.947	86.785%	678	12.4	39.55°C	0.976
	12.195V	5.102V	3.345V	5.13V	92.121				43.54°C	114.81V

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	1.217A	0.49A	0.493A	0.194A	19.993	71.211%	562	7.4	36.61°C	0.532
	12.196V	5.102V	3.349V	5.146V	28.075				39.72°C	229.84V
40W	2.680A	0.686A	0.69A	0.292A	39.993	81.795%	595	8.8	37.69°C	0.71
	12.196V	5.102V	3.348V	5.141V	48.896				41.02°C	229.84V
60W	4.144A	0.882A	0.887A	0.389A	59.994	86.097%	634	11.2	38.28°C	0.797
	12.195V	5.102V	3.347V	5.136V	69.68				41.81°C	229.83V
80W	5.600A	1.078A	1.085A	0.487A	79.926	88.227%	670	12.3	39.37°C	0.856
	12.195V	5.102V	3.346V	5.13V	90.59				43.12°C	229.83V

The results above are not used in the certification process

Ripple Measurements

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	20.10mV	15.24mV	15.09mV	8.41mV	Pass
20% Load	19.95mV	15.91mV	15.23mV	8.37mV	Pass
30% Load	20.56mV	17.04mV	17.14mV	9.39mV	Pass
40% Load	21.28mV	17.65mV	17.08mV	9.39mV	Pass
50% Load	20.51mV	15.96mV	18.26mV	9.70mV	Pass
60% Load	20.87mV	17.29mV	19.19mV	10.06mV	Pass
70% Load	21.94mV	17.40mV	20.83mV	11.08mV	Pass
80% Load	21.74mV	17.50mV	20.32mV	11.70mV	Pass
90% Load	22.50mV	18.58mV	21.80mV	12.01mV	Pass
100% Load	33.33mV	18.87mV	22.60mV	12.41mV	Pass
110% Load	34.96mV	19.03mV	24.34mV	14.65mV	Pass
Crossload1	28.85mV	16.70mV	17.71mV	9.65mV	Pass
Crossload2	23.22mV	21.50mV	18.93mV	9.44mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
Crossload3	20.61mV	16.58mV	18.26mV	9.34mV	Pass
Crossload4	35.11mV	17.75mV	21.08mV	11.45mV	Pass

The results above are not used in the certification process

230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	19.64mV	15.55mV	15.13mV	8.67mV	Pass
20% Load	19.33mV	15.65mV	16.21mV	9.08mV	Pass
30% Load	20.26mV	15.60mV	17.24mV	9.75mV	Pass
40% Load	20.72mV	16.42mV	17.03mV	10.67mV	Pass
50% Load	20.15mV	16.32mV	17.03mV	10.31mV	Pass
60% Load	21.38mV	16.58mV	19.14mV	10.06mV	Pass
70% Load	22.30mV	17.76mV	20.57mV	10.93mV	Pass
80% Load	21.89mV	18.32mV	23.34mV	11.75mV	Pass
90% Load	22.40mV	19.30mV	21.34mV	12.16mV	Pass
100% Load	36.58mV	16.91mV	23.11mV	12.32mV	Pass
110% Load	36.11mV	18.69mV	23.29mV	13.26mV	Pass
Crossload1	28.74mV	16.68mV	16.83mV	8.99mV	Pass
Crossload2	21.43mV	19.91mV	18.42mV	8.47mV	Pass
Crossload3	20.10mV	14.37mV	16.88mV	8.37mV	Pass
Crossload4	35.12mV	17.97mV	20.53mV	11.55mV	Pass

The results above are not used in the certification process

Gamer Storm PQ650G



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

PQ650G

黄金统治者



开关电源供应器

型号:	PQ650G-FD				
交流输入	100-240Vac 10A Max 50-60Hz				
直流输出	+3.3V	+5V	+12V	-12V	+5VSB
最大输出电流	20A	20A	54A	0.3A	2.5A
最大组合功率	100W		648W	3.6W	12.5W
总功率	650W				

内有高压，请勿开启

危险警告



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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

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