Enermax MarbleBron RGB 850

Serial Number 210801900044

Lab ID EM85001963

Certification ID 251963

Test Result Report ID: 22PS1963A

Certificate Issue Date: Jan 19, 2022

Scheme: ETA-EMI PSU

115V



230V



Scheme: LAMBDA PSU

115V



230V





Aristeidis Bitziopoulos, Certification Body General Manager

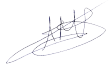
General Information

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	Enermax
Model	MarbleBron RGB 850
OEM/ODM	SANR Electronic Technology Co. Ltd
Serial Number	210801900044
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	11-5.5
Rated Frequency (Hz)	47-63

Rated Power (W)	850
Operating Temperature (Continuous Full Load) (°C)	
Type	ATX12V
Cable Design	Semi Modular
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
Cooling	120mm Fluid Dynamic Bearing Fan (HA1225H12F-Z)
Semi-Passive Operation	✗
Cybenetics Testing Information	
Lab ID	EM85001963
Date of receipt	Jan 4, 2022
Testing Date	Jan 18, 2022
Report Issued Date	Jan 19, 2022
Engineer Name	-
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

Cables and Connectors(Non-accredited measurements)

Captive Cables				
Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 20+4 pin (620mm)	1	1	18-22AWG	No
4+4 pin EPS12V (670mm)	2	2	18AWG	No
RGB Header Cable (720mm)	1	1	26AWG	No
Modular Cables				
6+2 pin PCIe (500mm+150mm)	2	4	18AWG	No
SATA (450mm+150mm) / 4-pin Molex (+150mm)	3	6 / 3	18AWG	No
SATA (450mm+150mm) / 4-pin Molex (+150mm) / FDD (+150mm)	1	2 / 1 / 1	18-22AWG	No
AC Power Cord (1100mm) - C13 coupler	1	1	18AWG	-

Power Specifications

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	20	20	70	2.5	0.3
	Watts	130		840	12.5	3.6
Total Max. Power (W)		850				

Parts Description

General Data	-
Manufacturer (OEM)	SANR Electronic Technology
PCB Type	Single Sided
Primary Side	-
Transient Filter	4x Y caps, 2x X caps, 1x DM choke, 2x CM chokes, 1x MOV
Inrush Protection	NTC Thermistor SCK203R0 (3 Ohm)
Bridge Rectifier(s)	1x GBU1506 (800V, 15A @ 100°C)
APFC MOSFETs	2x 65R099W
APFC Boost Diode	1x CRMicro CRXI08D065G1 (650V, 8A @ 159°C)
Bulk Cap(s)	2x TK (400V, 330uF each or 660uF combined, 105°C, LFW)
Main Switchers	2x CW CWS20N60AZ (600V, 13A @ 100°C, Rds(on): 0.19Ohm)
PFC/PWM Combo Controller	Champion CM6800UX
Topology	Primary side: APFC, Double Forward Secondary side: Synchronous Rectification & DC-DC converters
Secondary Side	-
+12V MOSFETs	4x Potens PDD6974-5 (65V, 60A @ 100°C, Rds(on): 3.3mOhm)
5V & 3.3V	DC-DC Converters: 4x Maplesemi SLD80N03T (30V, 48A @ 100°C, Rds(on): 5.5mOhm) PWM Controller(s): ANPEC APW7159C
Filtering Capacitors	Electrolytic: 9x Asia'x (105°C, TMX) Polymer: 2x NJcon, 3x no info
Supervisor IC	Grenery GR8313 (OVP, UVP, SCP, PG)
Fan Model	Enermax PF19011225-1800-ARGB (120mm, 12V - 0.26A, 5V - 0.6A, Fluid Dynamic Bearing Fan)
5VSB Circuit	-
Standby PWM Controller	SC2521Q

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	✓

Performance Summary

115V

Accredited	
Average Efficiency (>1450 load combinations)	84.927%
Average Noise Output (>1450 Load Combinations)	39.00dBA
Average PF (>1450 Load Combinations)	0.985
Efficiency With 10W (≤500W) or 2% (>500W) Load	62.319%
Standby Power Consumption	0.0491W
Non-Accredited	
12V Ripple (Full Load)	23.81mV
5V Ripple (Full Load)	10.98mV
3.3V Ripple (Full Load)	26.80mV
5VSB Ripple (Full Load)	14.94mV
12V Load Regulation	1.26%
5V Load Regulation	0.73%
3.3V Load Regulation	1.00%
5VSB Load Regulation	0.54%
Inrush Current	32.250A

230V

Accredited	
Average Efficiency (>1450 load combinations)	87.869%

Average Noise Output (>1450 Load Combinations)		38.83dBA
Average PF (>1450 Load Combinations)		0.938
Efficiency With 10W (≤500W) or 2% (>500W) Load		-
Standby Power Consumption		0.1338W
Non-Accredited		
12V Ripple (Full Load)		31.53mV
5V Ripple (Full Load)		10.66mV
3.3V Ripple (Full Load)		27.38mV
5VSB Ripple (Full Load)		14.71mV
12V Load Regulation		1.28%
5V Load Regulation		0.71%
3.3V Load Regulation		1.00%
5VSB Load Regulation		0.50%
Inrush Current		88.000A
Hold-Up Time & PWR_OK Signal		11.40ms
AC Loss to PWR_OK Hold Up Time		8.60ms
PWR_OK Inactive to DC Loss Delay		2.80ms
PSU Timings: T1 (20% / 100%)	65.0ms	65.0ms
PSU Timings: T3 (20% / 100%)	495.0ms	505.0ms
OPP (25.50°C / 41.61°C)	127.05%	124.87%

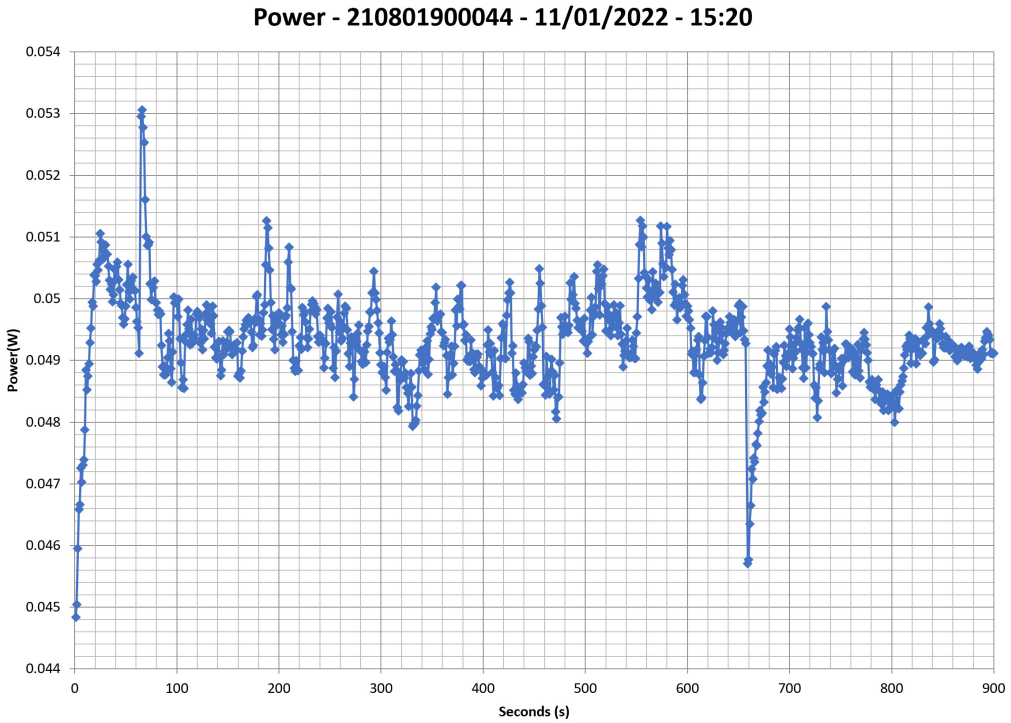
Hold-Up Time & PWR_OK Signal

Hold-Up Time (ms)	11.4
AC Loss to PWR_OK Hold Up Time (ms)	8.6
PWR_OK Inactive to DC Loss Delay (ms)	2.8

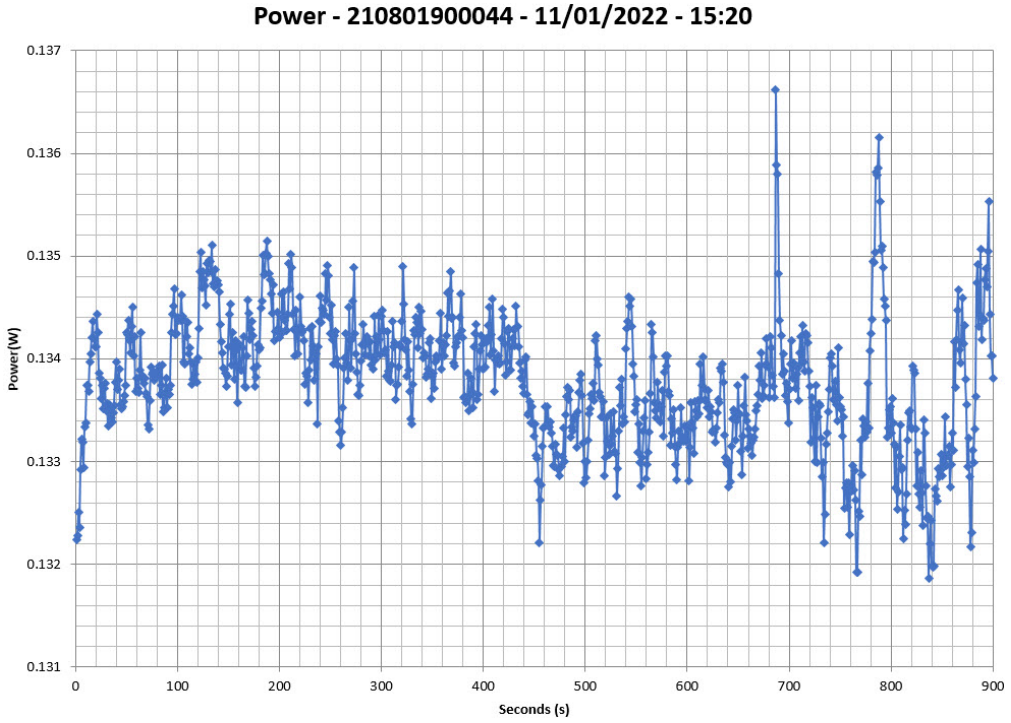
Vampire Power

Graphs

115V

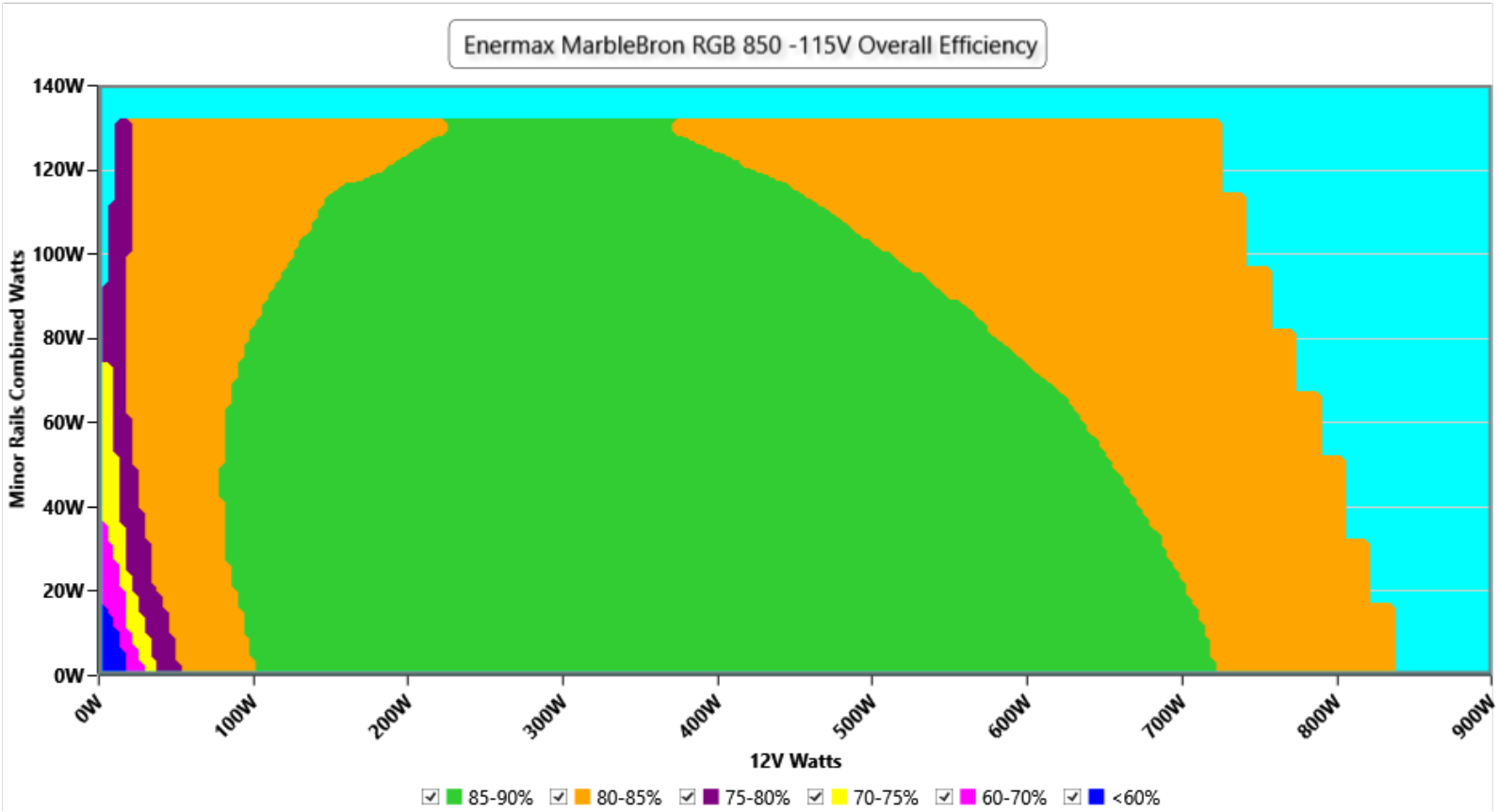


230V



Efficiency Graph

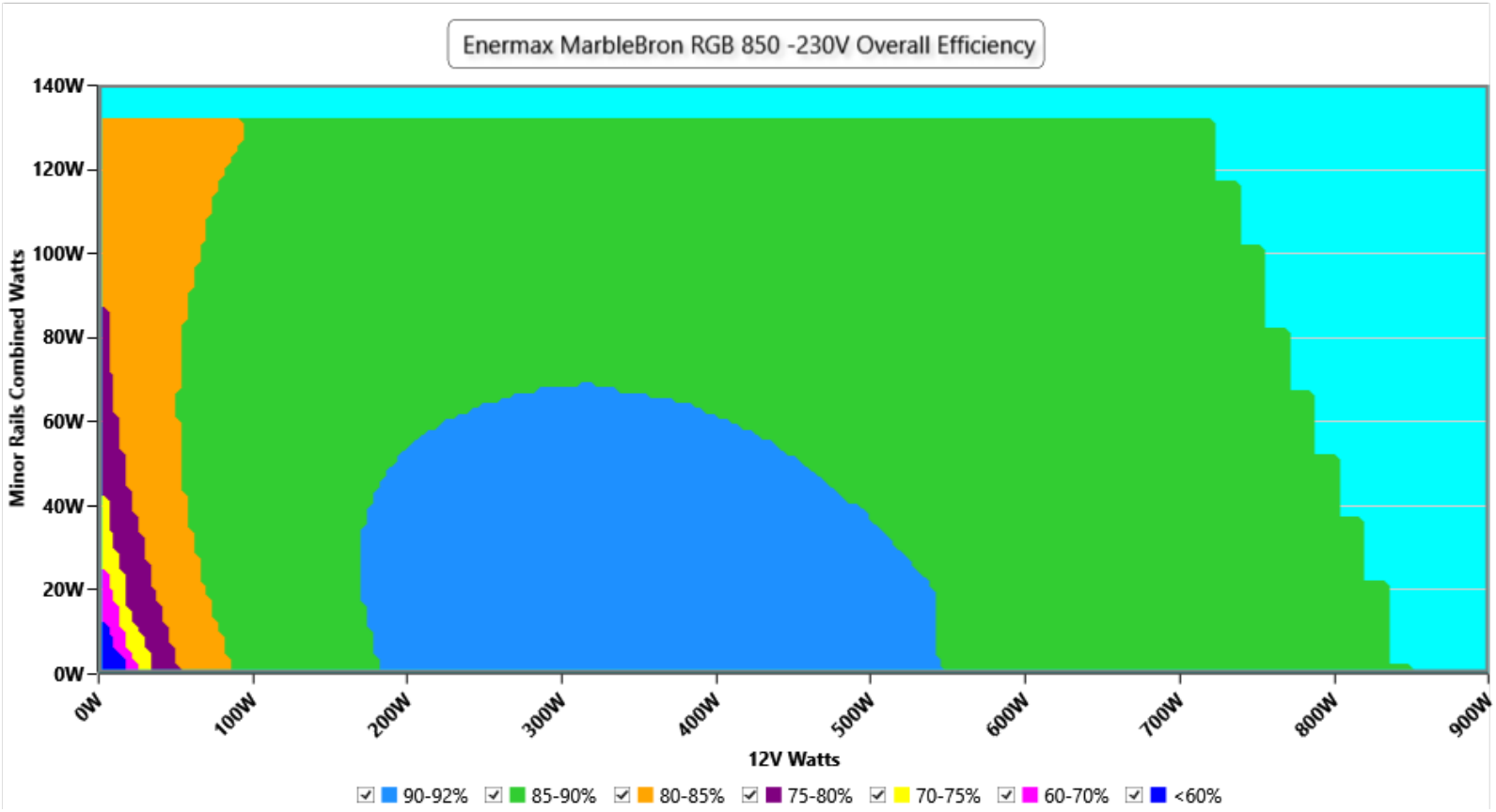
115V



INFO

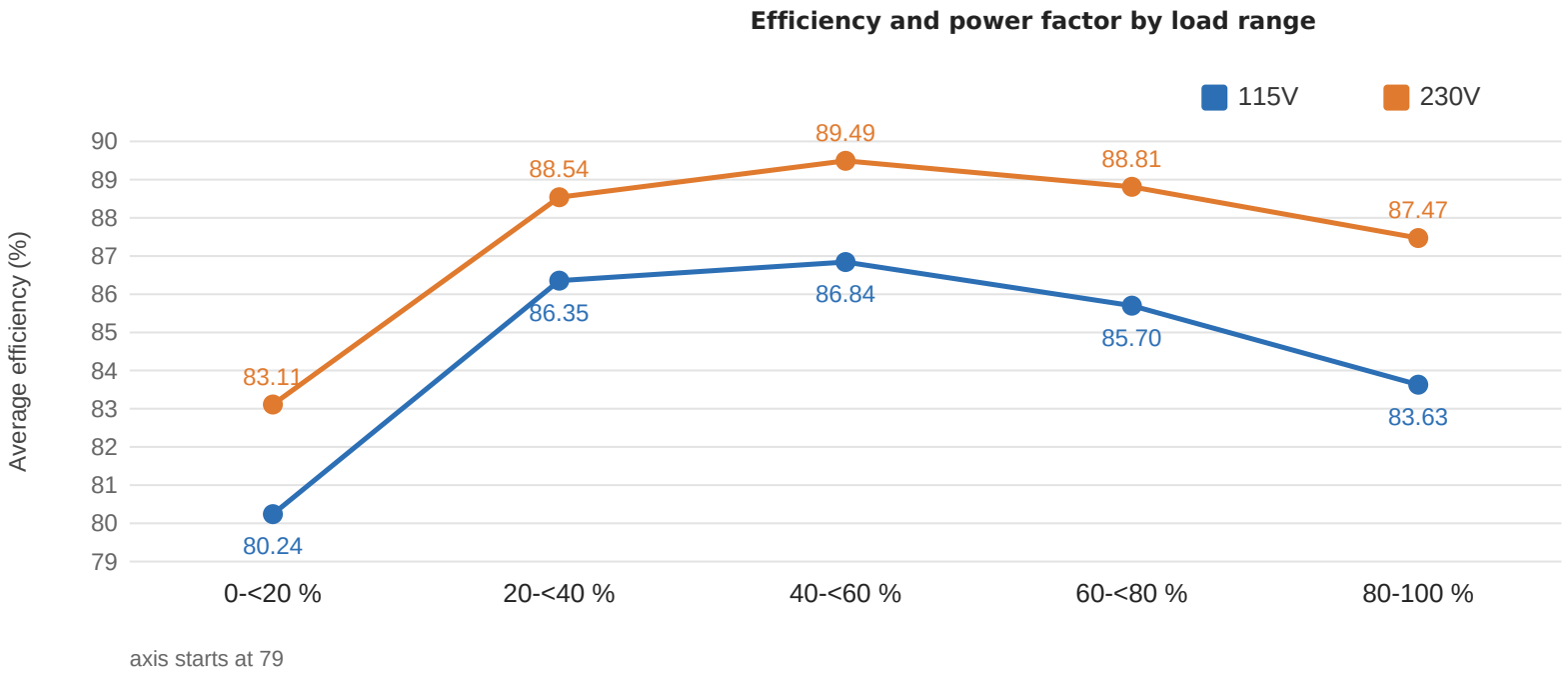
This graph depicts the PSU`s efficiency throughout its entire operational range. For the generation of the efficiency and noise graphs we set our loaders to auto mode through our custom-made software before trying thousands of possible load combinations

230V

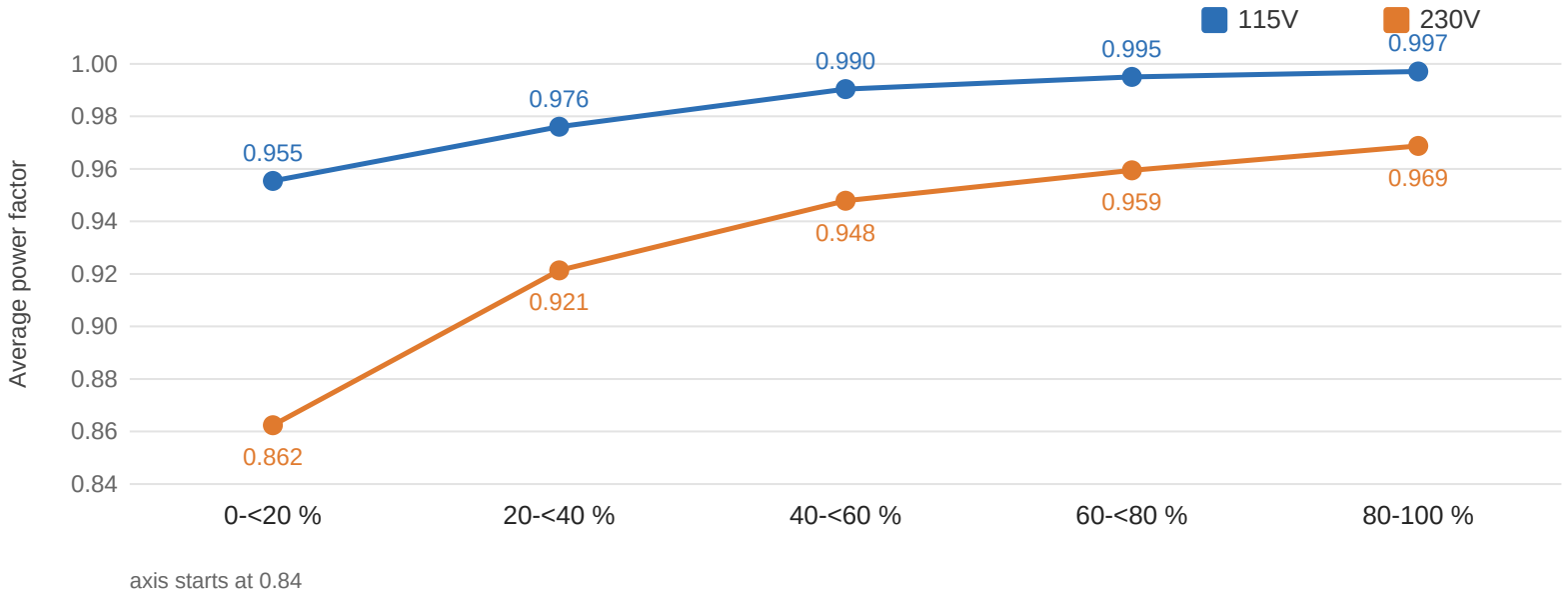


INFO

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



axis starts at 79



axis starts at 0.84

Load range	Points	Efficiency 115V	Efficiency 230V	PF 115V	PF 230V
0-<20 %	203 / 203	80.24%	83.11%	0.955	0.862
20-<40 %	341 / 341	86.35%	88.54%	0.976	0.921
40-<60 %	339 / 339	86.84%	89.49%	0.990	0.948
60-<80 %	341 / 344	85.70%	88.81%	0.995	0.959
80-100 %	345 / 347	83.63%	87.47%	0.997	0.969
70-100 % (High-Load)	515 / 520	84.19%	87.83%	0.997	0.966
All (published average)	1569 / 1574	84.93%	87.87%	0.985	0.938

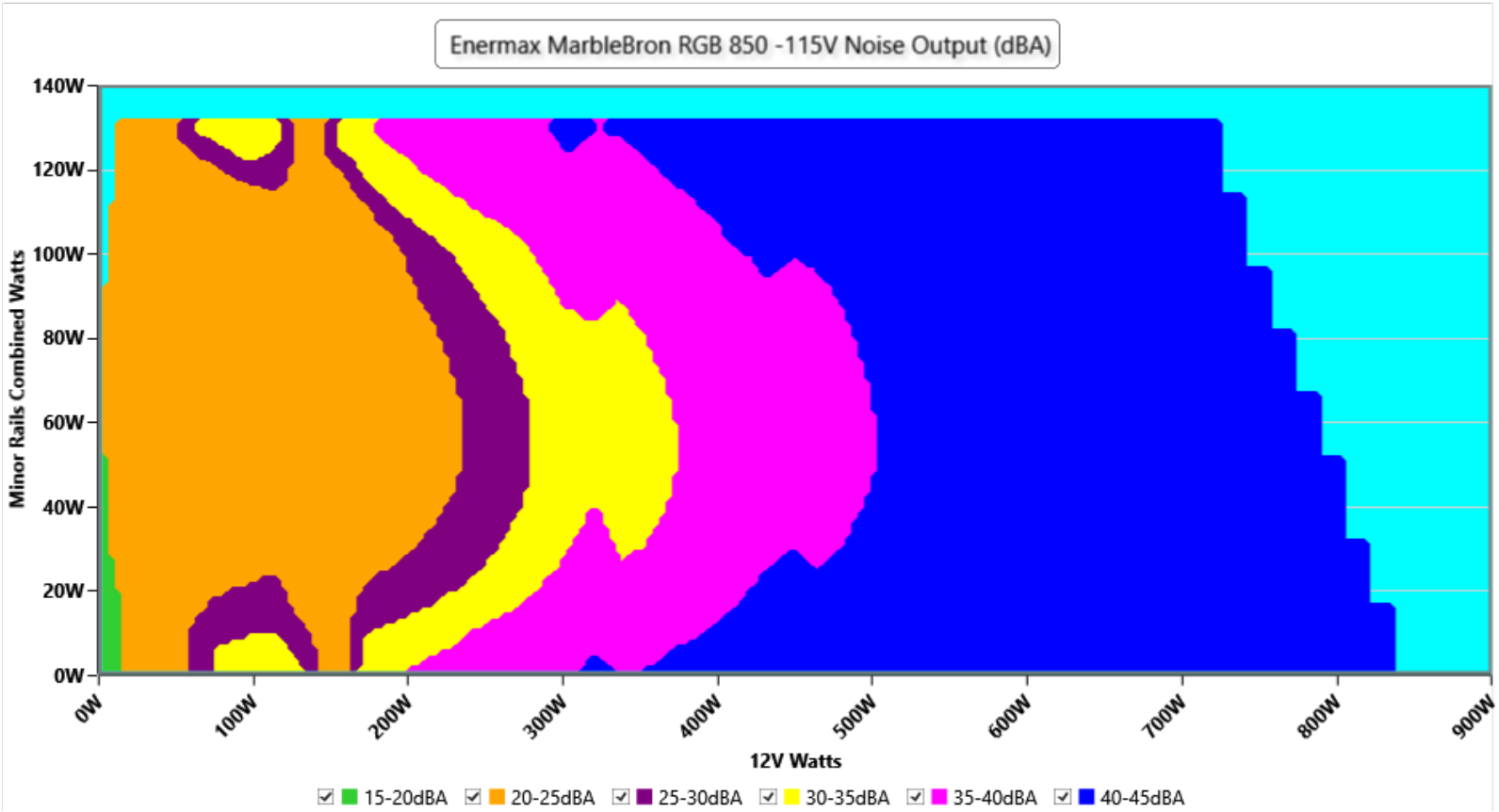
INFO

The average efficiency and power factor in five ranges of load. Calculated from the 1569 (115V) and 1574 (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

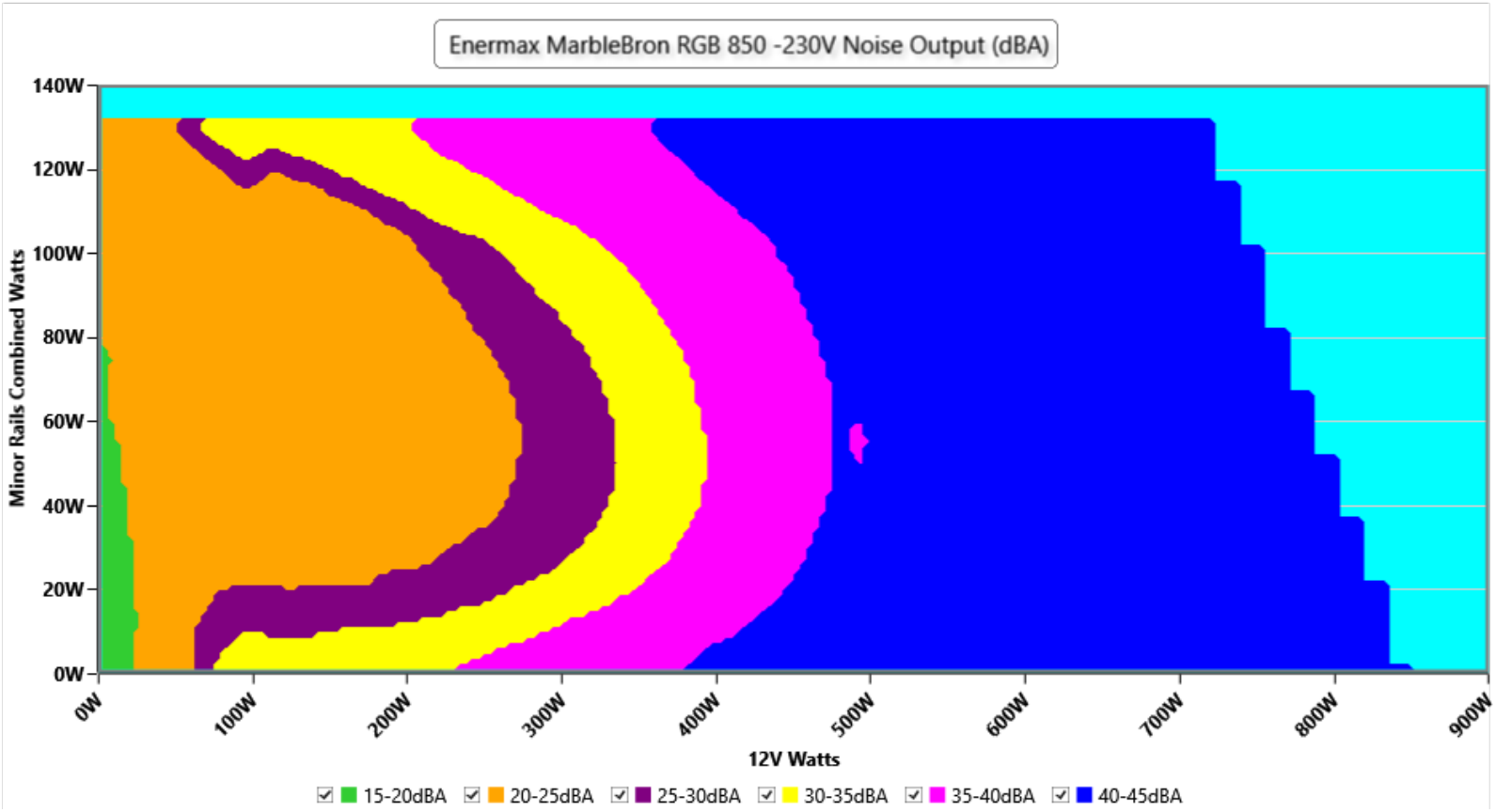
115V



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

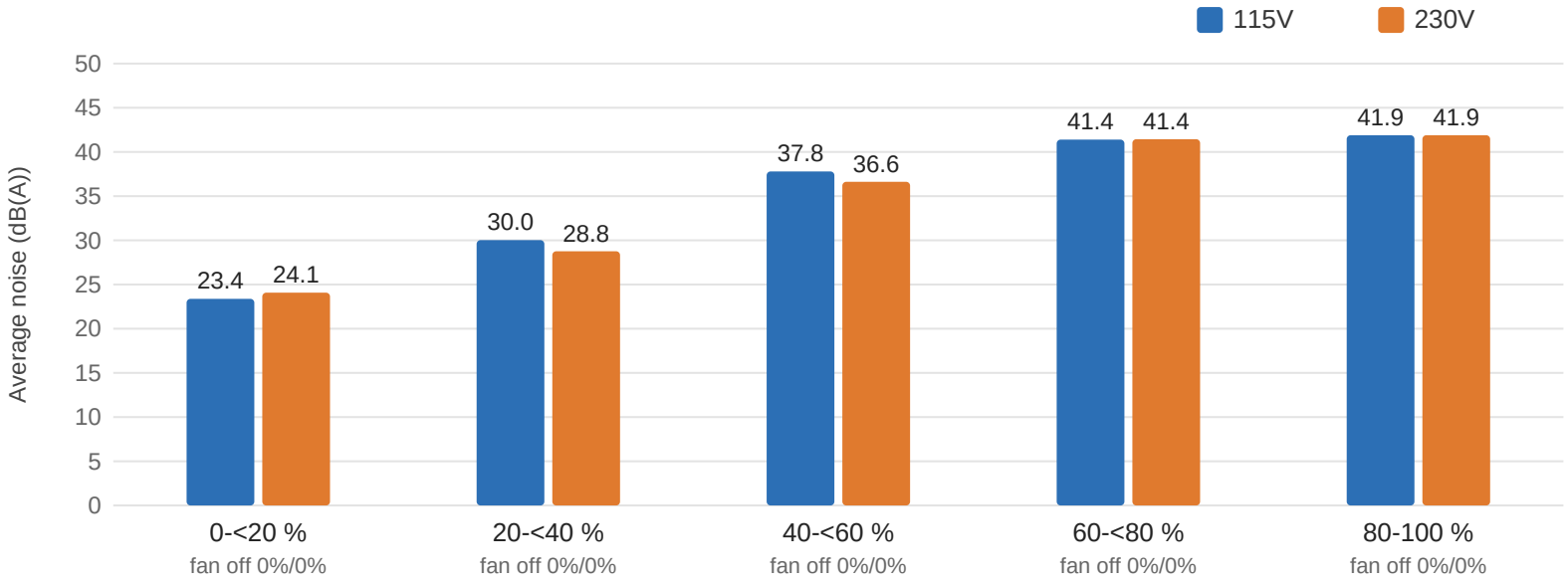
The PSU`s noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

Noise by load range

High-Load Index (70-100 % load)

Noise **41.9 dB(A)** at 115V and **41.9 dB(A)** at 230V · loudest point 42.6 dB(A)

Efficiency 84.19% / 87.83% · power factor 0.997 / 0.966 (115V / 230V)



Load range	Noise 115V avg (loudest)	Noise 230V avg (loudest)	Fan off 115V / 230V
0-<20 %	23.4 (33.2)	24.1 (33.2)	0% / 0%
20-<40 %	30.0 (40.6)	28.8 (37.7)	0% / 0%
40-<60 %	37.8 (41.9)	36.6 (41.9)	0% / 0%
60-<80 %	41.4 (41.9)	41.4 (42.6)	0% / 0%
80-100 %	41.9 (41.9)	41.9 (41.9)	0% / 0%
70-100 % (High-Load)	41.9 (41.9)	41.9 (42.6)	0% / 0%
All (published average)	39.0 (41.9)	38.8 (42.6)	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 1569 (115V) and 1574 (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".

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%	884 RPM · 21.7 dB(A) · 34.5 °C	884 RPM · 21.7 dB(A) · 34.5 °C	**+0.0 dB(A)**
20%	1011 RPM · 25.4 dB(A) · 35.5 °C	1011 RPM · 25.4 dB(A) · 35.5 °C	**+0.0 dB(A)**
50%	1850 RPM · 41.9 dB(A) · 36.9 °C	1850 RPM · 41.9 dB(A) · 36.9 °C	**+0.0 dB(A)**
100%	1846 RPM · 41.8 dB(A) · 39.8 °C	1846 RPM · 41.8 dB(A) · 39.8 °C	**+0.0 dB(A)**

230V

Load	Normal ambient fan · noise · intake	High ambient fan · noise · intake	Noise change
10%	870 RPM · 21.2 dB(A) · 36.3 °C	870 RPM · 21.2 dB(A) · 36.3 °C	**+0.0 dB(A)**
20%	1344 RPM · 33.1 dB(A) · 36.3 °C	1344 RPM · 33.1 dB(A) · 36.3 °C	**+0.0 dB(A)**
50%	1834 RPM · 41.7 dB(A) · 37.8 °C	1834 RPM · 41.7 dB(A) · 37.8 °C	**+0.0 dB(A)**
100%	1839 RPM · 41.7 dB(A) · 40.2 °C	1839 RPM · 41.7 dB(A) · 40.2 °C	**+0.0 dB(A)**

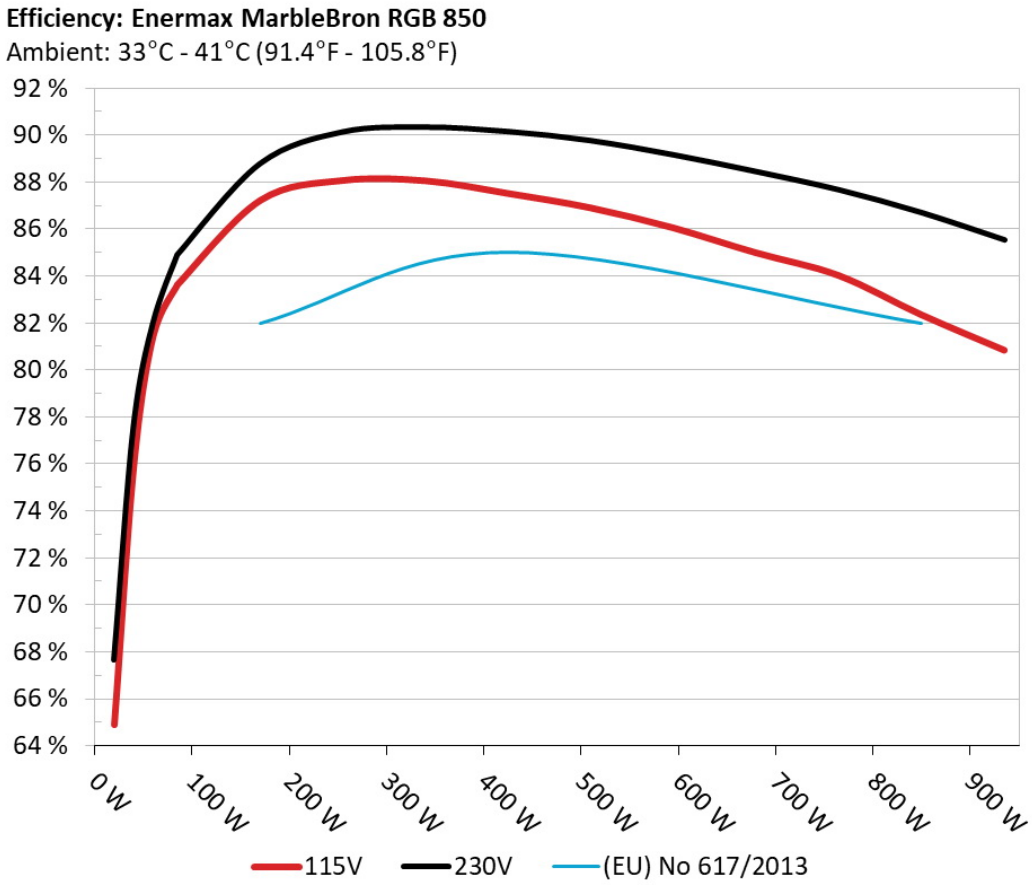
INFO

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, with the fan stopped; 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

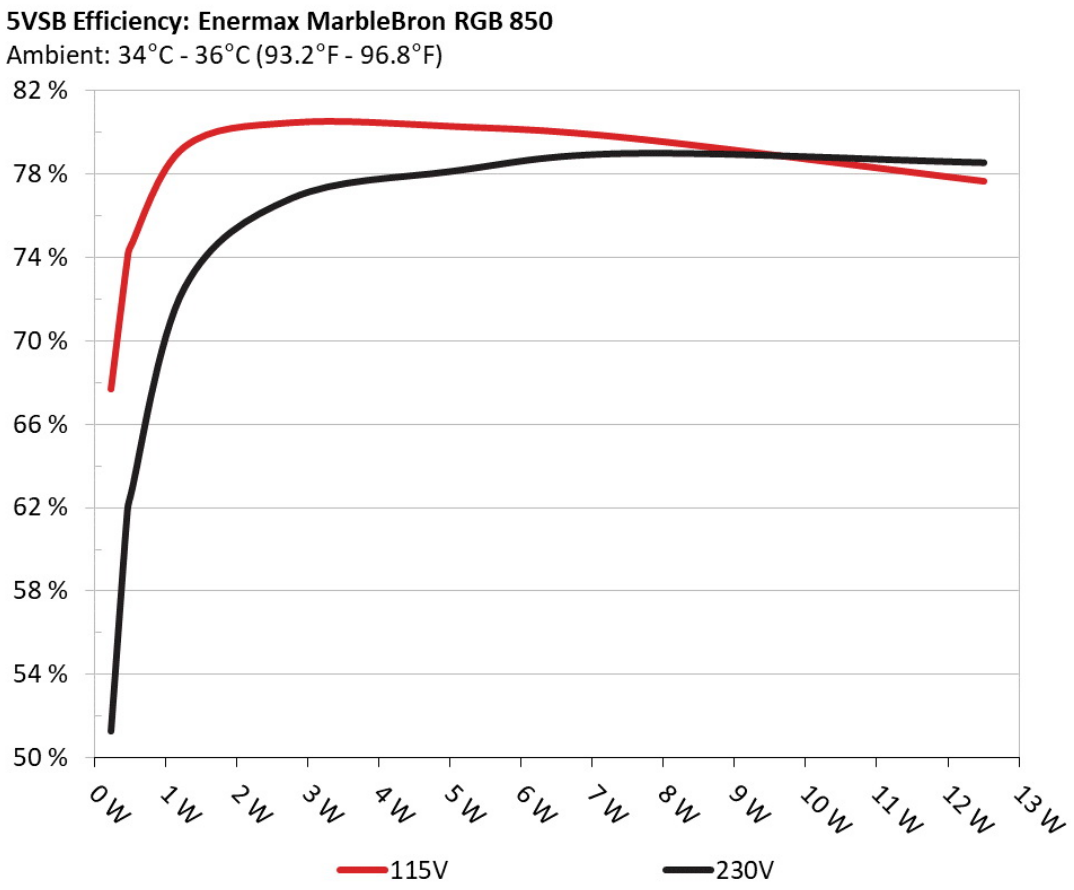
Efficiency under high ambient temperature



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	0.227W	67.704%	0.038
	5.049V	0.335W		115.16V
2	0.09A	0.454W	73.84%	0.068
	5.046V	0.615W		115.16V
3	0.55A	2.77W	80.459%	0.274
	5.038V	3.443W		115.16V
4	1A	5.03W	80.28%	0.358
	5.031V	6.266W		115.16V
5	1.5A	7.533W	79.715%	0.405
	5.023V	9.45W		115.16V
6	2.499A	12.507W	77.654%	0.453
	5.005V	16.106W		115.16V

230V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.227W	51.276%	0.015
	5.047V	0.443W		230.27V
2	0.09A	0.454W	61.685%	0.025
	5.047V	0.736W		230.27V
3	0.55A	2.769W	76.83%	0.113
	5.037V	3.604W		230.28V
4	1A	5.029W	78.125%	0.182
	5.03V	6.438W		230.28V
5	1.5A	7.533W	78.983%	0.239
	5.023V	9.538W		230.28V
6	2.499A	12.512W	78.537%	0.311
	5.007V	15.931W		230.27V

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%	5.224A	1.962A	1.931A	0.992A	84.99	83.406%	884	21.7	34.54°C	0.955
	12.134V	5.097V	3.417V	5.038V	101.899				38.7°C	115.16V
20%	11.470A	2.946A	2.901A	1.191A	169.923	87.199%	1011	25.4	35.49°C	0.959
	12.120V	5.093V	3.413V	5.036V	194.868				39.79°C	115.16V
30%	18.080A	3.439A	3.388A	1.39A	254.923	88.048%	1246	30.7	35.8°C	0.977
	12.106V	5.089V	3.409V	5.034V	289.528				40.34°C	115.16V
40%	24.713A	3.933A	3.876A	1.59A	340.003	88.033%	1774	41.0	36.11°C	0.986
	12.091V	5.086V	3.406V	5.032V	386.224				40.9°C	115.16V
50%	30.992A	4.918A	4.849A	1.789A	424.747	87.495%	1850	41.9	36.87°C	0.991
	12.076V	5.084V	3.403V	5.031V	485.452				42.01°C	115.15V
60%	37.265A	5.907A	5.832A	1.988A	509.262	86.886%	1849	41.9	37.43°C	0.993
	12.061V	5.08V	3.395V	5.03V	586.129				43.63°C	115.15V
70%	43.626A	6.902A	6.804A	2.188A	594.582	86.033%	1850	41.9	37.88°C	0.995
	12.045V	5.072V	3.395V	5.025V	691.107				44.98°C	115.14V
80%	50.007A	7.893A	7.78A	2.288A	679.407	84.974%	1850	41.9	38.21°C	0.996
	12.028V	5.069V	3.392V	5.025V	799.545				46.42°C	115.14V
90%	56.810A	8.386A	8.257A	2.388A	764.782	84.007%	1852	42.0	39.13°C	0.997
	12.010V	5.067V	3.389V	5.024V	910.383				48.25°C	115.13V
100%	63.575A	8.887A	8.768A	2.488A	849.515	82.341%	1846	41.8	39.76°C	0.997
	11.991V	5.063V	3.386V	5.022V	1031.706				49.89°C	115.13V
110%	70.099A	9.88A	9.839A	2.489A	934.918	80.832%	1848	41.8	40.62°C	0.998
	11.971V	5.06V	3.383V	5.021V	1156.621				51.52°C	115.12V
CL1	0.114A	15.393A	15.137A	0A	131.275	77.654%	1834	41.7	36.69°C	0.955
	12.157V	5.087V	3.408V	5.062V	169.051				41.86°C	115.18V

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	19.644A	0A	0.001A	101.385	77.146%	1501	36.0	36.83°C	0.948
	12.157V	5.091V	3.41V	5.059V	131.419				44.06°C	115.18V
CL3	0.113A	0A	19.315A	0A	67.367	71.073%	1575	37.3	36.11°C	0.959
	12.150V	5.095V	3.416V	5.056V	94.786				45.22°C	115.18V
CL4	70.966A	0A	0A	0A	849.402	83.815%	1860	42.1	40.34°C	0.998
	11.969V	5.073V	3.393V	5.067V	1013.437				51.41°C	115.13V

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%	5.224A	1.962A	1.931A	0.992A	84.99	84.81%	870	21.2	36.26°C	0.857
	12.135V	5.095V	3.417V	5.038V	100.212				40.5°C	230.24V
20%	11.469A	2.946A	2.9A	1.191A	169.912	88.766%	1344	33.1	36.32°C	0.902
	12.121V	5.092V	3.414V	5.036V	191.416				40.79°C	230.24V
30%	18.079A	3.44A	3.387A	1.39A	254.906	90.121%	1423	35.2	36.96°C	0.921
	12.106V	5.088V	3.41V	5.034V	282.85				41.74°C	230.25V
40%	24.712A	3.934A	3.875A	1.59A	339.989	90.324%	1727	39.9	37.41°C	0.939
	12.091V	5.085V	3.407V	5.031V	376.41				42.61°C	230.25V
50%	30.992A	4.921A	4.849A	1.789A	424.753	90.138%	1834	41.7	37.79°C	0.949
	12.076V	5.081V	3.403V	5.03V	471.226				43.38°C	230.26V
60%	37.267A	5.911A	5.826A	1.989A	509.285	89.754%	1838	41.7	38.01°C	0.955
	12.061V	5.076V	3.399V	5.028V	567.421				44.66°C	230.26V
70%	43.623A	6.902A	6.804A	2.188A	594.584	89.149%	1837	41.7	38.95°C	0.961
	12.046V	5.072V	3.395V	5.026V	666.957				46.14°C	230.26V
80%	50.009A	7.892A	7.778A	2.287A	679.42	88.438%	1833	41.7	39.08°C	0.966
	12.028V	5.07V	3.393V	5.026V	768.244				47.34°C	230.26V
90%	56.822A	8.386A	8.256A	2.387A	764.833	87.657%	1845	41.8	40.03°C	0.969
	12.009V	5.067V	3.39V	5.026V	872.525				49.44°C	230.27V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
100%	63.588A	8.886A	8.766A	2.487A	849.564	86.689%	1839	41.7	40.18°C	0.972
	11.990V	5.064V	3.387V	5.024V	980.017				50.53°C	230.27V
110%	70.104A	9.881A	9.839A	2.487A	934.931	85.527%	1829	41.6	40.57°C	0.979
	11.971V	5.06V	3.383V	5.025V	1093.141				51.38°C	230.27V
CL1	0.114A	15.394A	15.136A	0A	131.277	79.427%	1823	41.5	36.81°C	0.898
	12.158V	5.086V	3.408V	5.062V	165.281				42.38°C	230.28V
CL2	0.113A	19.649A	0A	0.001A	101.383	78.691%	1405	35.0	34.77°C	0.878
	12.157V	5.089V	3.41V	5.059V	128.836				42.28°C	230.29V
CL3	0.113A	0A	19.315A	0A	67.368	72.217%	1644	38.7	36.14°C	0.85
	12.150V	5.095V	3.417V	5.056V	93.286				45.42°C	230.3V
CL4	70.985A	0A	0A	0A	849.428	87.703%	1842	41.8	39.99°C	0.974
	11.967V	5.074V	3.394V	5.068V	968.526				50.58°C	230.3V

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	1.222A	0.49A	0.482A	0.198A	19.987	64.906%	878	21.3	33.05°C	0.941
	12.143V	5.1V	3.42V	5.049V	30.794				36.24°C	115.16V
40W	2.692A	0.686A	0.675A	0.297A	39.987	75.925%	878	21.3	33.67°C	0.965
	12.139V	5.099V	3.42V	5.048V	52.667				37.05°C	115.16V
60W	4.162A	0.883A	0.869A	0.396A	59.986	81.443%	880	21.3	34.32°C	0.981
	12.136V	5.098V	3.418V	5.047V	73.655				38.01°C	115.16V
80W	5.630A	1.079A	1.062A	0.495A	79.935	83.625%	881	21.3	34.47°C	0.959
	12.133V	5.098V	3.418V	5.046V	95.588				38.58°C	115.16V

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	1.222A	0.49A	0.482A	0.198A	19.988	67.664%	870	21.2	33.34°C	0.624
	12.144V	5.1V	3.421V	5.049V	29.539				36.37°C	230.23V
40W	2.692A	0.686A	0.675A	0.297A	39.988	77.574%	864	20.4	33.46°C	0.767
	12.140V	5.1V	3.42V	5.048V	51.549				36.65°C	230.24V
60W	4.162A	0.883A	0.869A	0.396A	59.986	81.976%	860	20.0	34.74°C	0.826
	12.138V	5.096V	3.418V	5.046V	73.174				38.26°C	230.23V
80W	5.628A	1.079A	1.062A	0.495A	79.925	84.891%	860	20.0	34.81°C	0.851
	12.134V	5.095V	3.417V	5.045V	94.151				38.6°C	230.24V

The results above are not used in the certification process

Ripple Measurements

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	14.73mV	5.29mV	8.80mV	9.92mV	Pass
20% Load	10.68mV	5.28mV	9.25mV	9.51mV	Pass
30% Load	10.83mV	5.23mV	11.58mV	9.82mV	Pass
40% Load	11.34mV	5.29mV	11.78mV	10.22mV	Pass
50% Load	16.61mV	5.69mV	12.54mV	10.17mV	Pass
60% Load	12.60mV	5.95mV	13.50mV	11.08mV	Pass
70% Load	15.24mV	7.01mV	14.81mV	11.44mV	Pass
80% Load	19.69mV	7.93mV	19.77mV	12.09mV	Pass
90% Load	20.35mV	10.11mV	21.94mV	12.75mV	Pass
100% Load	23.81mV	10.98mV	26.80mV	14.94mV	Pass
110% Load	26.34mV	11.34mV	28.84mV	16.55mV	Pass
Crossload1	16.15mV	9.17mV	20.44mV	14.74mV	Pass
Crossload2	13.11mV	8.94mV	16.63mV	14.12mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
Crossload3	11.59mV	5.13mV	20.93mV	10.12mV	Pass
Crossload4	23.79mV	8.24mV	20.71mV	11.68mV	Pass

The results above are not used in the certification process

230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	12.71mV	5.08mV	8.19mV	9.16mV	Pass
20% Load	11.80mV	5.44mV	9.05mV	10.02mV	Pass
30% Load	12.00mV	5.29mV	10.82mV	9.72mV	Pass
40% Load	11.95mV	4.62mV	9.96mV	9.36mV	Pass
50% Load	17.01mV	5.44mV	11.33mV	10.12mV	Pass
60% Load	15.39mV	5.89mV	13.04mV	10.73mV	Pass
70% Load	17.67mV	7.47mV	16.38mV	11.64mV	Pass
80% Load	20.86mV	7.67mV	20.27mV	13.00mV	Pass
90% Load	23.04mV	8.99mV	23.36mV	13.00mV	Pass
100% Load	31.53mV	10.66mV	27.38mV	14.71mV	Pass
110% Load	31.04mV	12.07mV	28.95mV	16.23mV	Pass
Crossload1	16.30mV	9.40mV	21.19mV	14.86mV	Pass
Crossload2	11.75mV	9.20mV	16.08mV	15.38mV	Pass
Crossload3	10.93mV	5.23mV	20.63mV	9.61mV	Pass
Crossload4	28.51mV	8.26mV	20.76mV	11.01mV	Pass

The results above are not used in the certification process

Enermax MarbleBron RGB 850



Top side



Power specifications label

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 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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