Cougar GR X2 850

Serial Number -

Lab ID CG85003465

Certification ID 263465

Test Result Report ID: 26PS3465A

Certificate Issue Date: Oct 11, 2026

Scheme: ETA-EMI PSU

115V



230V



115V



230V



Scheme: LAMBDA PSU



Outside Validation Scope



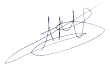
General Information

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	Cougar
Model	GR X2 850
OEM/ODM	RSY
Serial Number	-
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	100-240

Rated Current (Arms)	6-10
Rated Frequency (Hz)	50-60
Rated Power (W)	850
Operating Temperature (Continuous Full Load) (°C)	10 - 43
Type	ATX12V
Cable Design	Fully Modular
Warranty	No info
Cybenetics Measurements	
Dimensions (W x H x D)	150 x 86 x 140 mm
Weight	1232 g
Cooling	120mm Sleeve Bearing Fan (Globe Fan S1202512L)
Semi-Passive Operation	✗
Cybenetics Testing Information	
Lab ID	CG85003465
Date of receipt	Oct 6, 2026
Testing Date	Oct 9, 2026
Report Issued Date	Oct 11, 2026
Engineer Name	Efstathios Papadopoulos
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

Cables and Connectors
(Non-accredited measurements)

Description	**Cable Count**	**Connector Count (Total)**	**Gauge**	Cable Type
ATX connector 20+4 pin (600mm)	1	1	18-22AWG	Tinned Copper
4+4 pin EPS12V (700mm)	2	2	18AWG	Tinned Copper
6+2 pin PCIe (600mm)	1	1	18AWG	Tinned Copper
6+2 pin PCIe (550mm+150mm)	1	2	18AWG	Tinned Copper
12+4 pin PCIe (600mm) (450W)	1	1	16-24AWG	Copper

SATA (460mm+145mm+145mm) / 4-pin Molex (+145mm)	2	6 / 2	18AWG	Tinned Copper
AC Power Cord (1380mm) - C13 coupler	1	1	18AWG	-

Protection Features

Over Voltage Protection	✓
Under Voltage Protection	✓
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	3	0.4
	Watts	100		849.6	15	4.8
Total Max. Power (W)		850				

Parts Description

General Data	
Manufacturer (OEM)	RSY
PCB Type	Double-Sided
Primary Side	
Transient Filter	4x Y caps, 2X caps, 2x CM chokes, 1x MOV
Inrush Protection	NTC Thermistor 2.5D-11 (2.5 Ohm) & Relay
Bridge Rectifier	HY Electronic GBU1506L (600V, 15A @ 25°C)
APFC MOSFETs	2x Super Semi SSF60R190S2E (600V, 12.6A @ 100°C, Rds(on): 0.19Ohm)
APFC Boost Diode	Diodes Incorporated DSC08A065 (650V, 8A @ 25°C)

Bulk Cap(s)	Rubycon (420V, 390uF, 2000h @ 105°C, MXH)
Main Switchers	4x Shenzhen SIF13N50C (500V, 8A @ 100°C, Rds(on): 0.55Ohm)
APFC Controller	Texas Instruments UCC28180 & Sync Power SPN5003 (reducing no-load consumption)
Resonant Controller	Texas Instruments UCC25600
Topology	Primary side: APFC, Full-Bridge & LLC Resonant Converter Secondary side: [12V] Synchronous Rectification & [Minor Rails] DC-DC converters
Secondary Side	
+12V MOSFETs	4x AGMSemi AGMH4015C (40V, 114A @ 100°C, Rds(on): 2.3mOhm)
5V & 3.3V	DC-DC Converters: 4x Infineon BSC0906NS (30V, 63A @ 25°C, Rds(on): 4.5mOhm) PWM Controller(s): 2x Anpec APW7164
Filtering Capacitors	Electrolytic: 18x Vent (3,000h @ 105°C, CD288HJ) 1x Vent (8,000 @ 105°C, CD26G) Polymer: 9x NJcon
Supervisor IC	1x INFSitronix IN1S315I
Fan Model	Globe Fan S1202512L (120mm, 12V, 0.18A, Sleeve Bearing Fan)
5VSB Circuit	
Rectifiers	Pingwei PS1060L
PWM controller	Safety-Chip SC2583

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	✓
Conducted Emissions EN 55032 & CISPR 32	Passed

Performance Summary

115V

Accredited	
Average Efficiency (>1450 load combinations)	89.830%
Average Noise Output (>1450 Load Combinations)	20.67dBA
Average PF (>1450 Load Combinations)	0.990
Efficiency With 10W (≤500W) or 2% (>500W) Load	70.687%
Standby Power Consumption	0.0528W
Non-Accredited	
12V Ripple (Full Load)	35.47mV
5V Ripple (Full Load)	19.33mV
3.3V Ripple (Full Load)	14.90mV
5VSB Ripple (Full Load)	15.08mV
12V Load Regulation	0.90%
5V Load Regulation	2.34%
3.3V Load Regulation	2.97%
5VSB Load Regulation	3.55%
Inrush Current	58.110A

230V

Accredited	
Average Efficiency (>1450 load combinations)	91.759%
Average Noise Output (>1450 Load Combinations)	21.00dBA
Average PF (>1450 Load Combinations)	0.950
Efficiency With 10W (≤500W) or 2% (>500W) Load	75.442%
Standby Power Consumption	0.1317W
Non-Accredited	
12V Ripple (Full Load)	37.50mV
5V Ripple (Full Load)	27.29mV
3.3V Ripple (Full Load)	14.08mV

5VSB Ripple (Full Load)		22.32mV
12V Load Regulation		0.80%
5V Load Regulation		2.44%
3.3V Load Regulation		3.07%
5VSB Load Regulation		3.61%
Inrush Current		84.300A
12V Transient Response (200%)		11.42V
5V Transient Response (200%)		4.864V
3.3V Transient Response (200%)		3.169V
5VSB Transient Response (200%)		4.949V
Hold-Up Time & PWR_OK Signal		14.60ms
AC Loss to PWR_OK Hold Up Time		13.30ms
PWR_OK Inactive to DC Loss Delay		1.30ms
PSU Timings: T1 (20% / 100%)	126.0ms	128.0ms
PSU Timings: T3 (20% / 100%)	126.0ms	126.0ms
12V OCP (29.5°C / 42.6°C)	99.100A (139.97%), 12.046V — shut down	91.200A (128.81%), 12.046V — shut down
5V OCP (29.5°C / 42.6°C)	29.400A (147.00%), 5.024V — shut down	30.100A (150.50%), 5.023V — shut down
3.3V OCP (29.5°C / 42.6°C)	31.600A (158.00%), 3.260V — shut down	31.100A (155.50%), 3.262V — shut down
5VSB OCP (29.5°C / 42.6°C)	4.500A (150.00%), 4.981V — shut down	4.500A (150.00%), 4.983V — shut down
OPP (31.00°C / 42.77°C)	140.35%	122.99%

Hold-Up Time & PWR_OK Signal

Hold-Up Time (ms)	14.6
AC Loss to PWR_OK Hold Up Time (ms)	13.3
PWR_OK Inactive to DC Loss Delay (ms)	1.3

Stromverbrauch im Ruhezustand

Tables

115V

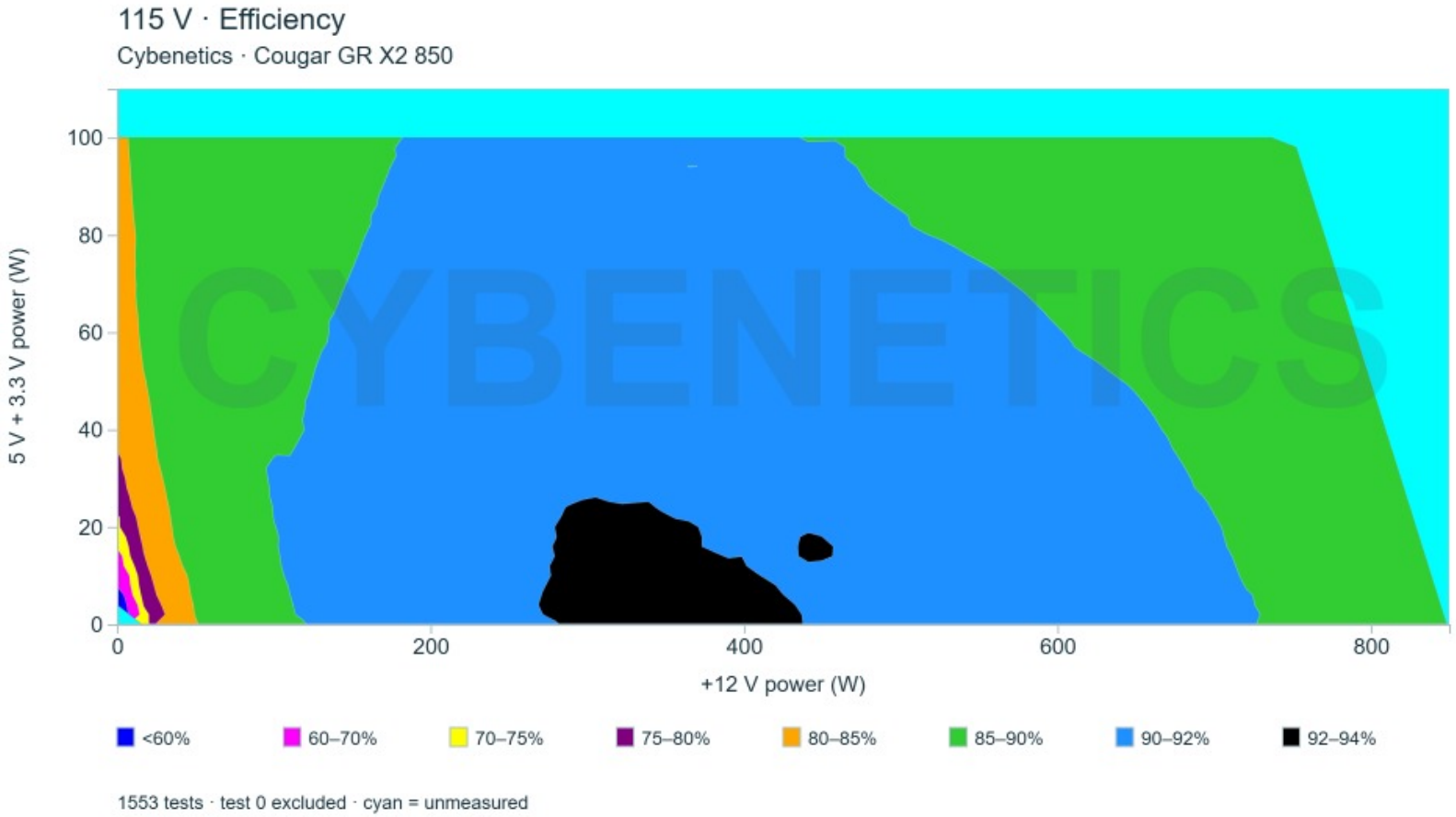
Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	115.00 V	114.98 V	113.85 V	115.01 V	116.15 V	PASS
Mains Frequency:	60.00 Hz	60.00 Hz	59.40 Hz	60.01 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.416	1.415	1.340	1.417	1.490	PASS
Mains Voltage THD:	0.13 %	0.11 %	N/A	0.16 %	2.00 %	PASS
Real Power:	0.053 W	0.011 W	N/A	0.088 W	N/A	N/A
Apparent Power:	9.219 W	9.170 W	N/A	9.246 W	N/A	N/A
Power Factor:	0.009	N/A	N/A	N/A	N/A	N/A

230V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	230.00 V	229.99 V	227.70 V	230.02 V	232.30 V	PASS
Mains Frequency:	50.00 Hz	50.00 Hz	49.50 Hz	50.01 Hz	50.50 Hz	PASS
Mains Voltage CF:	1.415	1.415	1.340	1.416	1.490	PASS
Mains Voltage THD:	0.14 %	0.13 %	N/A	0.16 %	2.00 %	PASS
Real Power:	0.132 W	0.093 W	N/A	0.179 W	N/A	N/A
Apparent Power:	30.213 W	30.180 W	N/A	30.248 W	N/A	N/A
Power Factor:	0.004	N/A	N/A	N/A	N/A	N/A

Efficiency Graph

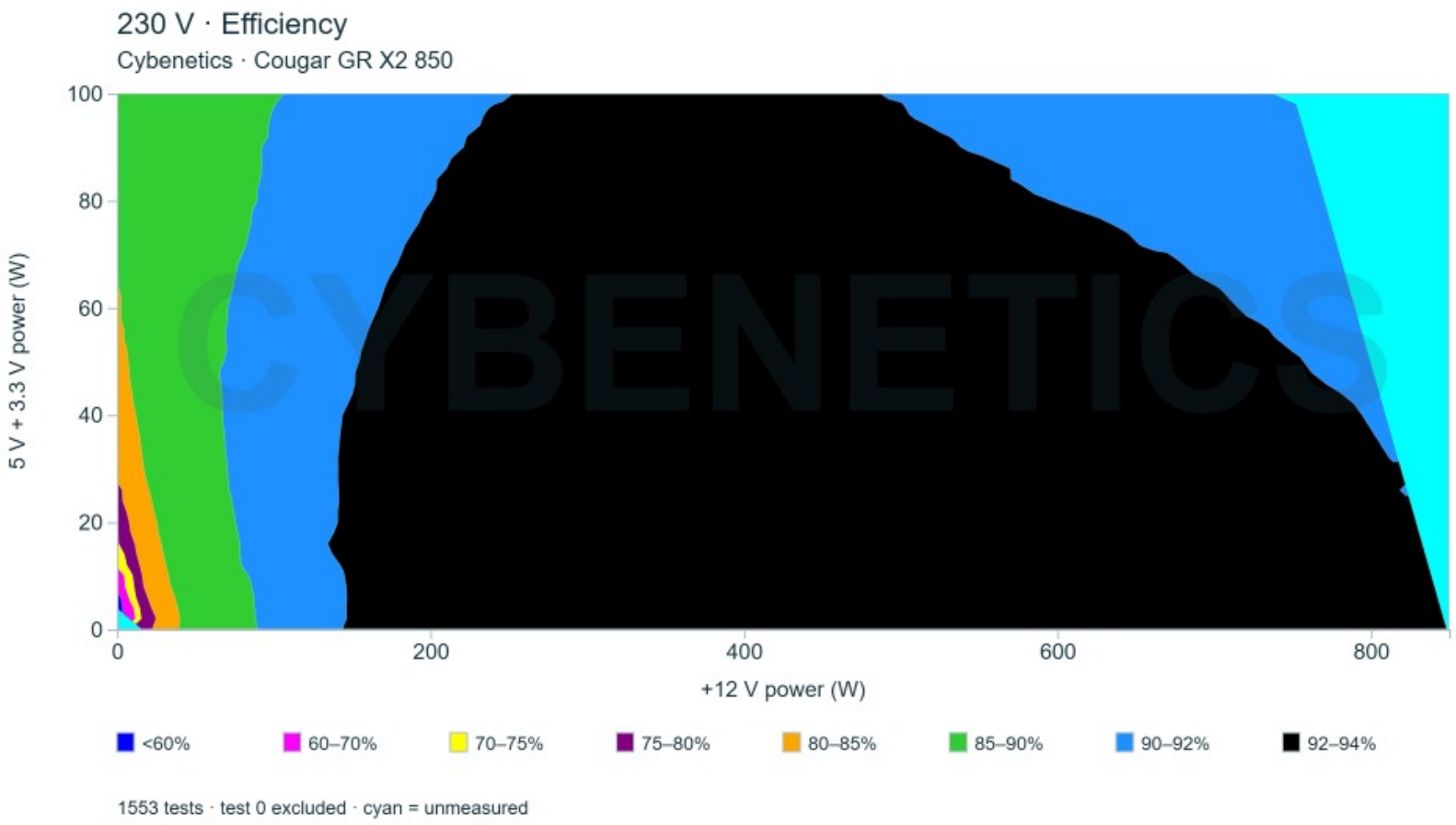
115V



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

230V



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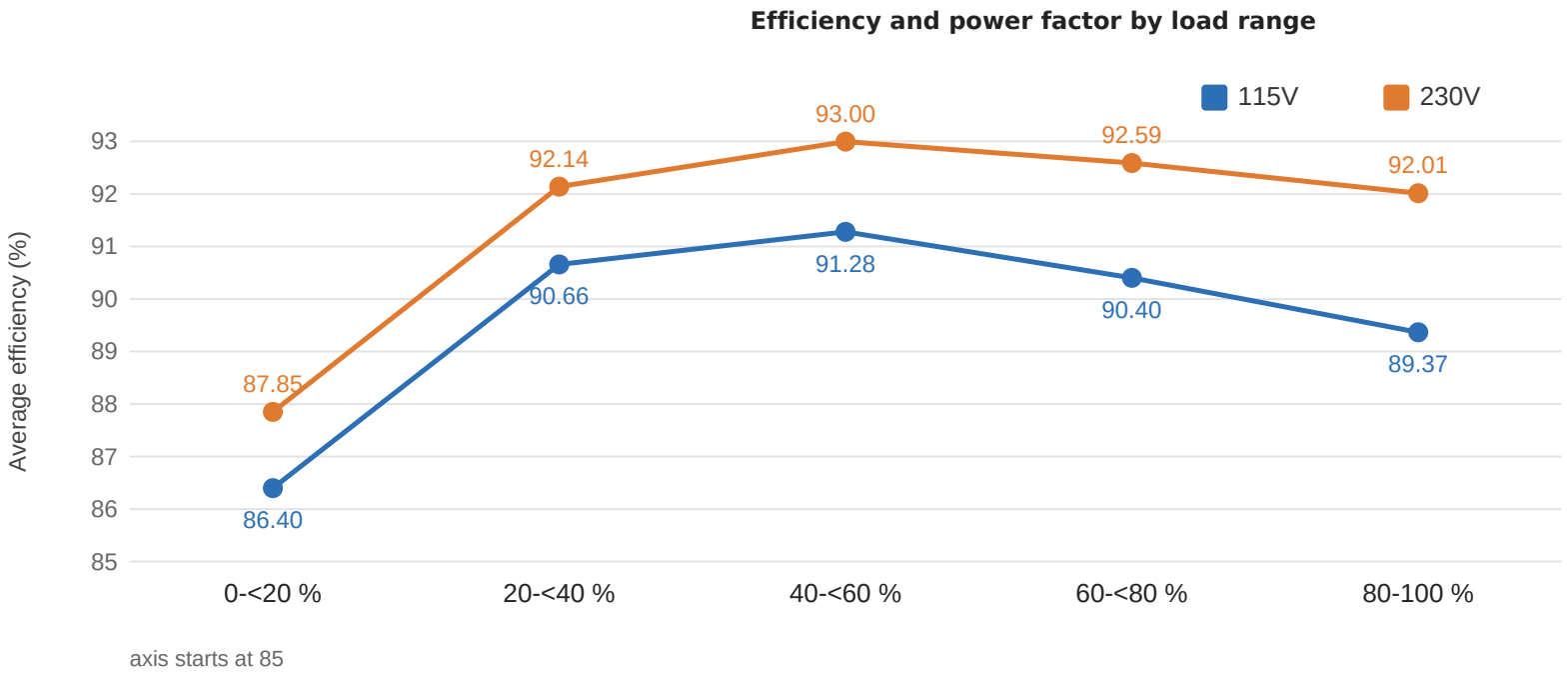
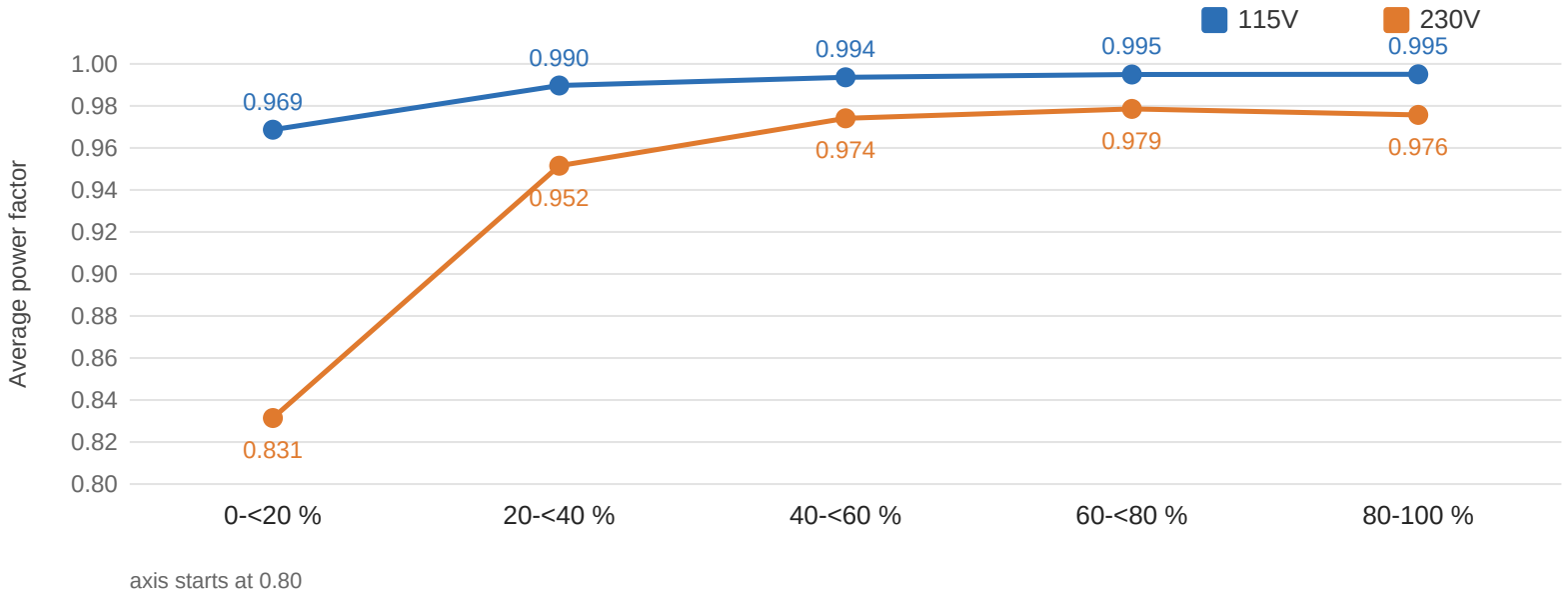


axis starts at 85



axis starts at 0.80

Load range	Points	Efficiency 115V	Efficiency 230V	PF 115V	PF 230V
0-<20 %	228 / 228	86.40%	87.85%	0.969	0.831
20-<40 %	331 / 331	90.66%	92.14%	0.990	0.952
40-<60 %	327 / 327	91.28%	93.00%	0.994	0.974
60-<80 %	333 / 333	90.40%	92.59%	0.995	0.979
80-100 %	334 / 334	89.37%	92.01%	0.995	0.976
70-100 % (High-Load)	505 / 505	89.63%	92.15%	0.995	0.977
All (published average)	1553 / 1553	89.83%	91.76%	0.990	0.950

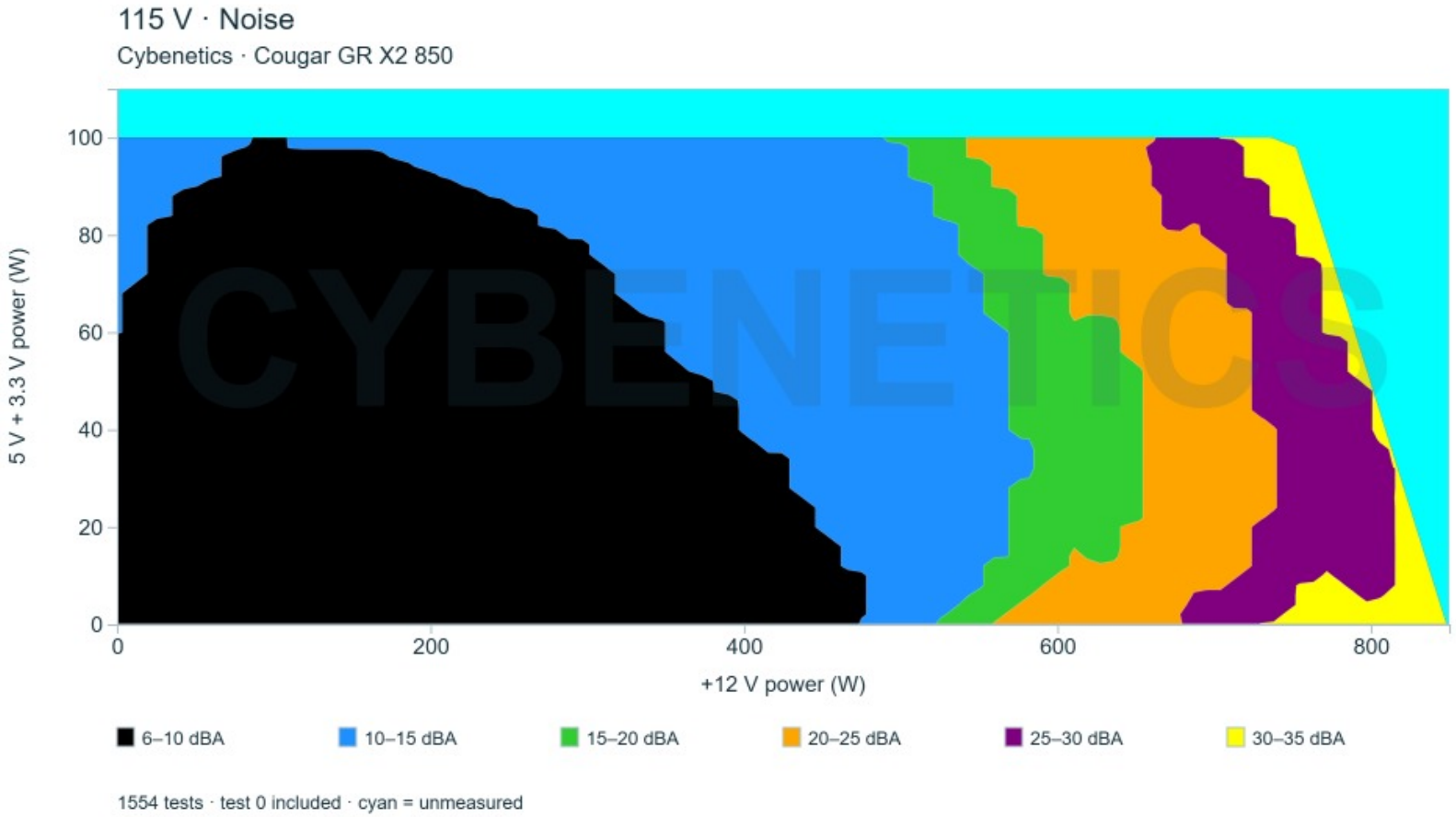
INFO

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

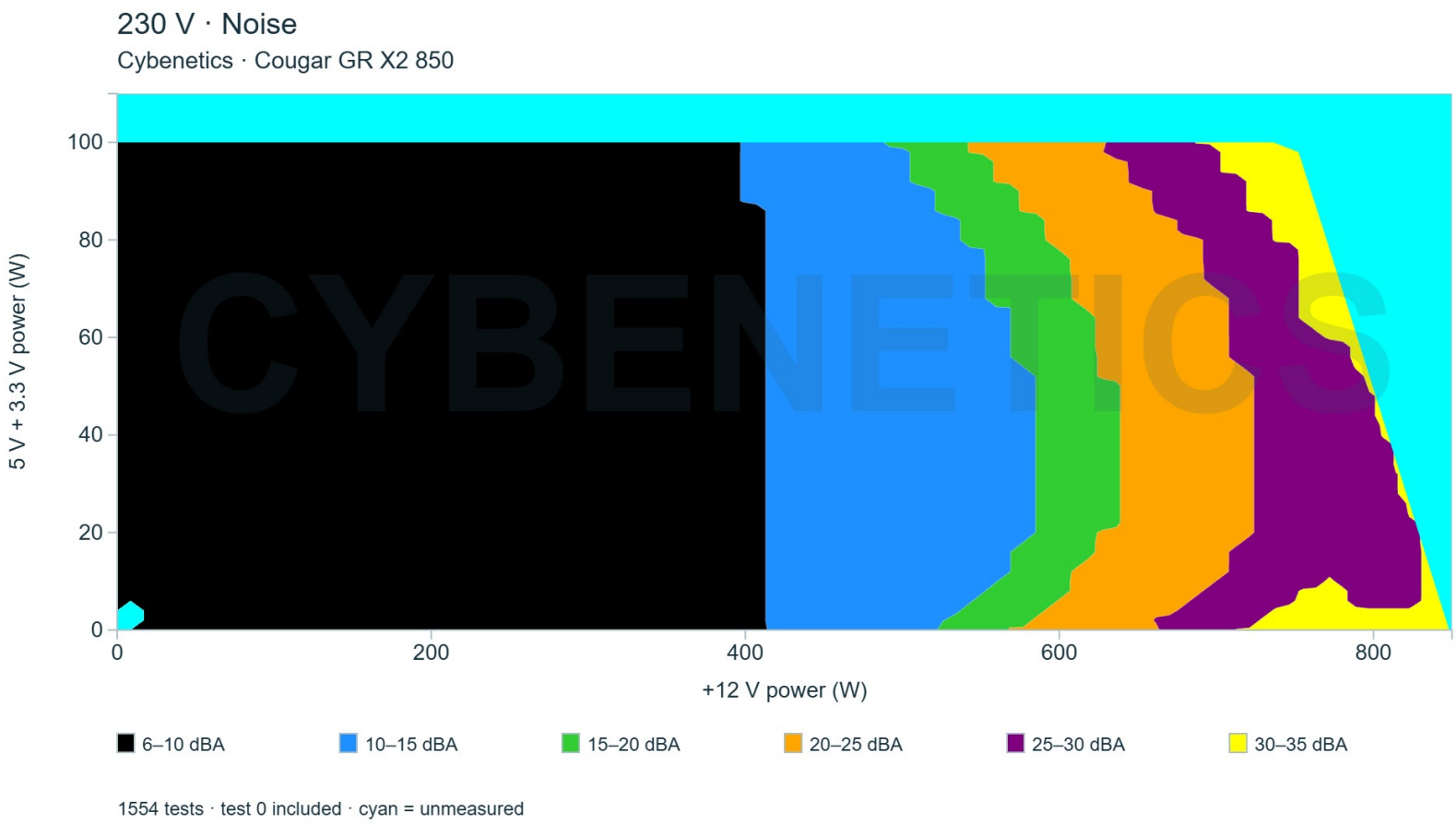
115V



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

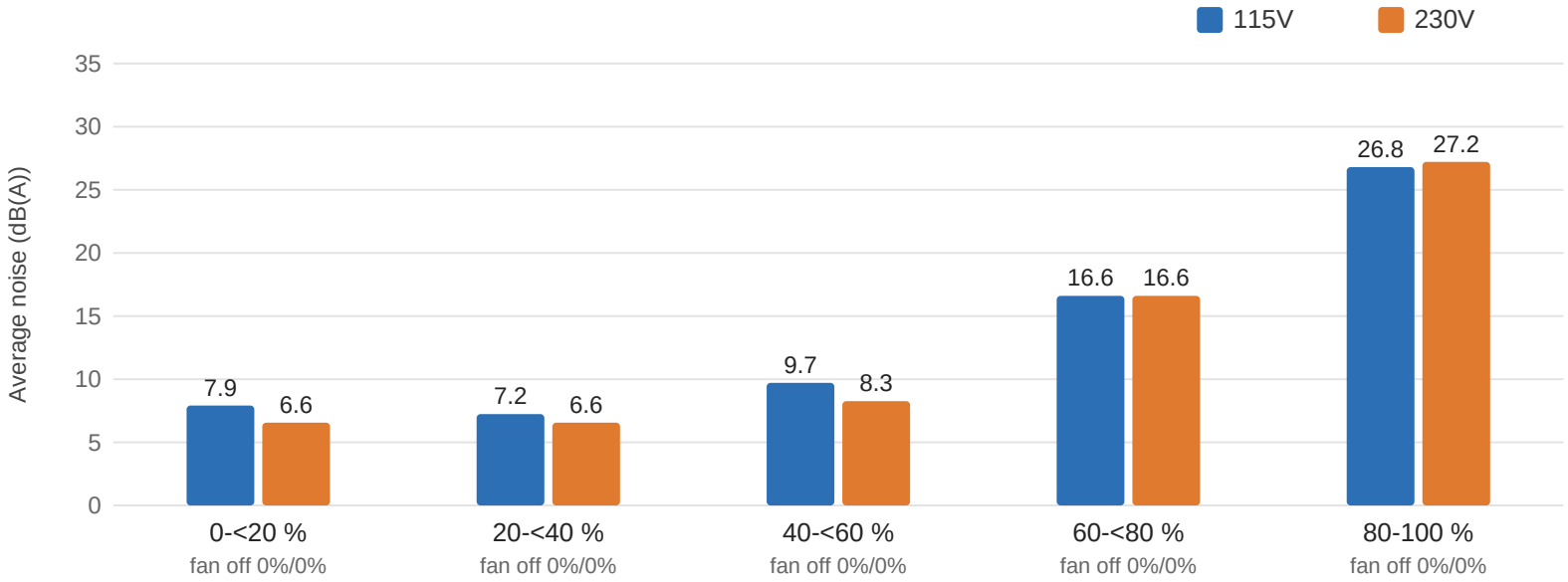
The PSU`s noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

Noise by load range

High-Load Index (70-100 % load)

Noise **25.3 dB(A)** at 115V and **25.7 dB(A)** at 230V · loudest point 31.9 dB(A)

Efficiency 89.63% / 92.15% · power factor 0.995 / 0.977 (115V / 230V)



Load range	Noise 115V avg (loudest)	Noise 230V avg (loudest)	Fan off 115V / 230V
0-<20 %	7.9 (10.9)	6.6 (6.6)	0% / 0%
20-<40 %	7.2 (10.9)	6.6 (6.6)	0% / 0%
40-<60 %	9.7 (13.5)	8.3 (13.8)	0% / 0%
60-<80 %	16.6 (24.6)	16.6 (26.2)	0% / 0%
80-100 %	26.8 (31.9)	27.2 (31.9)	0% / 0%
70-100 % (High-Load)	25.3 (31.9)	25.7 (31.9)	0% / 0%
All (published average)	20.7 (31.9)	21.0 (31.9)	0% / 0%

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%	522 RPM · 7.5 dB(A) · 30.1 °C	540 RPM · 11.1 dB(A) · 40.2 °C	**+3.6 dB(A)**
20%	523 RPM · 7.5 dB(A) · 30.8 °C	541 RPM · 11.1 dB(A) · 40.7 °C	**+3.6 dB(A)**
50%	525 RPM · 7.5 dB(A) · 30.7 °C	555 RPM · 10.9 dB(A) · 42.5 °C	**+3.4 dB(A)**
100%	1116 RPM · 28.0 dB(A) · 30.8 °C	1660 RPM · 39.0 dB(A) · 45.7 °C	**+11.0 dB(A)**

230V

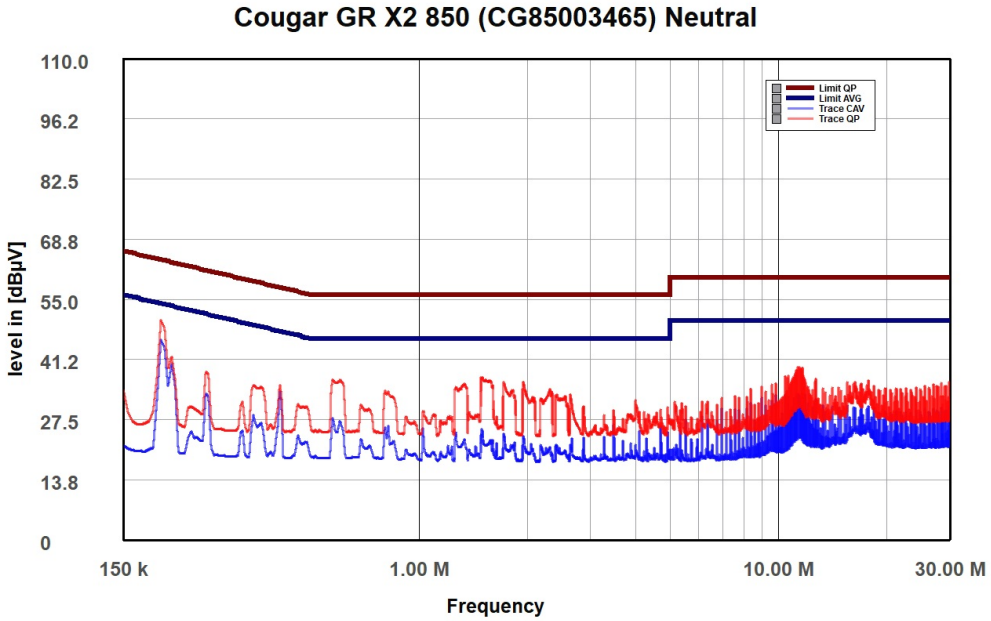
Load	Normal ambient fan · noise · intake	High ambient fan · noise · intake	Noise change
10%	487 RPM · 6.7 dB(A) · 30.3 °C	535 RPM · 8.9 dB(A) · 40.2 °C	**+2.2 dB(A)**
20%	494 RPM · 6.6 dB(A) · 30.6 °C	536 RPM · 8.9 dB(A) · 40.9 °C	**+2.3 dB(A)**
50%	503 RPM · 6.6 dB(A) · 27.3 °C	545 RPM · 11.1 dB(A) · 42.2 °C	**+4.5 dB(A)**
100%	1176 RPM · 30.4 dB(A) · 30.4 °C	1585 RPM · 39.8 dB(A) · 45.2 °C	**+9.4 dB(A)**

INFO

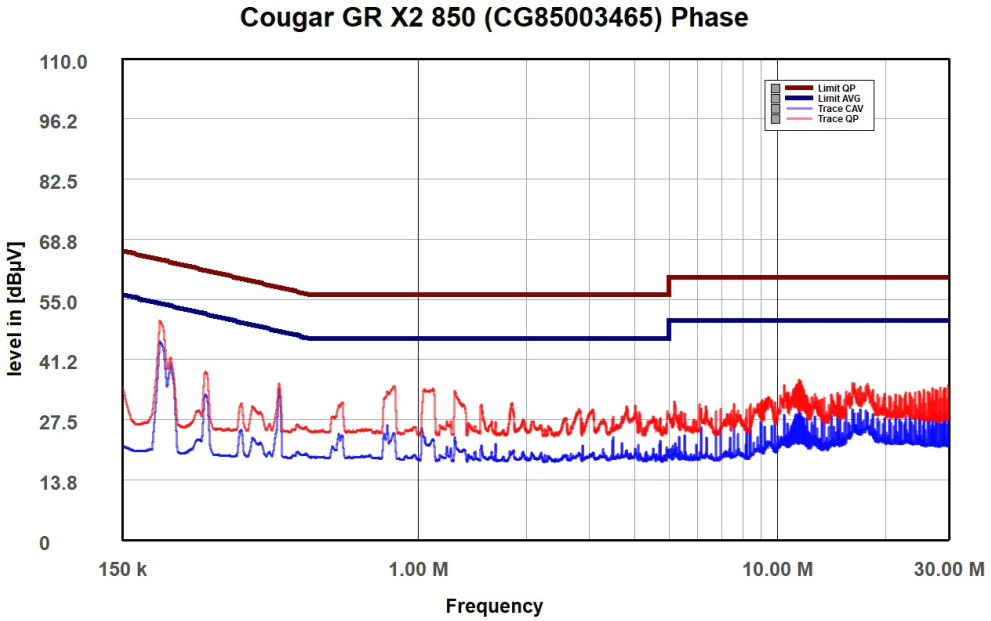
Fan speed, noise and the measured intake temperature at 10, 20, 50 and 100 % load, from the two load regulation tests: at normal ambient (about 30-32 °C) and at high ambient (about 40-47 °C). These are stabilized readings at fixed loads, not averages over the certification sweep, so they are indicative 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.

Conducted Emissions EN 55032 & CISPR 32



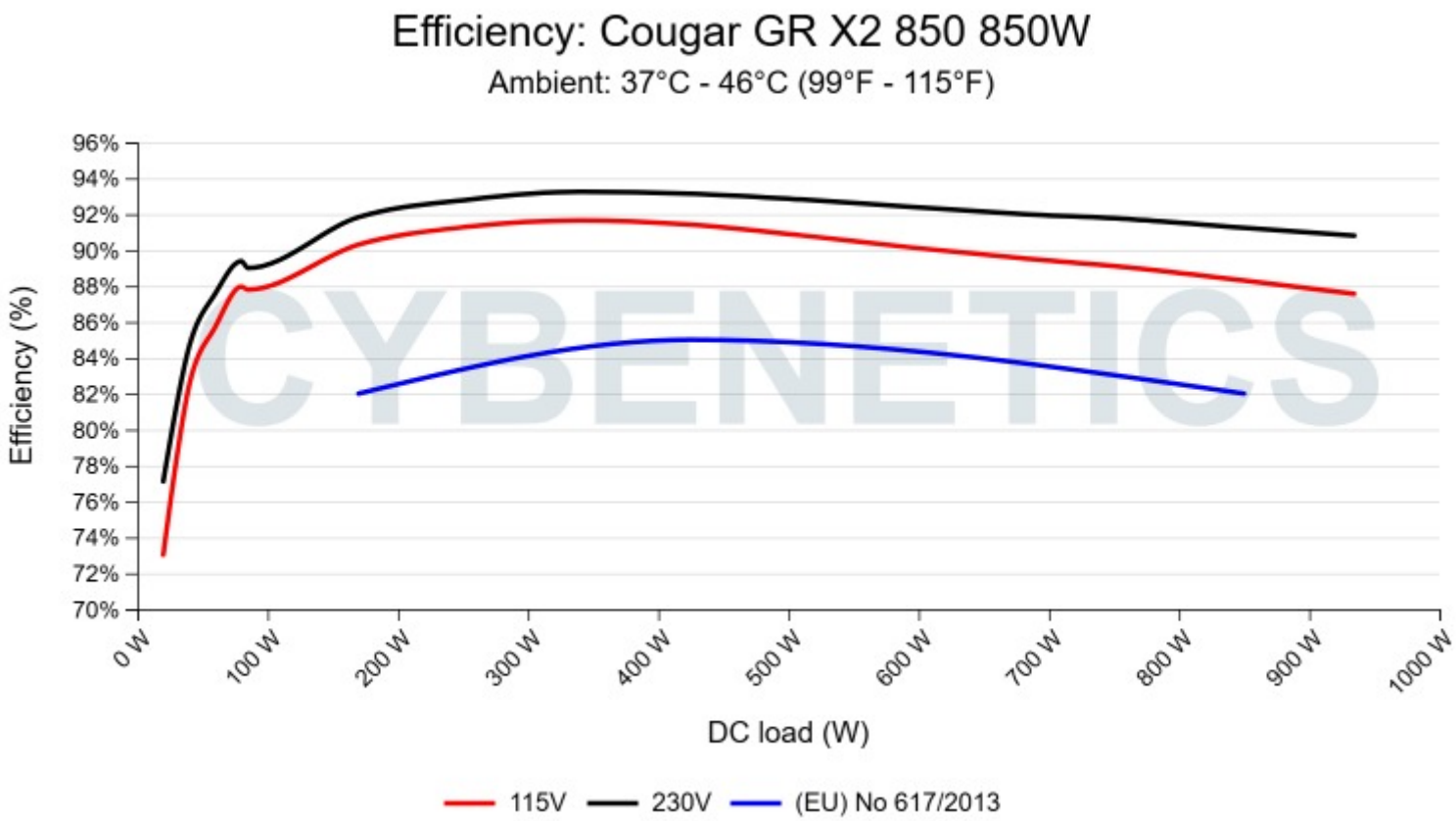
NEUTRAL



PHASE

Indicative Performance

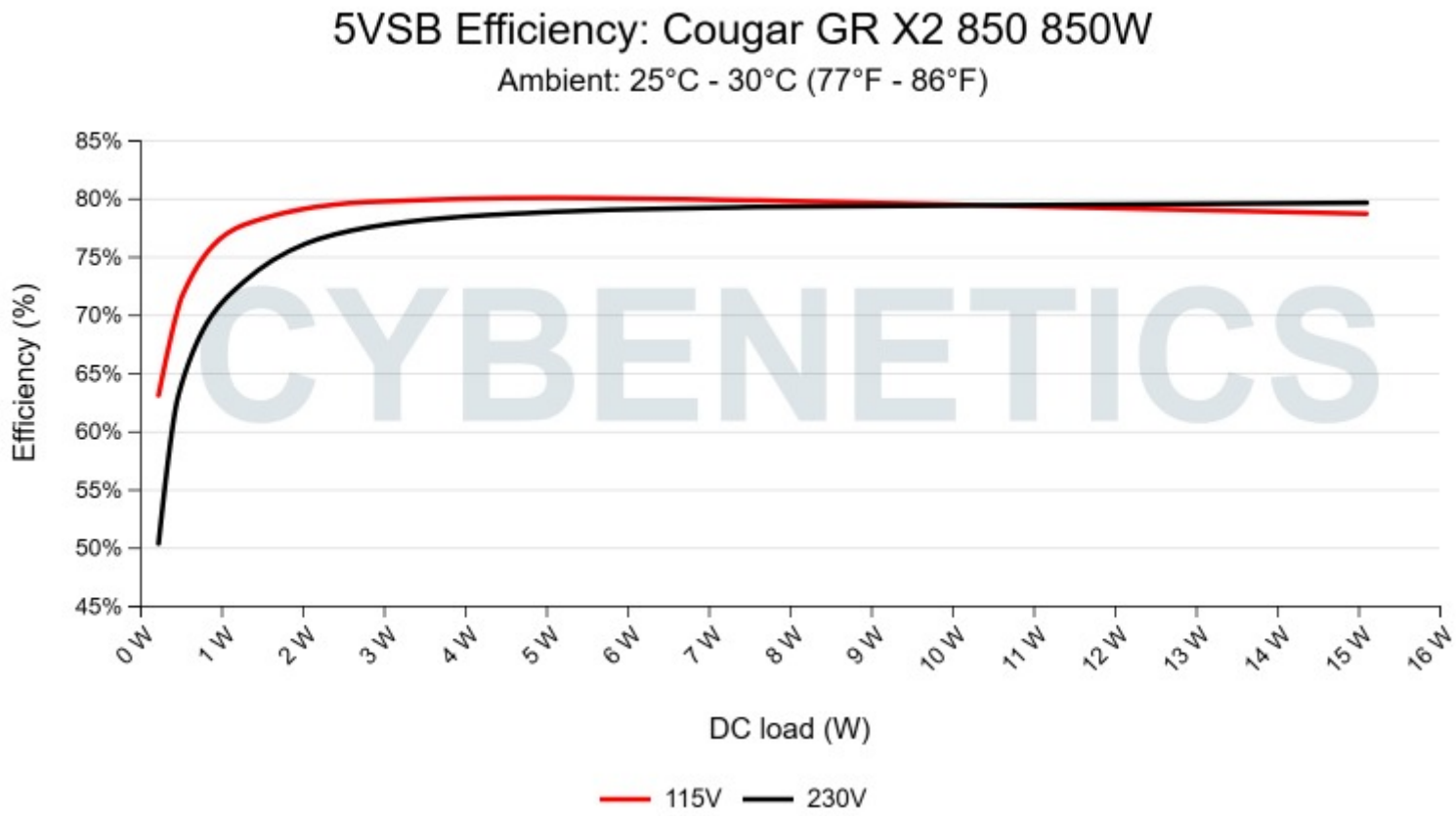
Efficiency under high ambient temperature



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**	0.23W	63.073%	0.04
	5.115V	0.365W		114.95V
2	**0.09A**	0.46W	70.26%	0.071
	5.113V	0.655W		114.94V
3	**0.55A**	2.806W	79.669%	0.271
	5.101V	3.523W		114.94V
4	**1A**	5.09W	80.024%	0.346
	5.089V	6.361W		114.93V
5	**1.5A**	7.615W	79.808%	0.391
	5.075V	9.541W		114.94V
6	**3A**	15.103W	78.65%	0.447
	5.034V	19.203W		114.93V

230V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	**0.045A**	0.23W	50.339%	0.015
	5.115V	0.457W		230.1V
2	**0.09A**	0.46W	62.654%	0.024
	5.114V	0.735W		230.1V
3	**0.55A**	2.806W	77.486%	0.112
	5.102V	3.622W		230.1V
4	**1A**	5.091W	78.817%	0.181
	5.089V	6.459W		230.1V
5	**1.5A**	7.615W	79.234%	0.235
	5.076V	9.611W		230.09V
6	**3A**	15.106W	79.599%	0.325
	5.035V	18.978W		230.09V

Protection Features

OCP (Normal @ 29.5°C)	12V: 99.1A (139.97%), 12.046V — shut down 5V: 29.4A (147%), 5.024V — shut down 3.3V: 31.6A (158%), 3.26V — shut down 5VSB: 4.5A (150%), 4.981V — shut down
OCP (Hot @ 42.6°C)	12V: 91.2A (128.81%), 12.046V — shut down 5V: 30.1A (150.5%), 5.023V — shut down 3.3V: 31.1A (155.5%), 3.262V — shut down 5VSB: 4.5A (150%), 4.983V — shut down
OVP (per rail)	12V: 14.184V (✓) 5V: 5.86V (✓) 3.3V: 3.85V (✓)
OPP (Normal @ 31°C)	1192.98W (140.35%) — shut down
OPP (Hot @ 42.8°C)	1045.4W (122.99%) — shut down
OTP	✓ (115°C @ 12V Heatsink)
SCP	12V to Earth: ✓ 5V to Earth: ✓ 3.3V to Earth: ✓ 5VSB to Earth: ✓ -12V to Earth: ✓
PWR_OK	Accurate but short
UVP (Typical Load @ 90V)	✓
UVP (No Damage @ 80V)	✓
Conducted Emissions EN 55032 & CISPR 32	✓
NLO	✓
Fan Failure Protection	✗
SIP	Surge: MOV Inrush: NTC & 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%	**5.215A**	**1.973A**	**1.969A**	**0.985A**	85.001	87.794%	540	11.1	40.18°C	0.975
	12.158V	5.07V	3.352V	5.079V	96.82				43.57°C	114.95V
20%	**11.447A**	**2.966A**	**2.962A**	**1.185A**	169.96	90.297%	541	11.1	40.72°C	0.985
	12.147V	5.059V	3.343V	5.064V	188.223				44.3°C	114.95V
30%	**18.037A**	**3.467A**	**3.465A**	**1.386A**	254.97	91.303%	543	11.1	41.15°C	0.99
	12.137V	5.049V	3.334V	5.05V	279.256				42°C	114.92V
40%	**24.646A**	**3.97A**	**3.971A**	**1.589A**	340.059	91.649%	548	11.1	41.52°C	0.993
	12.126V	5.038V	3.324V	5.035V	371.045				43.97°C	114.9V
50%	**30.917A**	**4.975A**	**4.978A**	**1.793A**	424.993	91.416%	555	10.9	42.48°C	0.994
	12.113V	5.027V	3.315V	5.02V	464.898				47.28°C	114.88V
60%	**37.163A**	**5.985A**	**5.992A**	**1.999A**	509.524	90.818%	738	15.3	42.79°C	0.994
	12.101V	5.014V	3.305V	5.004V	561.038				49.74°C	114.86V
70%	**43.485A**	**7A**	**7.013A**	**2.206A**	594.854	90.135%	1075	26.3	43.19°C	0.995
	12.090V	5.001V	3.294V	4.987V	659.96				50.68°C	114.85V
80%	**49.815A**	**8.019A**	**8.039A**	**2.313A**	679.674	89.541%	1289	33.2	43.84°C	0.995
	12.080V	4.988V	3.283V	4.973V	759.062				50.54°C	114.82V
90%	**56.554A**	**8.541A**	**8.554A**	**2.42A**	765.12	88.994%	1474	36.5	44.29°C	0.995
	12.071V	4.976V	3.273V	4.96V	859.741				50.31°C	114.78V
100%	**63.035A**	**9.066A**	**9.104A**	**3.041A**	849.918	88.299%	1660	39.0	45.66°C	0.995
	12.060V	4.964V	3.262V	4.933V	962.545				50.49°C	114.76V
110%	**69.404A**	**10.102A**	**10.242A**	**3.049A**	934.506	87.561%	1812	43.3	46.06°C	0.995
	12.049V	4.95V	3.251V	4.921V	1067.262				51.19°C	114.75V
CL1	**0.115A**	**11.931A**	**11.863A**	**0A**	101.295	84.169%	573	11.1	40.87°C	0.978
	12.147V	5.046V	3.346V	5.089V	120.347				46.44°C	114.95V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
CL2	**0.115A**	**19.817A**	**0A**	**0A**	101.392	82.221%	579	11.0	41.87°C	0.979
	12.152V	5.046V	3.339V	5.095V	123.317				44°C	114.95V
CL3	**0.115A**	**0A**	**19.649A**	**0A**	67.387	78.002%	548	11.1	41.78°C	0.972
	12.151V	5.058V	3.359V	5.093V	86.391				43.44°C	114.95V
CL4	**70.405A**	**0A**	**0A**	**0A**	849.722	89.236%	1331	33.4	45.14°C	0.995
	12.069V	4.989V	3.27V	5.03V	952.224				44.32°C	114.75V

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%	**5.214A**	**1.973A**	**1.968A**	**0.985A**	84.999	88.994%	535	8.9	40.17°C	0.798
	12.160V	5.07V	3.353V	5.079V	95.511				41.27°C	230.1V
20%	**11.443A**	**2.966A**	**2.961A**	**1.185A**	169.945	91.824%	536	8.9	40.86°C	0.929
	12.150V	5.058V	3.343V	5.064V	185.076				40.86°C	230.1V
30%	**18.027A**	**3.468A**	**3.464A**	**1.386A**	254.948	92.809%	536	8.9	41.11°C	0.956
	12.142V	5.047V	3.334V	5.05V	274.703				44.94°C	230.1V
40%	**24.630A**	**3.971A**	**3.971A**	**1.589A**	340.033	93.235%	539	11.1	41.71°C	0.966
	12.133V	5.037V	3.324V	5.035V	364.704				42.92°C	230.1V
50%	**30.890A**	**4.976A**	**4.978A**	**1.793A**	424.932	93.139%	545	11.1	42.17°C	0.975
	12.122V	5.025V	3.314V	5.019V	456.235				45.25°C	230.09V
60%	**37.126A**	**5.986A**	**5.992A**	**1.999A**	509.467	92.815%	644	13.5	42.77°C	0.979
	12.112V	5.013V	3.304V	5.003V	548.908				46.79°C	230.09V
70%	**43.437A**	**7.003A**	**7.015A**	**2.206A**	594.81	92.397%	938	22.5	43.13°C	0.979
	12.103V	4.999V	3.293V	4.986V	643.753				47.61°C	230.08V
80%	**49.763A**	**8.023A**	**8.04A**	**2.313A**	679.695	92.004%	1161	30.4	43.62°C	0.978
	12.093V	4.986V	3.283V	4.972V	738.77				47.3°C	230.05V
90%	**56.499A**	**8.545A**	**8.556A**	**2.421A**	765.213	91.701%	1356	34.0	44.31°C	0.976
	12.084V	4.974V	3.273V	4.958V	834.464				47.05°C	230.01V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
100%	**62.981A**	**9.074A**	**9.111A**	**3.043A**	850.063	91.235%	1585	39.8	45.19°C	0.973
	12.073V	4.96V	3.26V	4.93V	931.731				48.4°C	229.97V
110%	**69.343A**	**10.109A**	**10.261A**	**3.051A**	934.689	90.795%	1782	42.8	44.1°C	0.971
	12.062V	4.947V	3.245V	4.917V	1029.454				48.44°C	229.95V
CL1	**0.115A**	**11.935A**	**11.884A**	**0A**	101.315	85.568%	1432	35.2	41.48°C	0.841
	12.150V	5.045V	3.341V	5.088V	118.403				46.04°C	230.01V
CL2	**0.115A**	**19.822A**	**0A**	**0A**	101.4	83.455%	576	11.0	41.97°C	0.846
	12.154V	5.045V	3.339V	5.094V	121.502				46.26°C	230.03V
CL3	**0.115A**	**0A**	**19.687A**	**0A**	67.391	79.258%	547	11.1	41.26°C	0.778
	12.152V	5.058V	3.352V	5.092V	85.028				46.95°C	230.05V
CL4	**70.348A**	**0A**	**0A**	**0A**	849.731	92.12%	1376	34.2	45.23°C	0.974
	12.079V	4.988V	3.269V	5.028V	922.421				46.43°C	229.98V

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	**1.220A**	**0.492A**	**0.491A**	**0.196A**	20.004	73.029%	524	7.5	36.59°C	0.835
	12.169V	5.08V	3.359V	5.108V	27.392				37.87°C	114.95V
40W	**2.688A**	**0.689A**	**0.688A**	**0.294A**	40.001	82.491%	532	8.9	37.35°C	0.924
	12.164V	5.078V	3.358V	5.104V	48.491				40.83°C	114.96V
60W	**4.155A**	**0.887A**	**0.885A**	**0.392A**	59.999	85.725%	537	8.9	38.34°C	0.955
	12.161V	5.076V	3.356V	5.099V	69.99				41.19°C	114.95V
80W	**5.620A**	**1.084A**	**1.082A**	**0.491A**	79.957	87.953%	539	11.1	39.31°C	0.975
	12.159V	5.073V	3.354V	5.094V	90.908				41.05°C	114.94V

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	**1.221A**	**0.492A**	**0.491A**	**0.196A**	20.005	77.116%	526	7.5	36.56°C	0.514
	12.169V	5.081V	3.36V	5.108V	25.942				39°C	230.07V
40W	**2.687A**	**0.689A**	**0.688A**	**0.294A**	40.001	84.658%	528	8.9	37.5°C	0.692
	12.167V	5.078V	3.358V	5.103V	47.25				38.8°C	230.08V
60W	**4.154A**	**0.887A**	**0.885A**	**0.392A**	59.998	87.584%	528	8.9	38.15°C	0.75
	12.164V	5.075V	3.355V	5.099V	68.504				39.14°C	230.08V
80W	**5.618A**	**1.084A**	**1.082A**	**0.491A**	79.95	89.379%	531	8.9	39.18°C	0.787
	12.161V	5.073V	3.354V	5.094V	89.451				40.54°C	230.08V

The results above are not used in the certification process

Ripple Measurements

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	16.59mV	12.91mV	6.31mV	12.18mV	Pass
20% Load	20.71mV	13.46mV	7.12mV	12.89mV	Pass
30% Load	24.27mV	14.44mV	7.37mV	13.45mV	Pass
40% Load	27.88mV	14.84mV	8.14mV	13.55mV	Pass
50% Load	30.84mV	16.12mV	8.95mV	13.81mV	Pass
60% Load	31.96mV	16.53mV	9.10mV	14.06mV	Pass
70% Load	33.74mV	18.21mV	9.97mV	14.57mV	Pass
80% Load	33.53mV	18.72mV	12.92mV	14.98mV	Pass
90% Load	34.09mV	19.94mV	13.89mV	15.03mV	Pass
100% Load	35.47mV	19.33mV	14.90mV	15.08mV	Pass
110% Load	37.25mV	19.38mV	16.12mV	16.10mV	Pass
Crossload1	18.27mV	12.29mV	11.19mV	16.10mV	Pass
Crossload2	19.54mV	14.08mV	8.75mV	14.83mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
Crossload3	16.49mV	11.02mV	11.65mV	14.72mV	Pass
Crossload4	34.19mV	13.98mV	11.09mV	15.59mV	Pass

The results above are not used in the certification process

230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	20.10mV	13.77mV	6.77mV	12.53mV	Pass
20% Load	21.37mV	14.74mV	7.32mV	13.35mV	Pass
30% Load	24.02mV	15.31mV	7.68mV	14.11mV	Pass
40% Load	27.68mV	15.71mV	8.24mV	14.22mV	Pass
50% Load	32.31mV	16.07mV	9.05mV	14.27mV	Pass
60% Load	33.53mV	17.29mV	9.66mV	14.72mV	Pass
70% Load	35.21mV	17.95mV	10.22mV	14.57mV	Pass
80% Load	36.13mV	18.77mV	13.89mV	15.99mV	Pass
90% Load	41.42mV	19.28mV	27.97mV	15.64mV	Pass
100% Load	37.50mV	27.29mV	14.08mV	22.32mV	Pass
110% Load	39.69mV	20.86mV	21.77mV	15.95mV	Pass
Crossload1	19.22mV	15.58mV	16.43mV	15.74mV	Pass
Crossload2	22.90mV	14.39mV	9.05mV	15.44mV	Pass
Crossload3	19.74mV	11.22mV	11.95mV	14.57mV	Pass
Crossload4	36.28mV	14.23mV	11.24mV	16.10mV	Pass

The results above are not used in the certification process

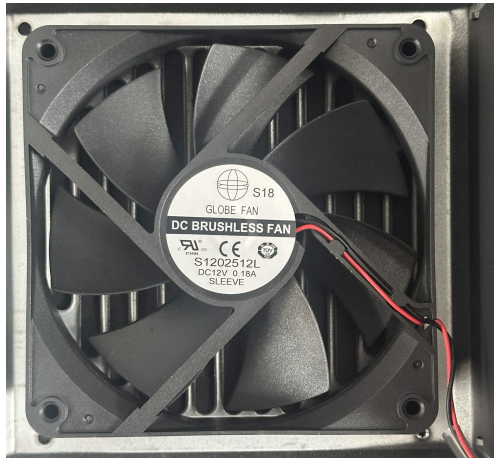
Cougar GR X2 850



Top side



Power specifications label



Fan



PSU Internals

Cybenetics bietet freiwillige Zertifizierungsprogramme für Netzteile – ETA für Effizienz, LAMBDA für Lautstärke und SAFE für Sicherheit und korrekten Betrieb – sowie für Kühlprodukte mit DELTA für die Schalldämmung von Gehäusen und PHI für Luftstrom und statischen Druck von Lüftern

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