Montech Titan Gold 850W

TITAN850221100504

Lab ID MT85002126

Certification ID 252126

Test Result Report ID: 23PS2126A

Certificate Issue Date: Feb 10, 2023

Scheme: ETA-EMI PSU

115V



230V



Scheme: LAMBDA PSU

115V



230V





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	Montech
Model	Titan Gold 850W
OEM/ODM	CWT
Serial Number	TITAN850221100504
Product Specifications	
Manufacturer-Provided Information	
□□□□ (Vrms)	100-240
□□□□ (Arms)	50-60

□□□□ (Hz)	5-12
□□□□ (W)	850
Operating Temperature (Continuous Full Load) (°C)	
□□	ATX12V
□□□□	Fully Modular
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
□□	135mm Fluid Dynamic Bearing Fan (HA13525H12SF-Z)
□□□□□	✓ (selectable)
Cybenetics Testing Information	
Lab ID	MT85002126
Date of receipt	Jan 20, 2023
Testing Date	Feb 2, 2023
Report Issued Date	Feb 10, 2023
Engineer Name	-
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

□□□□□ (Non-accredited measurements)

□□□□□				
□□	□□□□	□□□□□□	Gauge	In Cable Capacitors
ATX □□ 20+4 pin (600mm)	1	1	16-18AWG	□
4+4 pin EPS 12V □□ (700mm)	1	1	16AWG	□
8 pin EPS 12V □□ (700mm)	1	1	16AWG	□
6+2pin PCIe□□ (500mm+150mm)	2	4	16-18AWG	□
12+4 pin PCIe (600mm) (600W)	1	1	16-24AWG	□
SATA□□ (500mm+150mm+150mm+150mm)	3	12	18AWG	□
4-pin Molex (500mm+150mm+150mm+150mm)	1	4	18AWG	□

AC Power Cord (1400mm) - C13 coupler	1	1	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
□□□□	□□	22	22	70.8	3	0.3
	□	120		850	15	3.6
□□□□□ (W)		850				

Parts Description

General Data	
Manufacturer (OEM)	CWT
Platform	CSZ
PCB Type	Double Sided
Primary Side	
Transient Filter	4x Y caps, 2x X caps, 2x CM chokes, 1x MOV
Inrush Protection	1x NTC Thermistor SCK-075 (7 Ohm) & Relay
Bridge Rectifier(s)	2x GBJ1506 (600V, 15A @ 100°C)
APFC MOSFETs	2x Infineon IPA60R125P6 (650V, 19A @ 100°C, Rds(on): 0.125Ohm)
APFC Boost Diode	1x Infineon IDH08G65C6 (650V, 10A @ 140°C)
Bylk Caps	1x Rubycon (420V, 470uF, 2,000h @ 105°C, MXE) 1x Rubycon (450V, 330uF, 3,000h @ 105°C, MXG)
Main Switchers	2x Infineon IPA60R190P6 (650V, 12.7A @ 100°C, Rds(on): 0.190Ohm)

APFC Controller	Champion CM6500UNX
Resonant Controller	Champion CU6901VAC
Topology	Primary side: APFC, Half-Bridge & LLC converter Secondary side: Synchronous Rectification & DC-DC converters
Secondary Side	
+12V MOSFETs	6x Infineon BSC014N04LS (40V, 125A @ 100°C, Rds(on): 1.4mOhm)
5V & 3.3V	DC-DC Converters: 2x UBIQ QN3107M6N (30V, 70A @ 100°C, Rds(on): 2.6mOhm) & 2x UBIQ QM3054M6 (30V, 61A @ 100°C, Rds(on): 4.8mOhm) PWM Controller(s): uPI-Semi uP3861P
Filtering Capacitors	Electrolytic: 2x Nippon Chemi-Con (105°C, W) 1x Nichicon (2-4,000h @ 105°C HD) 3x Nichicon (4-10,000h @ 105°C, HE) 1x Nichicon (5-6,000h @ 105°C HV) 1x Rubycon (3-6,000h @ 105°C YXG) 1x Rubycon (2-10,000h @ 105°C YXF) Polymer: 18x FPCAP, 9x Chemi-Con
Supervisor IC	Weltrend WT7502R
Fan Controller	Microchip PIC16F1503
Fan Model	Hong Hua HA13525H12SF-Z (135mm, 12V, 0.5A, Fluid Dynamic Bearing Fan)
5VSB Circuit	
Rectifier	1x D10S45L SBR (45V, 10A)
Standby PWM Controller	On-Bright OB2365T

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	✓
ATX v3.0 Compliance	✓

Performance Summary

115V

Accredited	
□□□□ (>1450 load combinations)	88.852%
Average Noise Output (>1450 Load Combinations)	24.29dBA
PF□□□ (>1450 Load Combinations)	0.988
Efficiency With 10W (≤500W) or 2% (>500W) Load	75.641%
□□□□□□	0.0143W
Non-Accredited	
12V Ripple (Full Load)	20.43mV
5V Ripple (Full Load)	10.74mV
3.3V Ripple (Full Load)	14.04mV
5VSB Ripple (Full Load)	12.75mV
12V Load Regulation	0.96%
5V Load Regulation	0.60%
3.3V Load Regulation	1.01%
5VSB Load Regulation	1.39%
Inrush Current	25.410A

230V

Accredited	
□□□□ (>1450 load combinations)	90.818%
Average Noise Output (>1450 Load Combinations)	24.13dBA
PF□□□ (>1450 Load Combinations)	0.964
Efficiency With 10W (≤500W) or 2% (>500W) Load	74.532%
□□□□□□	0.0686W
Non-Accredited	
12V Ripple (Full Load)	20.59mV
5V Ripple (Full Load)	11.16mV
3.3V Ripple (Full Load)	15.10mV

5VSB Ripple (Full Load)		11.56mV
12V Load Regulation		0.99%
5V Load Regulation		0.46%
3.3V Load Regulation		1.04%
5VSB Load Regulation		1.39%
Inrush Current		51.360A
12V Transient Response (200%)		11.45V
5V Transient Response (200%)		4.967V
3.3V Transient Response (200%)		3.177V
5VSB Transient Response (200%)		4.954V
□□□□ & PG□□		19.60ms
AC Loss to PWR_OK Hold Up Time		17.20ms
PWR_OK Inactive to DC Loss Delay		2.40ms
PSU Timings: T1 (20% / 100%)	64.0ms	63.0ms
PSU Timings: T3 (20% / 100%)	127.0ms	127.0ms
OPP (26.58°C / 36.71°C)	126.18%	126.19%

□□□□ & PG□□

Hold-Up Time (ms)	19.6
AC Loss to PWR_OK Hold Up Time (ms)	17.2
PWR_OK Inactive to DC Loss Delay (ms)	2.4

□□□□

Tables

115V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	114.87 V	114.82 V	113.85 V	114.89 V	116.15 V	PASS

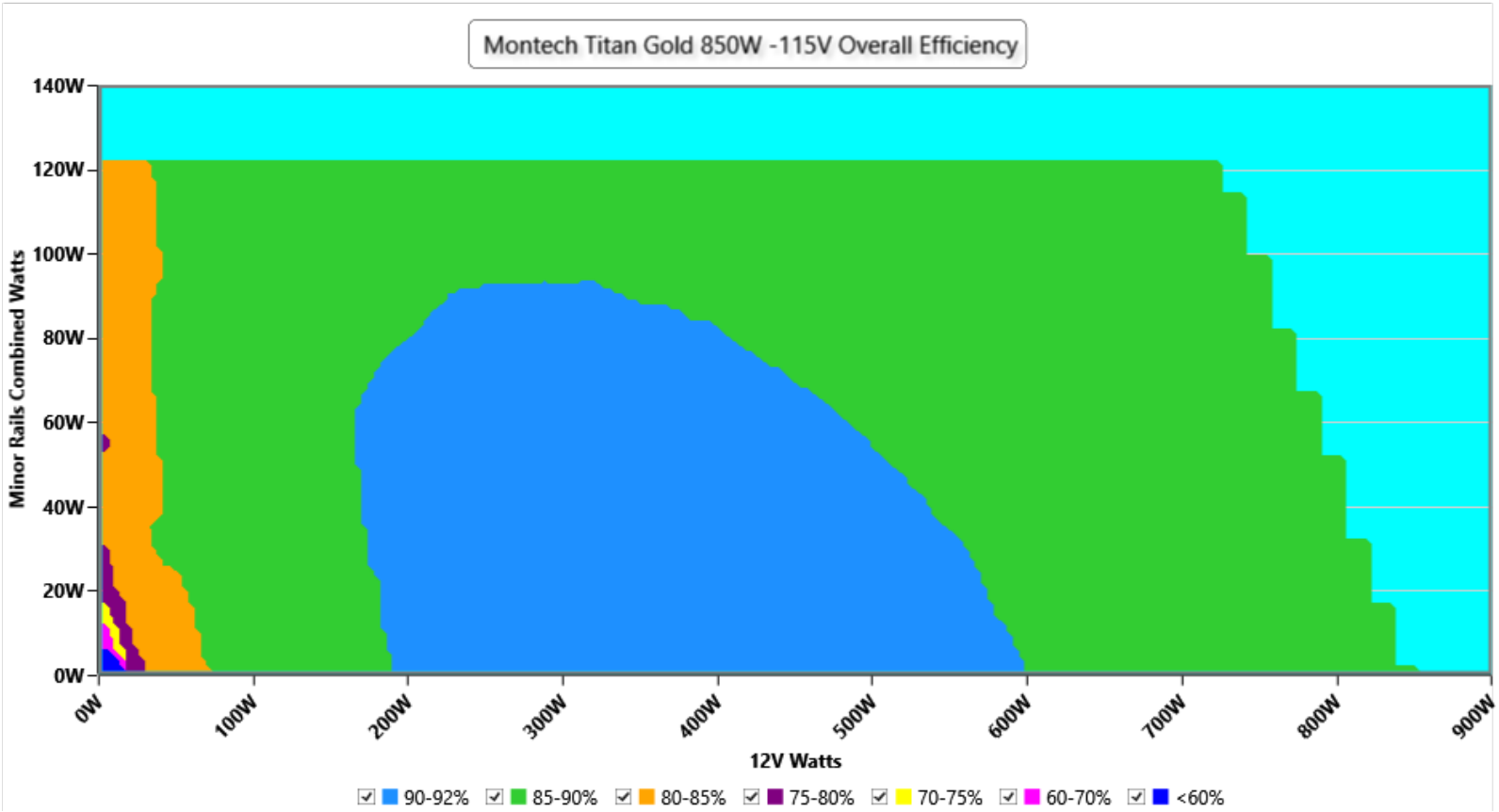
Mains Frequency:	60.00 Hz	60.00 Hz	59.40 Hz	60.02 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.416	1.416	1.340	1.418	1.490	PASS
Mains Voltage THD:	0.14 %	0.12 %	N/A	0.17 %	2.00 %	PASS
Real Power:	0.014 W	0.012 W	N/A	0.016 W	N/A	N/A
Apparent Power:	10.316 W	10.293 W	N/A	10.341 W	N/A	N/A
Power Factor:	0.001	N/A	N/A	N/A	N/A	N/A

230V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	229.90 V	229.84 V	227.70 V	229.92 V	232.30 V	PASS
Mains Frequency:	50.00 Hz	50.00 Hz	49.50 Hz	50.00 Hz	50.50 Hz	PASS
Mains Voltage CF:	1.415	1.415	1.340	1.416	1.490	PASS
Mains Voltage THD:	0.13 %	0.12 %	N/A	0.16 %	2.00 %	PASS
Real Power:	0.069 W	0.056 W	N/A	0.085 W	N/A	N/A
Apparent Power:	34.759 W	34.737 W	N/A	34.783 W	N/A	N/A
Power Factor:	0.002	N/A	N/A	N/A	N/A	N/A

□□□□□□

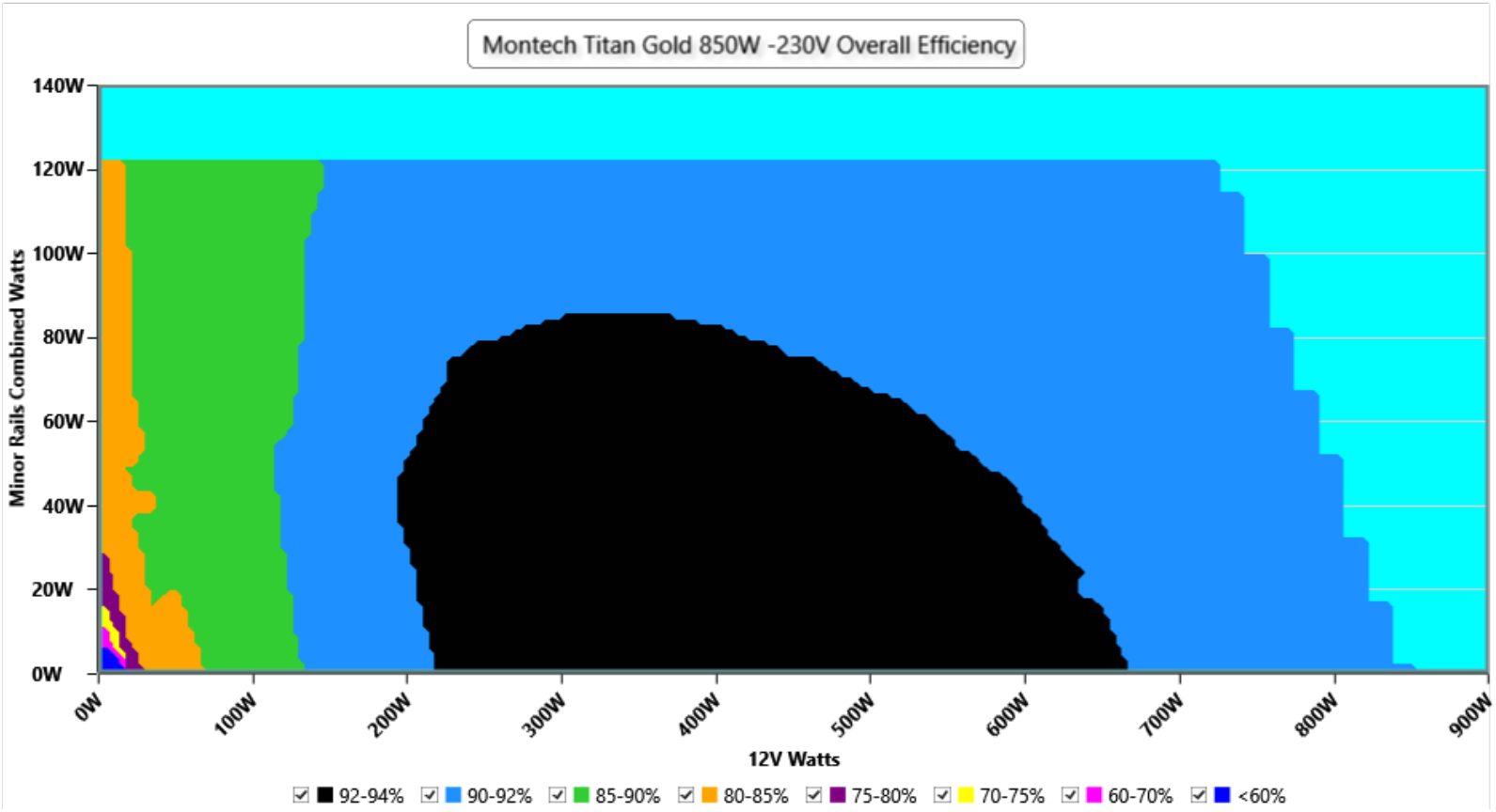
115V



□□

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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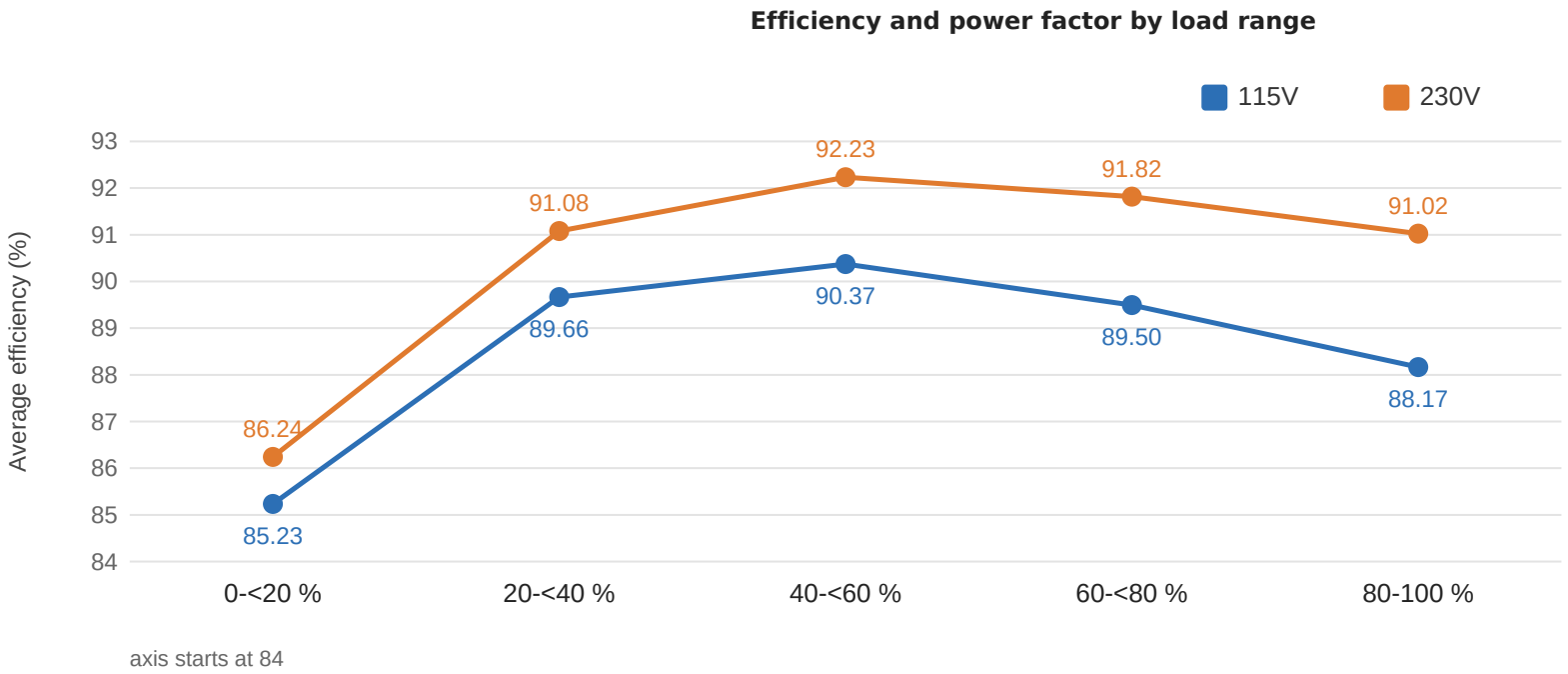
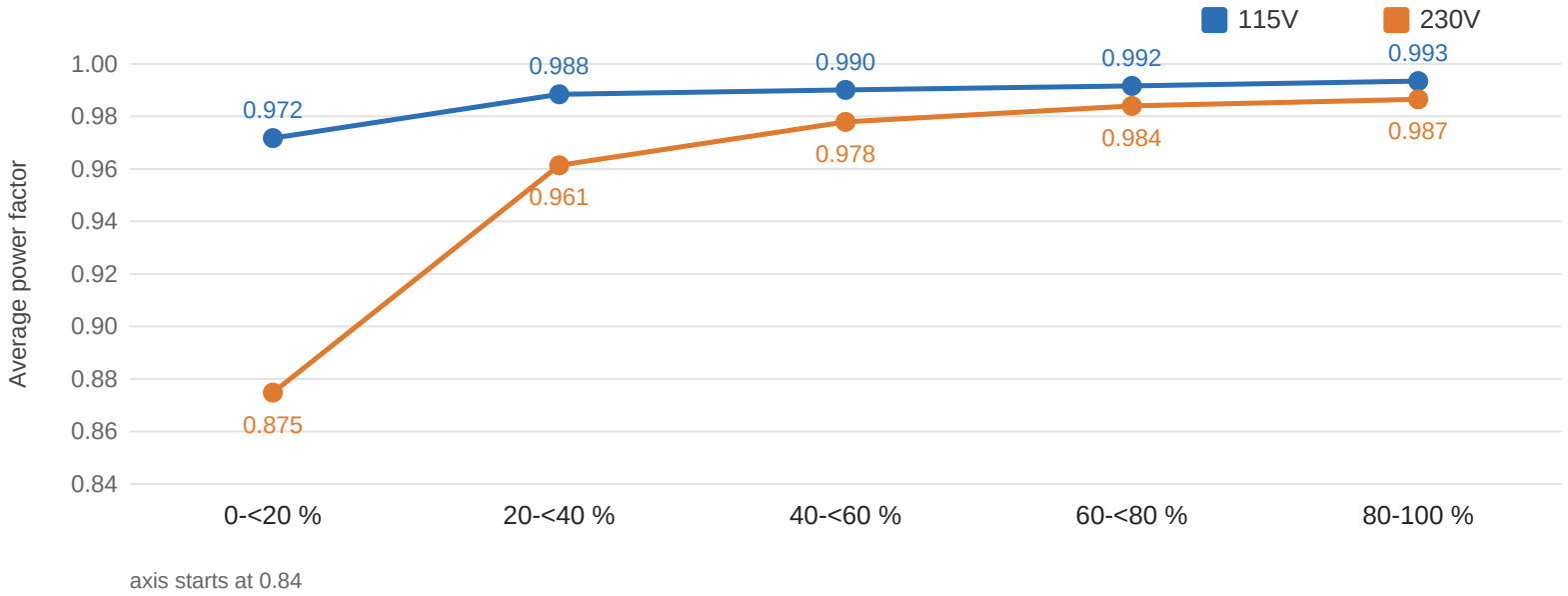


axis starts at 84



axis starts at 0.84

Load range	Points	Efficiency 115V	Efficiency 230V	PF 115V	PF 230V
0-<20 %	201 / 201	85.23%	86.24%	0.972	0.875
20-<40 %	318 / 318	89.66%	91.08%	0.988	0.961
40-<60 %	319 / 319	90.37%	92.23%	0.990	0.978
60-<80 %	319 / 318	89.50%	91.82%	0.992	0.984
80-100 %	324 / 325	88.17%	91.02%	0.993	0.987
70-100 % (High-Load)	484 / 484	88.51%	91.23%	0.993	0.986
All (published average)	1481 / 1481	88.85%	90.82%	0.988	0.964

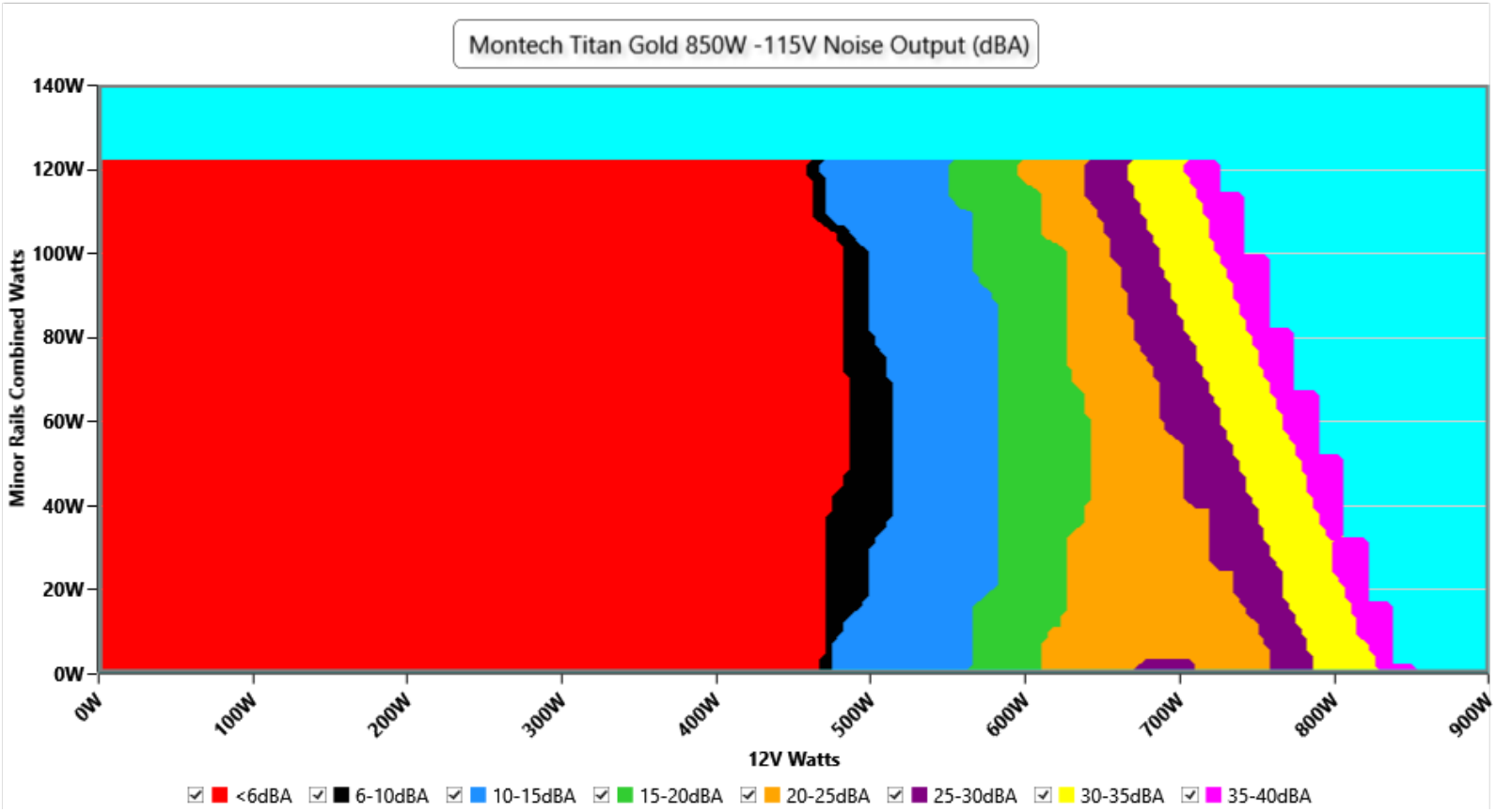
INFO

The average efficiency and power factor in five ranges of load. Calculated from the 1481 (115V) and 1481 (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.

□□□□□

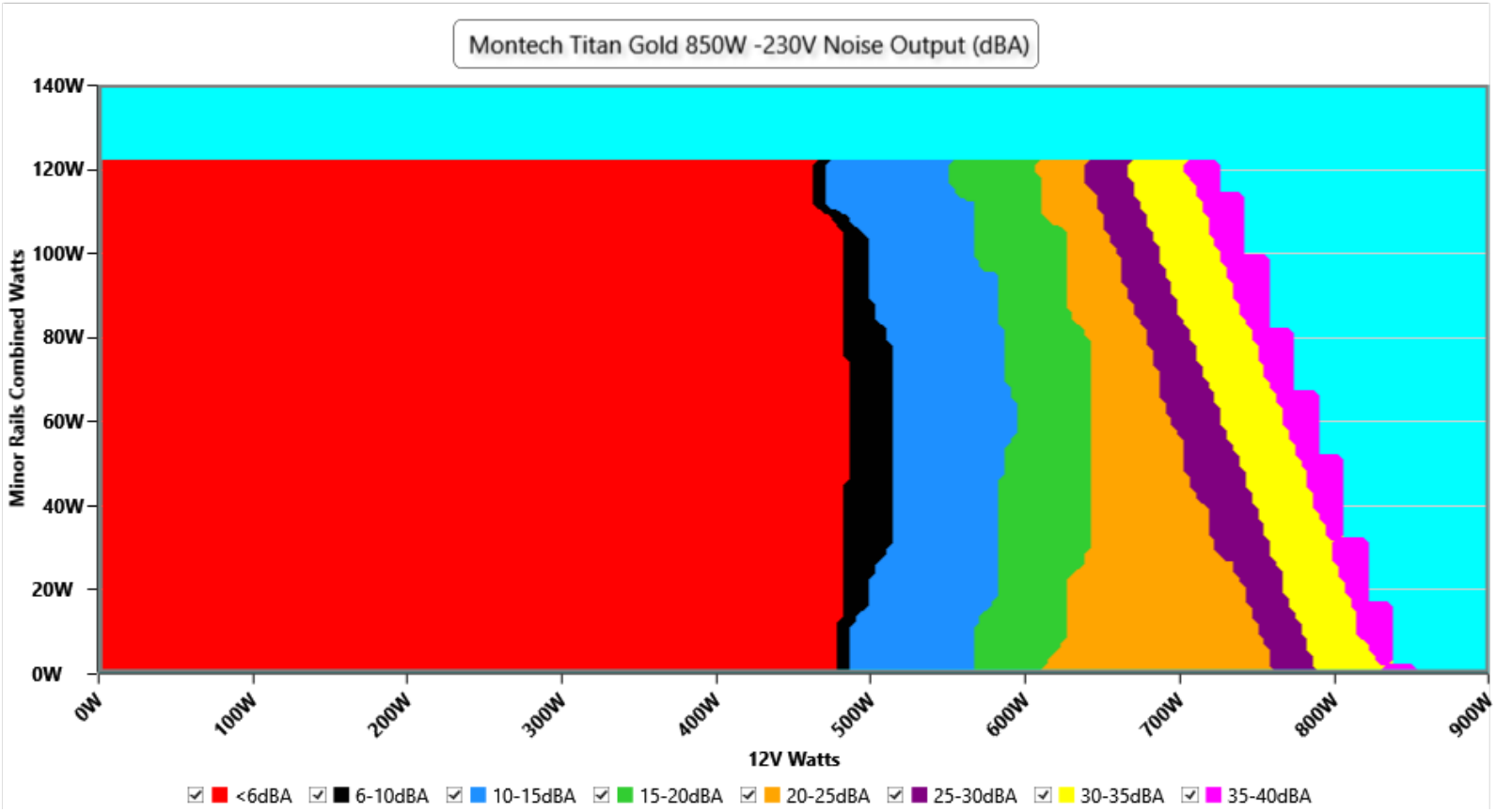
115V



□□

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

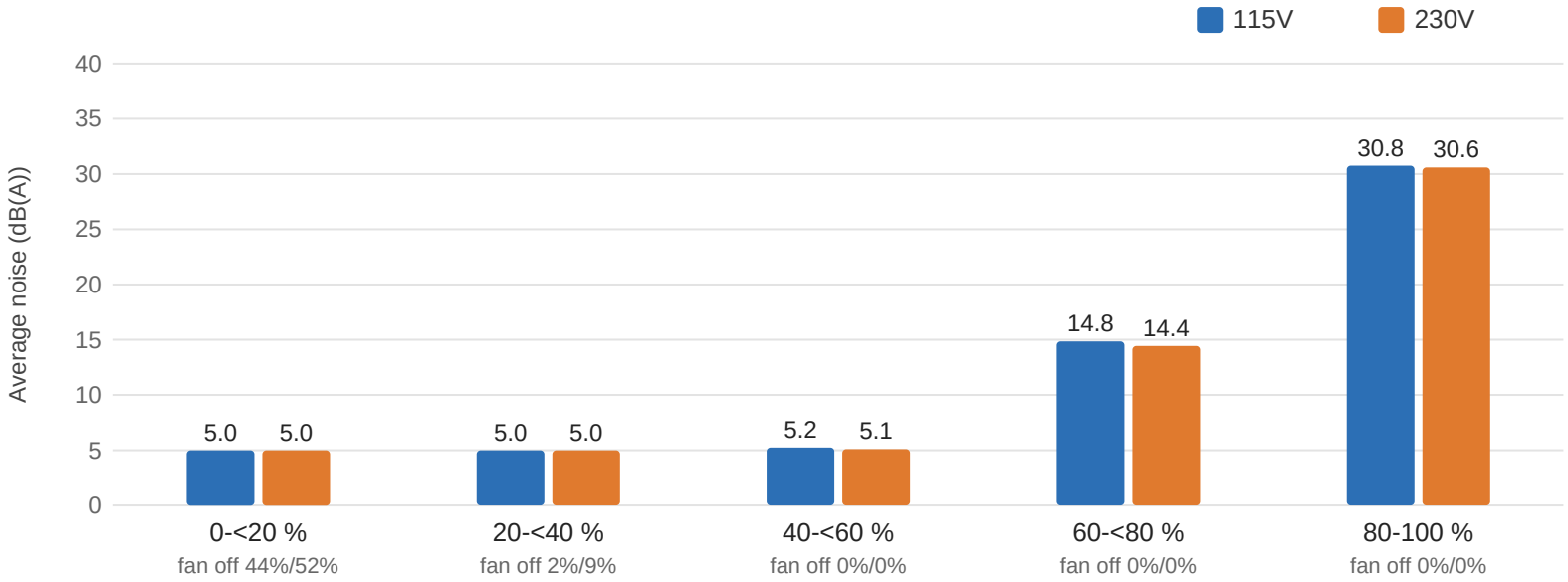
230V



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 by load range

High-Load Index (70-100 % load)
Noise **29.1 dB(A)** at 115V and **28.9 dB(A)** at 230V · loudest point 38.8 dB(A)
Efficiency 88.51% / 91.23% · power factor 0.993 / 0.986 (115V / 230V)



Load range	Noise 115V avg (loudest)	Noise 230V avg (loudest)	Fan off 115V / 230V
0-<20 %	5.0 (5.0)	5.0 (5.0)	44% / 52%
20-<40 %	5.0 (5.0)	5.0 (5.0)	2% / 9%
40-<60 %	5.2 (10.6)	5.1 (10.6)	0% / 0%
60-<80 %	14.8 (24.1)	14.4 (24.1)	0% / 0%
80-100 %	30.8 (38.8)	30.6 (37.5)	0% / 0%
70-100 % (High-Load)	29.1 (38.8)	28.9 (37.5)	0% / 0%
All (published average)	24.3 (38.8)	24.1 (37.5)	6% / 9%

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 1481 (115V) and 1481 (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%	0 RPM · <6.0 dB(A) · 44.8 °C	0 RPM · <6.0 dB(A) · 44.8 °C	fan off in both
20%	0 RPM · <6.0 dB(A) · 45.3 °C	0 RPM · <6.0 dB(A) · 45.3 °C	fan off in both
50%	445 RPM · <6.0 dB(A) · 42.4 °C	445 RPM · <6.0 dB(A) · 42.4 °C	fan off in both
100%	1585 RPM · 42.3 dB(A) · 45.5 °C	1585 RPM · 42.3 dB(A) · 45.5 °C	**+0.0 dB(A)**

230V

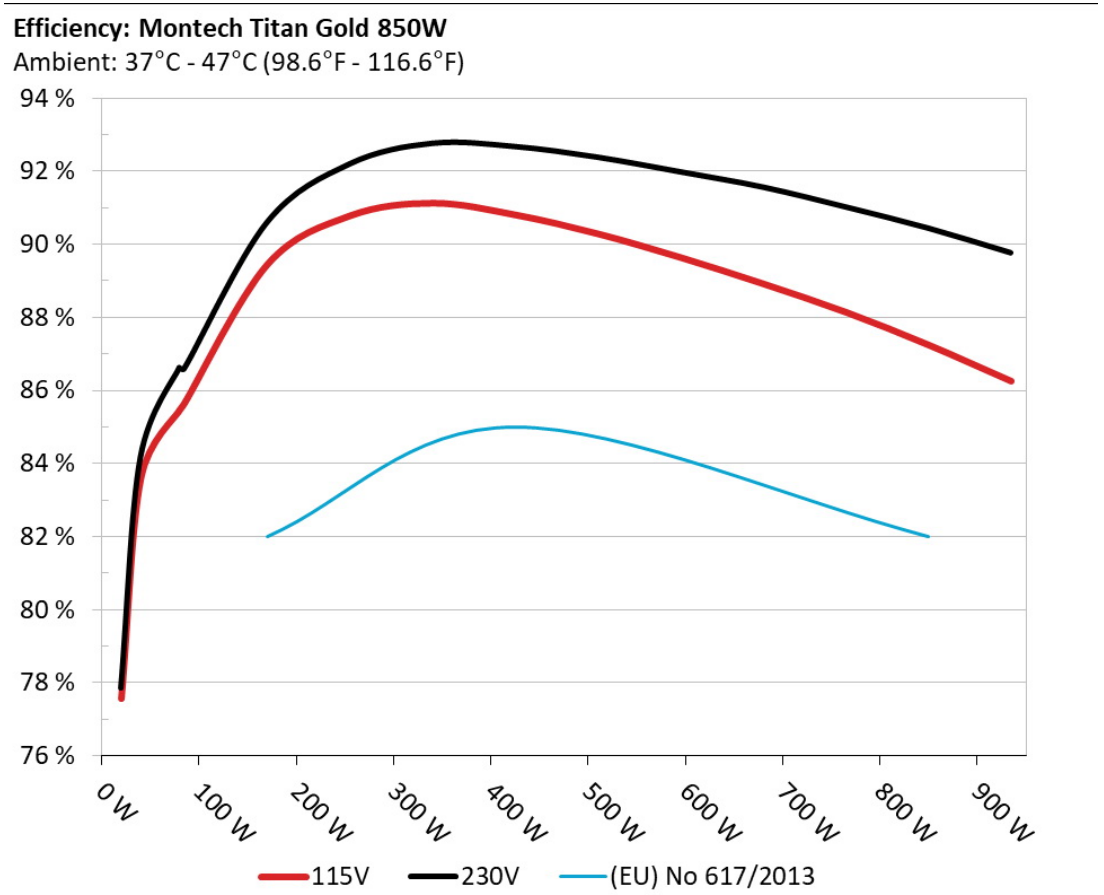
Load	Normal ambient fan · noise · intake	High ambient fan · noise · intake	Noise change
10%	0 RPM · <6.0 dB(A) · 44.5 °C	0 RPM · <6.0 dB(A) · 44.5 °C	fan off in both
20%	0 RPM · <6.0 dB(A) · 45.3 °C	0 RPM · <6.0 dB(A) · 45.3 °C	fan off in both
50%	407 RPM · <6.0 dB(A) · 42.3 °C	407 RPM · <6.0 dB(A) · 42.3 °C	fan off in both
100%	1515 RPM · 41.2 dB(A) · 45.8 °C	1515 RPM · 41.2 dB(A) · 45.8 °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.

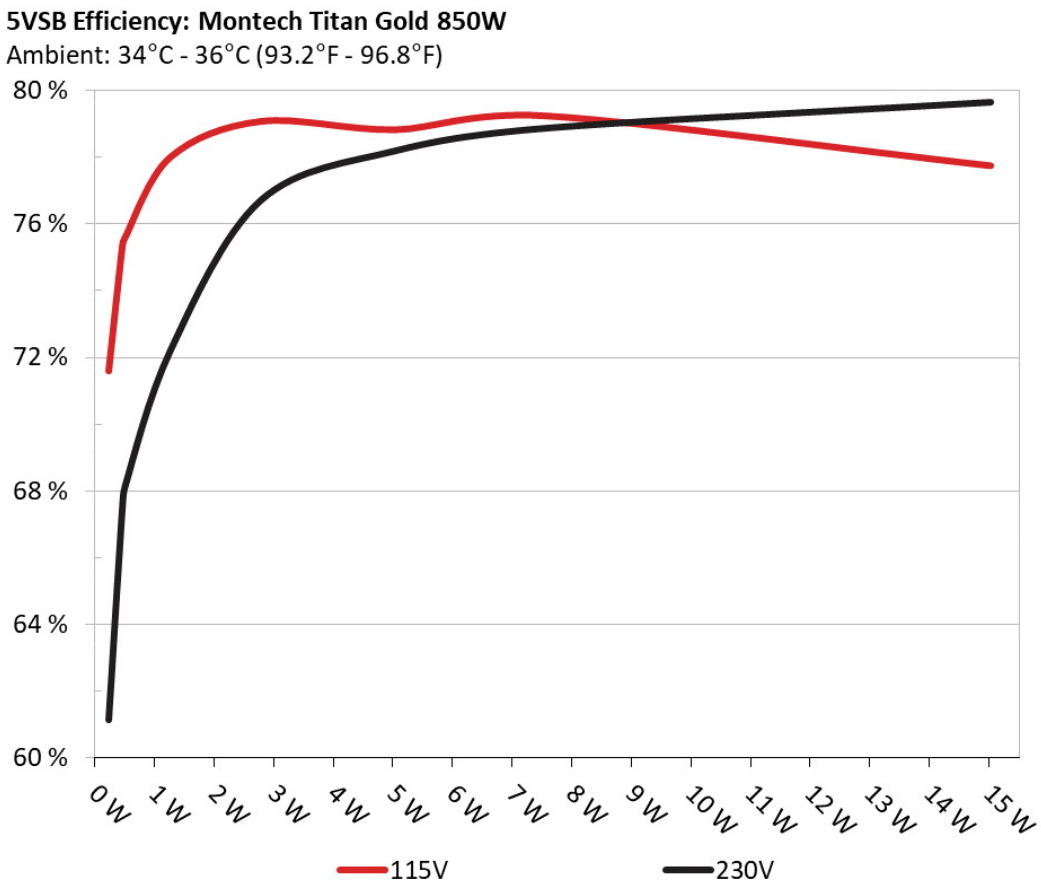
Informational. Not part of the ETA or LAMBDA rating.

Indicative Performance



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□□□□



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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	0.228W	71.607%	0.031
	5.064V	0.318W		114.88V
2	0.09A	0.456W	75.335%	0.058
	5.063V	0.605W		114.88V
3	0.55A	2.78W	79.072%	0.268
	5.054V	3.516W		114.87V
4	1A	5.046W	78.821%	0.376
	5.046V	6.402W		114.87V
5	1.5A	7.556W	79.238%	0.428
	5.037V	9.536W		114.87V
6	3A	15.03W	77.746%	0.504
	5.01V	19.331W		114.86V

230V

□□ #	5VSB	DC/AC (□)	□□	PF/AC □□
1	0.045A	0.228W	61.147%	0.011
	5.064V	0.373W		229.9V
2	0.09A	0.456W	67.475%	0.019
	5.063V	0.676W		229.9V
3	0.55A	2.78W	76.702%	0.1
	5.055V	3.625W		229.89V
4	1A	5.046W	78.188%	0.167
	5.046V	6.452W		229.89V
5	1.5A	7.556W	78.86%	0.228
	5.038V	9.582W		229.89V
6	3A	15.03W	79.638%	0.331
	5.01V	18.873W		229.89V

Supplementary Tests (For Reference)

10-110%□□□□

115V

□□	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
10%	5.194A	1.985A	2.011A	0.991A	84.995	85.65%	0	<6.0	44.77°C	0.974
	12.204V	5.036V	3.282V	5.045V	99.235				40.53°C	114.85V
20%	11.390A	2.979A	3.019A	1.191A	169.913	89.436%	0	<6.0	45.31°C	0.985
	12.206V	5.035V	3.279V	5.037V	189.983				40.66°C	114.81V
30%	17.947A	3.476A	3.524A	1.371A	254.905	90.771%	0	<6.0	46.22°C	0.989
	12.195V	5.035V	3.277V	5.107V	280.821				41.07°C	114.79V
40%	24.545A	3.972A	4.03A	1.567A	339.982	91.118%	0	<6.0	47.36°C	0.991
	12.172V	5.034V	3.275V	5.107V	373.122				41.79°C	114.76V
50%	30.786A	4.967A	5.041A	1.765A	424.709	90.797%	445	<6.0	42.38°C	0.99
	12.155V	5.033V	3.273V	5.099V	467.76				48.28°C	114.73V
60%	37.027A	5.961A	6.054A	1.964A	509.243	90.282%	567	11.1	42.82°C	0.991
	12.138V	5.032V	3.27V	5.092V	564.053				49.25°C	114.71V
70%	43.345A	6.956A	7.069A	2.163A	594.552	89.631%	766	20.4	43.15°C	0.992
	12.122V	5.032V	3.268V	5.084V	663.335				50.17°C	114.67V
80%	49.688A	7.952A	8.083A	2.265A	679.434	88.912%	944	27.3	43.71°C	0.993
	12.106V	5.03V	3.266V	5.077V	764.161				51.76°C	114.65V
90%	56.427A	8.451A	8.58A	2.366A	764.873	88.131%	1231	35.6	44.12°C	0.994
	12.093V	5.029V	3.263V	5.071V	867.879				53.17°C	114.61V
100%	62.866A	8.95A	9.109A	2.967A	849.706	87.235%	1585	42.3	45.53°C	0.994
	12.089V	5.028V	3.26V	5.055V	974.04				55.57°C	114.58V
110%	69.179A	9.949A	10.221A	2.97A	934.305	86.248%	1819	43.4	46.83°C	0.995
	12.085V	5.026V	3.257V	5.05V	1083.279				57.76°C	114.55V
CL1	1.966A	14.351A	14.578A	0.496A	146.415	84.346%	447	<6.0	42.5°C	0.984
	12.214V	5.032V	3.272V	5.044V	173.589				47.97°C	114.82V

CL2	1.964A	21.207A	1.006A	0.495A	136.421	83.178%	446	<6.0	42.4°C	0.983
	12.223V	5.028V	3.279V	5.05V	164.011				49.43°C	114.83V
CL3	1.964A	0.992A	20.712A	0.495A	99.095	80.595%	445	<6.0	42.48°C	0.979
	12.221V	5.043V	3.264V	5.046V	122.957				51.56°C	114.84V
CL4	69.398A	0.993A	1.01A	0.489A	849.814	88.008%	1314	37.9	44.46°C	0.994
	12.090V	5.036V	3.266V	5.107V	965.617				55.37°C	114.59V

The results above are not used in the certification process

230V

□□	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
10%	5.196A	1.983A	2.011A	0.991A	84.988	86.589%	0	<6.0	44.52°C	0.868
	12.200V	5.041V	3.281V	5.046V	98.154				40.23°C	229.89V
20%	11.394A	2.976A	3.02A	1.191A	169.896	90.587%	0	<6.0	45.34°C	0.941
	12.200V	5.04V	3.278V	5.037V	187.551				40.79°C	229.88V
30%	17.951A	3.472A	3.525A	1.374A	254.893	92.193%	0	<6.0	46.22°C	0.963
	12.191V	5.039V	3.276V	5.093V	276.477				41.13°C	229.86V
40%	24.557A	3.969A	4.032A	1.566A	339.973	92.76%	0	<6.0	47.25°C	0.973
	12.166V	5.039V	3.274V	5.107V	366.507				41.8°C	229.85V
50%	30.800A	4.962A	5.044A	1.765A	424.734	92.67%	407	<6.0	42.27°C	0.979
	12.151V	5.038V	3.271V	5.099V	458.33				48.32°C	229.83V
60%	37.039A	5.955A	6.057A	1.964A	509.279	92.38%	459	<6.0	42.46°C	0.982
	12.135V	5.038V	3.269V	5.092V	551.284				49.18°C	229.81V
70%	43.358A	6.949A	7.072A	2.164A	594.595	91.978%	702	17.5	43.23°C	0.985
	12.120V	5.037V	3.266V	5.084V	646.454				50.29°C	229.8V
80%	49.698A	7.943A	8.087A	2.265A	679.442	91.561%	884	25.2	43.71°C	0.986
	12.104V	5.036V	3.264V	5.078V	742.068				51.74°C	229.79V
90%	56.433A	8.44A	8.584A	2.366A	764.855	91.015%	1225	35.5	44.21°C	0.987
	12.092V	5.035V	3.261V	5.071V	840.366				53.25°C	229.77V
100%	62.868A	8.939A	9.112A	2.967A	849.667	90.435%	1515	41.2	45.8°C	0.988
	12.088V	5.034V	3.259V	5.056V	939.533				55.85°C	229.75V

110%	69.175A	9.935A	10.226A	2.97A	934.245	89.763%	1858	47.0	46.54°C	0.989
	12.085V	5.032V	3.256V	5.051V	1040.788				57.45°C	229.73V
CL1	1.965A	14.332A	14.585A	0.495A	146.411	85.543%	446	<6.0	41.19°C	0.936
	12.215V	5.038V	3.27V	5.045V	171.154				46.66°C	229.87V
CL2	1.964A	21.178A	1.006A	0.495A	136.41	84.438%	444	<6.0	41.22°C	0.93
	12.220V	5.035V	3.278V	5.051V	161.55				48.29°C	229.87V
CL3	1.964A	0.99A	20.717A	0.495A	99.092	81.458%	443	<6.0	40.55°C	0.9
	12.216V	5.05V	3.263V	5.046V	121.649				49.65°C	229.88V
CL4	69.411A	0.991A	1.011A	0.489A	849.799	91.135%	1311	37.8	44.73°C	0.988
	12.088V	5.043V	3.265V	5.107V	932.465				55.68°C	229.75V

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 □□
20W	1.219A	0.494A	0.501A	0.198A	19.987	77.561%	0	<6.0	39.64°C	0.867
	12.174V	5.058V	3.293V	5.063V	25.771				36.53°C	114.87V
40W	2.684A	0.692A	0.701A	0.296A	39.989	83.594%	0	<6.0	40.99°C	0.937
	12.177V	5.058V	3.293V	5.061V	47.836				37.7°C	114.87V
60W	4.148A	0.891A	0.903A	0.395A	59.989	85.458%	0	<6.0	41.99°C	0.962
	12.180V	5.047V	3.287V	5.058V	70.197				38.36°C	114.86V
80W	5.596A	1.091A	1.105A	0.495A	79.923	86.097%	0	<6.0	43.89°C	0.971
	12.205V	5.041V	3.284V	5.055V	92.83				39.92°C	114.85V

The results above are not used in the certification process

230V

□□	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
20W	1.218A	0.494A	0.501A	0.198A	19.986	77.845%	0	<6.0	39.65°C	0.522
	12.176V	5.057V	3.293V	5.064V	25.673				36.56°C	229.89V
40W	2.684A	0.692A	0.701A	0.296A	39.987	84.154%	0	<6.0	40.72°C	0.704
	12.178V	5.057V	3.293V	5.061V	47.517				37.43°C	229.88V
60W	4.148A	0.891A	0.903A	0.395A	59.986	86.616%	0	<6.0	42.31°C	0.801
	12.181V	5.046V	3.287V	5.058V	69.256				38.75°C	229.88V
80W	5.594A	1.091A	1.105A	0.494A	79.912	86.718%	0	<6.0	43.05°C	0.858
	12.206V	5.04V	3.284V	5.056V	92.153				39.25°C	229.88V

The results above are not used in the certification process

□□□□

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	8.54mV	8.37mV	9.49mV	6.98mV	Pass
20% Load	9.77mV	8.98mV	9.39mV	7.34mV	Pass
30% Load	21.43mV	8.62mV	10.16mV	7.44mV	Pass
40% Load	13.35mV	8.93mV	10.67mV	9.24mV	Pass
50% Load	13.04mV	11.70mV	10.11mV	8.26mV	Pass
60% Load	12.94mV	11.60mV	10.42mV	8.31mV	Pass
70% Load	13.30mV	16.37mV	19.03mV	9.49mV	Pass
80% Load	13.14mV	23.04mV	13.44mV	11.85mV	Pass
90% Load	12.84mV	12.27mV	13.44mV	10.78mV	Pass
100% Load	20.43mV	10.74mV	14.04mV	12.75mV	Pass
110% Load	20.92mV	11.16mV	14.45mV	12.42mV	Pass
Crossload1	11.70mV	10.90mV	14.17mV	8.25mV	Pass
Crossload2	15.50mV	18.32mV	9.96mV	8.31mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
Crossload3	12.02mV	11.04mV	14.73mV	7.85mV	Pass
Crossload4	20.48mV	10.28mV	11.81mV	8.95mV	Pass

The results above are not used in the certification process

230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	9.41mV	9.34mV	9.03mV	7.39mV	Pass
20% Load	9.67mV	9.44mV	9.28mV	7.23mV	Pass
30% Load	24.95mV	8.78mV	10.11mV	7.70mV	Pass
40% Load	14.84mV	8.62mV	10.62mV	8.47mV	Pass
50% Load	12.68mV	8.88mV	10.62mV	7.70mV	Pass
60% Load	13.61mV	8.98mV	10.52mV	8.06mV	Pass
70% Load	11.97mV	15.14mV	18.62mV	9.03mV	Pass
80% Load	12.94mV	9.39mV	12.62mV	9.96mV	Pass
90% Load	13.35mV	10.16mV	12.72mV	10.06mV	Pass
100% Load	20.59mV	11.16mV	15.10mV	11.56mV	Pass
110% Load	21.15mV	10.77mV	14.71mV	12.02mV	Pass
Crossload1	10.87mV	10.40mV	13.18mV	7.87mV	Pass
Crossload2	15.45mV	17.29mV	9.60mV	7.90mV	Pass
Crossload3	11.40mV	9.85mV	16.52mV	7.34mV	Pass
Crossload4	19.19mV	9.72mV	11.60mV	8.65mV	Pass

The results above are not used in the certification process





Montech Titan Gold 850W

Top side

Power specifications label

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