ABKO COREMAX 500W BRONZE

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Lab ID AB50003398

Certification ID 263398

Test Result Report ID: 26PS3398A

Certificate Issue Date: Sep 3, 2026

115V

Scheme: ETA-EMI PSU



115V



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	ABKO
Model	COREMAX 500W BRONZE
OEM/ODM	PREE
Serial Number	-
Product Specifications	
Manufacturer-Provided Information	
□□□□ (Vrms)	115-230
□□□□ (Arms)	10
□□□□ (Hz)	50-60

□□□□ (W)	500
Operating Temperature (Continuous Full Load) (°C)	0 - 40
□□	ATX12V
□□□□	Fixed cables
Warranty	No Info
Cybenetics Measurements	
Dimensions (W x H x D)	150 x 85 x 140mm
Weight	1.63 kg (3.59 lb)
□□	120mm Sleeve Bearing Fan (W12025HZ12SEMA)
□□□□□	✗
Cybenetics Testing Information	
Lab ID	AB50003398
Date of receipt	Jul 28, 2026
Testing Date	Aug 27, 2026
Report Issued Date	Sep 3, 2026
Engineer Name	Efstathios Papadopoulos
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

□□□□ (Non-accredited measurements)

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□□	□□□□	□□□□□□	**Gauge**	Cable Type
ATX □□ 20+4 pin (520mm)	1	1	18AWG	Tinned Copper
4+4 pin EPS 12V □□ (630mm+150mm)	1	2	18AWG	Tinned Copper
6+2pin PCIe□□ (600mm)	1	1	18AWG	Tinned Copper
6+2pin PCIe□□ (600mm+150mm)	1	2	18AWG	Tinned Copper
SATA□□ (450mm+150mm+150mm+150mm)	1	4	18AWG	Tinned Copper
SATA□□ (450mm+150mm) / 4-pin Molex (+150mm)	1	2/1	18AWG	Tinned Copper
4-pin Molex (450mm+150mm) / SATA□□ (+150mm)	1	2/1	18AWG	Tinned Copper

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
□□□□	□□	20	20	41.7	2.5	0.3
	□	125		500	12.5	3.6
□□□□□ (W)		500				

Parts Description

General Data	
Manufacturer (OEM)	PREE
PCB Type	Double-Sided
Primary Side	
Transient Filter	4x Y caps, 2x X caps, 2x CM chokes
Inrush Protection	NTC Thermistor 2.5D-9 (2.5 Ohm @ 25°C)
Bridge Rectifier	1x Diodes GBU1510 (1000V, 8A @ 100°C)
APFC MOSFETs	2x Maple Semiconductor SLP18N50S (500V, 11.7A @ 100°C, Rds(on): 0.330Ohm)
APFC Boost Diode	Microsemi UF860 (600V, 8A @ 25°C)
Bulk Cap(s)	Toshin Kogyo (420V, 270uF, 2000h @ 105°C, LA)
Main Switchers	2x Maple Semiconductor SLP18N50S (500V, 11.7A @ 100°C, Rds(on): 0.330Ohm)
PFC/PWM Combo Controller	Champion CM6805BG
Topology	Primary side: APFC, Double Forward Secondary side: [12V] Passive Rectification & [Minor Rails] DC-DC converters

Secondary Side	
+12V MOSFETs	5x HS 6NX014
5V & 3.3V	DC-DC Converters: 4x AP70N03NF (30V, 51A @ 100°C, Rds(on): 5.5mOhm) PWM Controller(s): ANPEC APW7159C
Filtering Capacitors	 Electrolytic: 12x 12Kuang Jin (2-3,000 @ 105°C, GR) Polymer: 2x
Supervisor IC	EST 7610FS
Fan Model	WAM W12025HZ12SEMA (120mm, 12V, 0.20A, Rifle Bearing Fan)
5VSB Circuit	
Rectifier	HS 6NX014
Standby PWM Controller	EST 2816H

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	✓
Conducted Emissions EN 55032 & CISPR 32	Passed

Performance Summary 115V

Accredited	
□□□□ (>1450 load combinations)	83.652%
Average Noise Output (>1450 Load Combinations)	42.77dBA
PF□□□ (>1450 Load Combinations)	0.977
Efficiency With 10W (≤500W) or 2% (>500W) Load	51.944%
□□□□□□	0.0702W
Non-Accredited	

12V Ripple (Full Load)	65.44mV
5V Ripple (Full Load)	25.35mV
3.3V Ripple (Full Load)	22.63mV
5VSB Ripple (Full Load)	19.61mV
12V Load Regulation	0.43%
5V Load Regulation	1.69%
3.3V Load Regulation	2.24%
5VSB Load Regulation	2.54%
Inrush Current	59.630A

□□□□ & PG□□

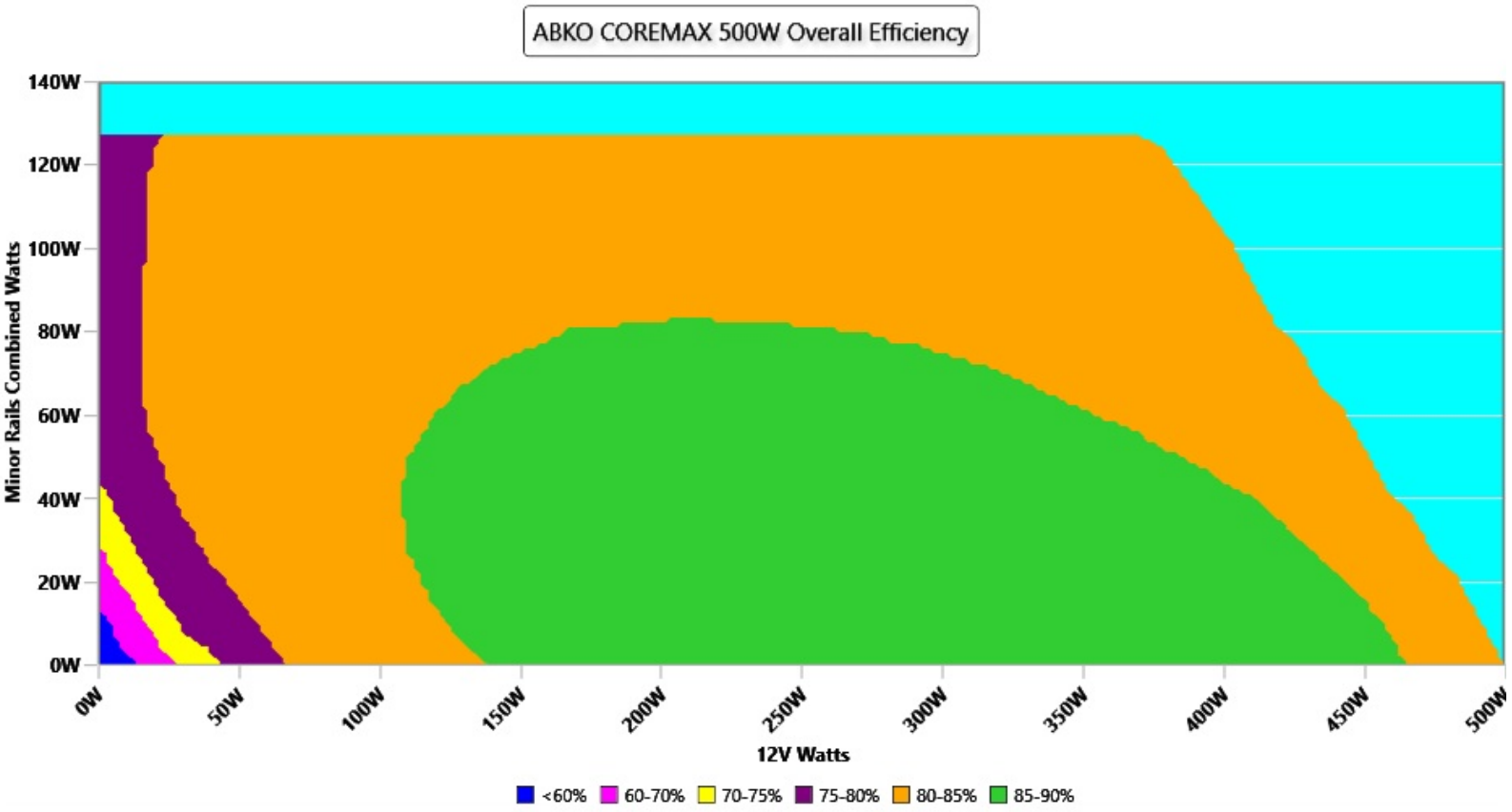
Hold-Up Time (ms)	13.7
AC Loss to PWR_OK Hold Up Time (ms)	11.0
PWR_OK Inactive to DC Loss Delay (ms)	2.7

□□□□

Tables 115V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	115.00 V	114.96 V	113.85 V	115.02 V	116.15 V	PASS
Mains Frequency:	60.00 Hz	59.94 Hz	59.40 Hz	60.01 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.416	1.416	1.340	1.418	1.490	PASS
Mains Voltage THD:	0.15 %	0.07 %	N/A	0.22 %	2.00 %	PASS
Real Power:	0.070 W	0.048 W	N/A	0.091 W	N/A	N/A
Apparent Power:	5.895 W	5.710 W	N/A	5.959 W	N/A	N/A
Power Factor:	0.013	N/A	N/A	N/A	N/A	N/A

115V



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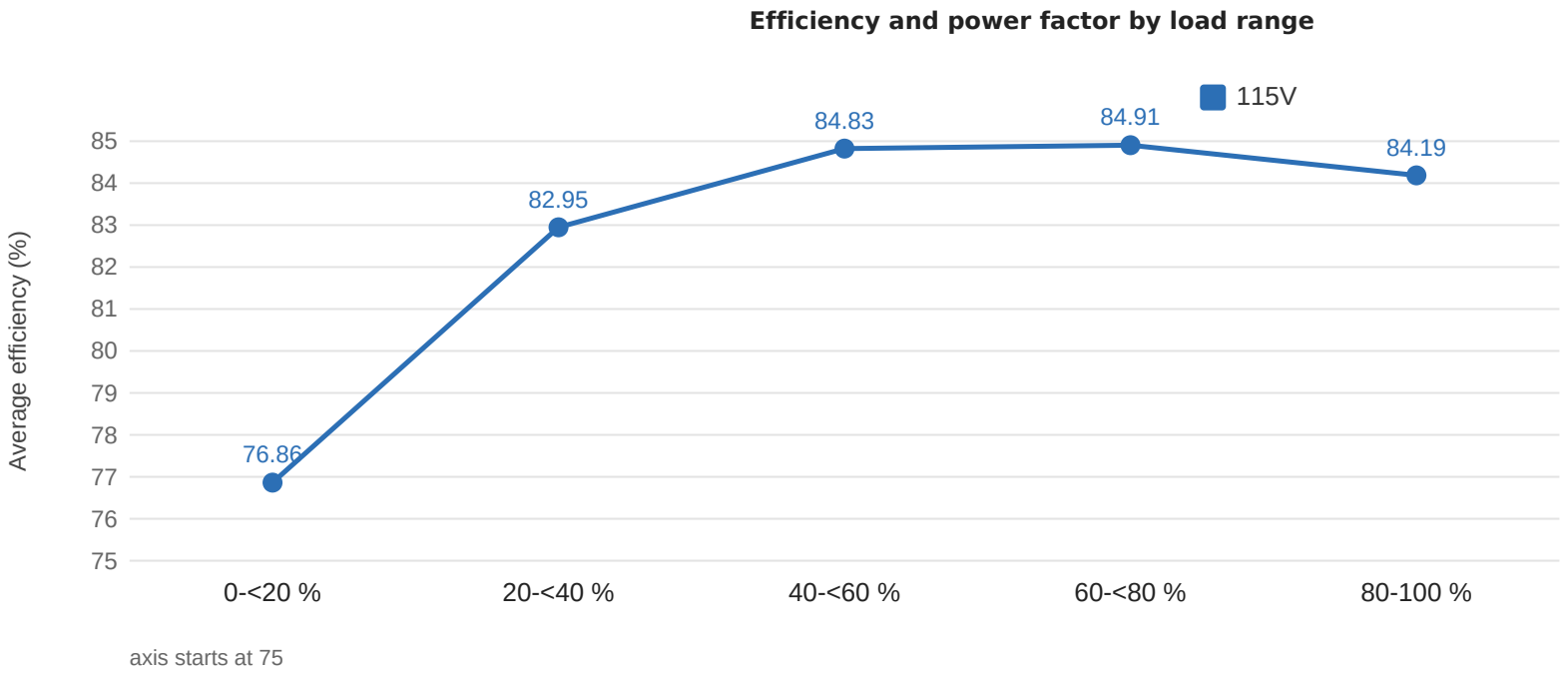
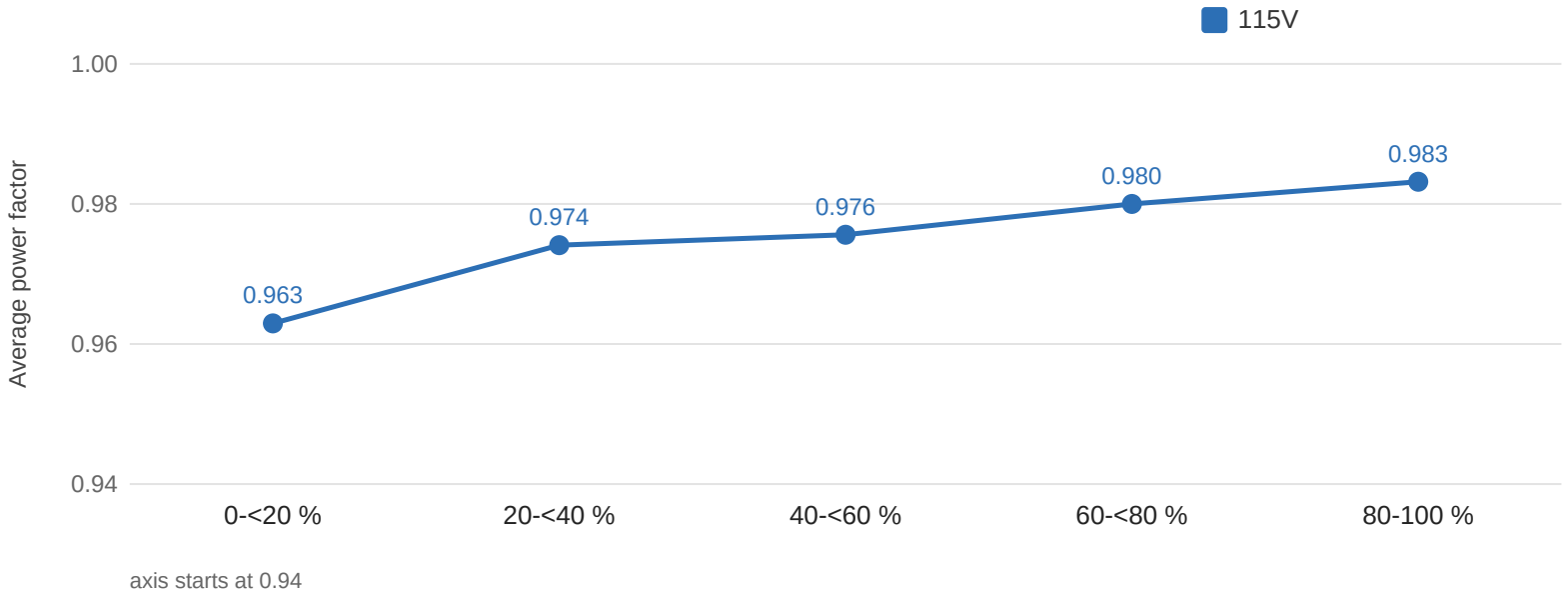
This graph depicts the PSU`s efficiency throughout its entire operational range. For the generation of the efficiency and noise graphs we set our loaders to auto mode through our custom-made software before trying thousands of possible load combinations



axis starts at 75



axis starts at 0.94

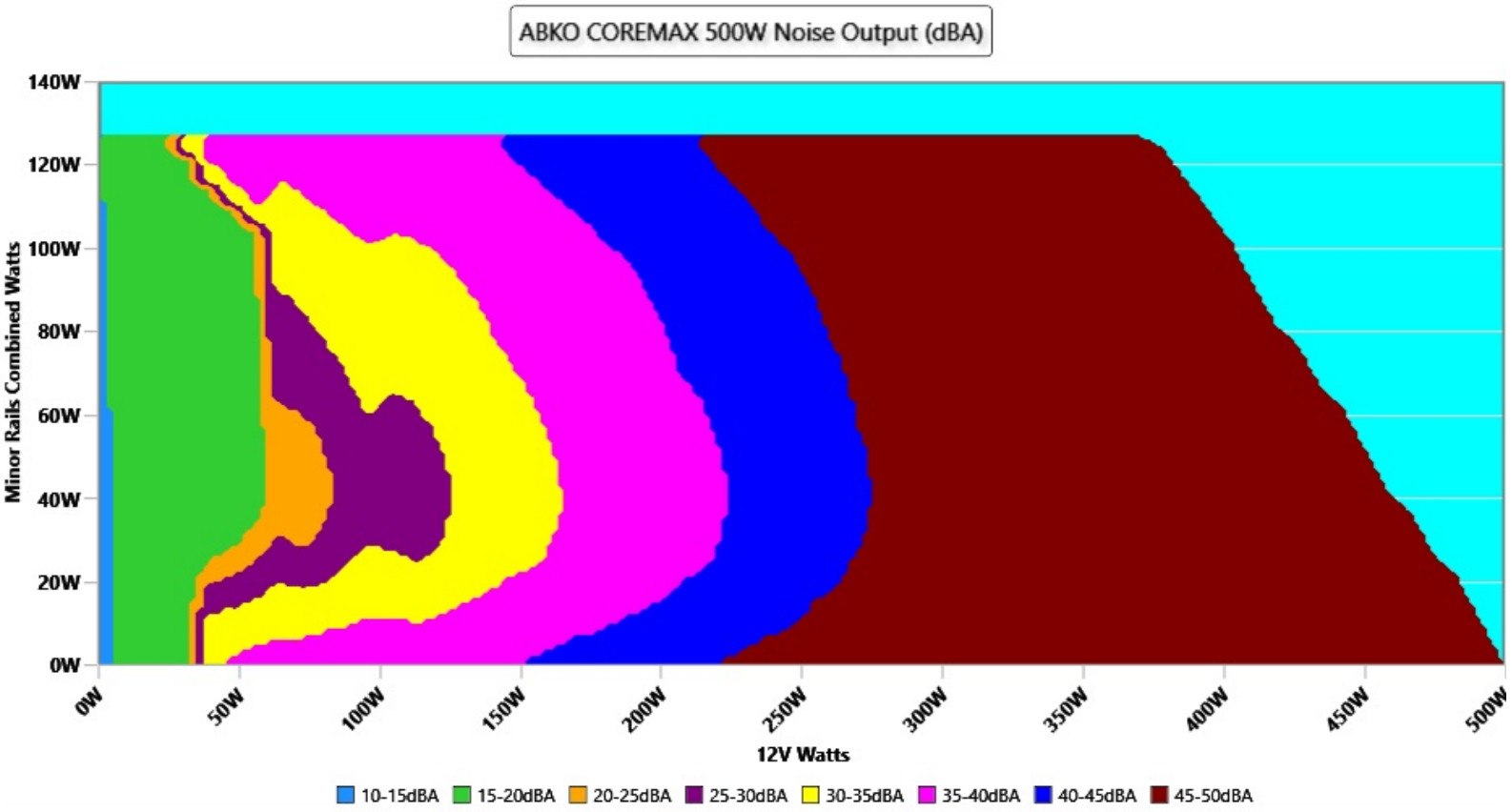
Load range	Points	Efficiency 115V	PF 115V
0-<20 %	132	76.86%	0.963
20-<40 %	370	82.95%	0.974
40-<60 %	389	84.83%	0.976
60-<80 %	386	84.91%	0.980
80-100 %	403	84.19%	0.983
70-100 % (High-Load)	596	84.39%	0.982
All (published average)	1680	83.65%	0.977

INFO

The average efficiency and power factor in five ranges of load. Calculated from the 1680 (115V) 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 500 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



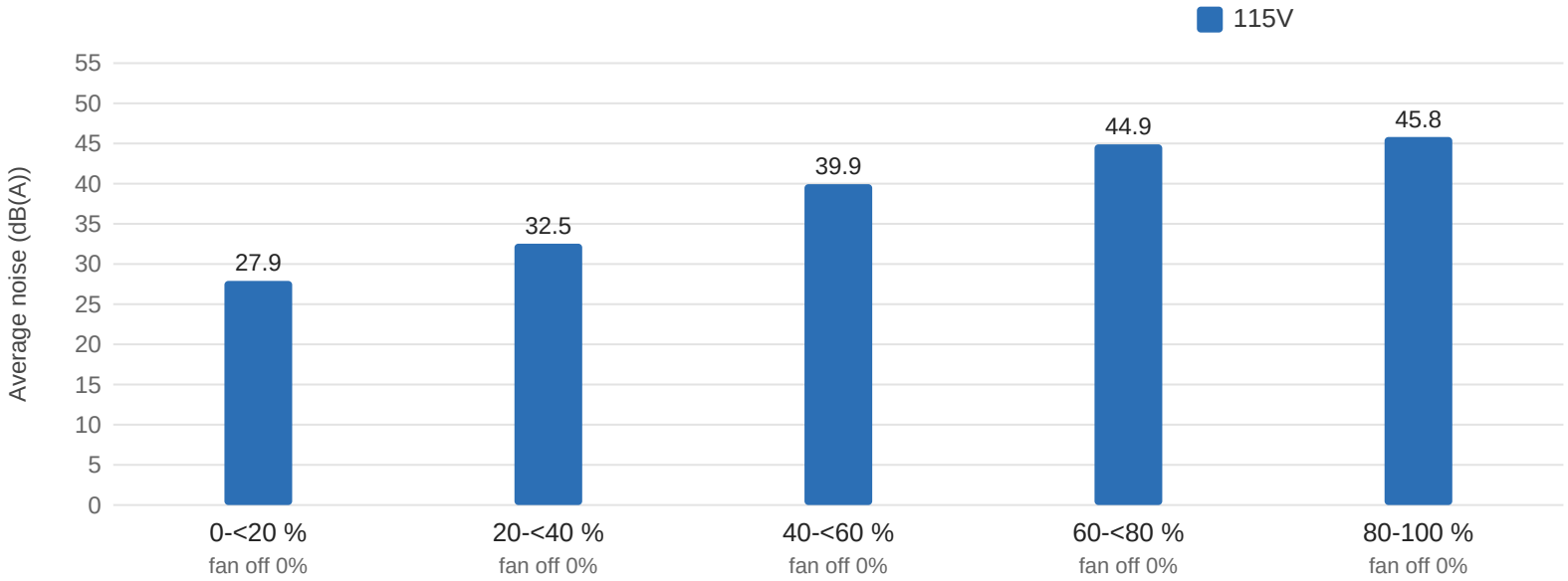
□□

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

Noise by load range

High-Load Index (70-100 % load)
Noise **45.8 dB(A)** at 115V · loudest point 45.8 dB(A)

Efficiency 84.39% · power factor 0.982 (115V)



Load range	Noise 115V avg (loudest)	Fan off 115V
0-<20 %	27.9 (37.8)	0%
20-<40 %	32.5 (42.2)	0%
40-<60 %	39.9 (45.8)	0%
60-<80 %	44.9 (45.8)	0%
80-100 %	45.8 (45.8)	0%
70-100 % (High-Load)	45.8 (45.8)	0%
All (published average)	42.8 (45.8)	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 1680 (115V) 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 500 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

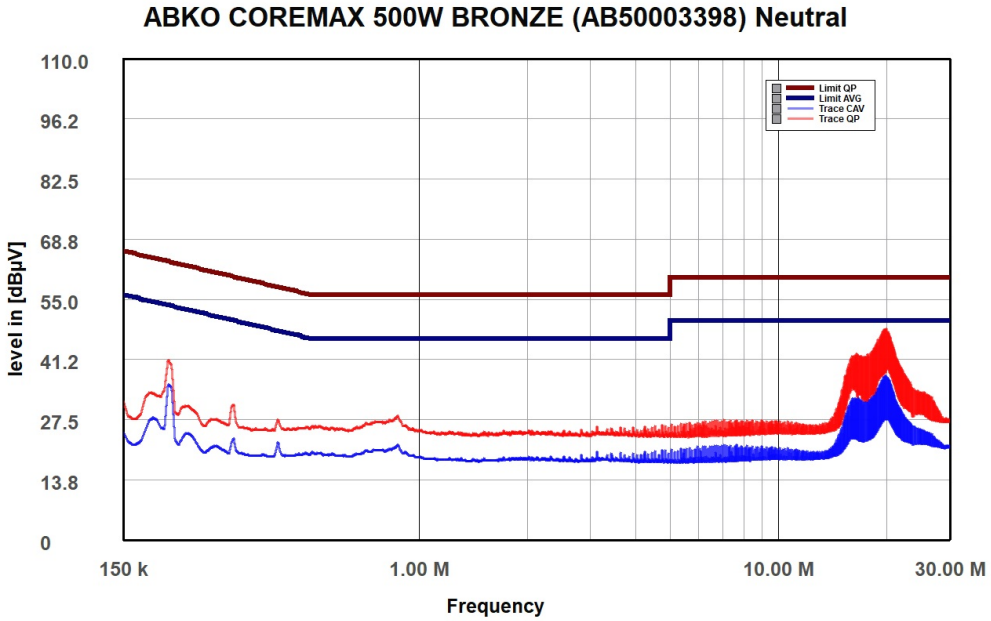
Load	Normal ambient fan · noise · intake	High ambient fan · noise · intake	Noise change
10%	707 RPM · 15.6 dB(A) · 30.6 °C	731 RPM · 16.5 dB(A) · 34.4 °C	**+0.9 dB(A)**
20%	711 RPM · 15.6 dB(A) · 30.3 °C	735 RPM · 17.1 dB(A) · 34.6 °C	**+1.5 dB(A)**
50%	1382 RPM · 36.4 dB(A) · 30.2 °C	1722 RPM · 42.6 dB(A) · 36.2 °C	**+6.2 dB(A)**
100%	1853 RPM · 46.0 dB(A) · 31.0 °C	1869 RPM · 46.3 dB(A) · 39.3 °C	**+0.3 dB(A)**

INFO

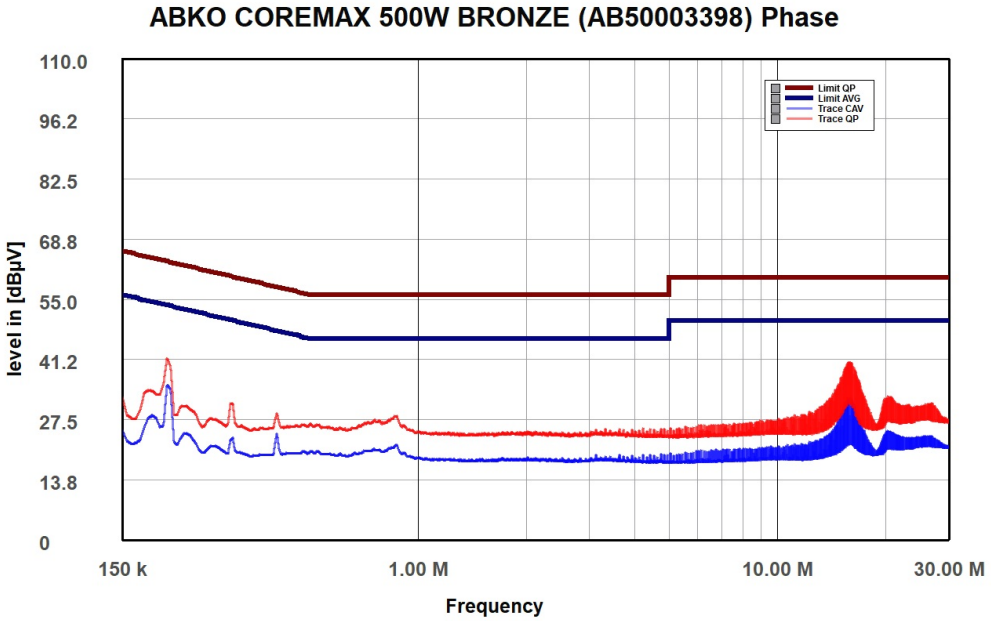
Fan speed, noise and the measured intake temperature at 10, 20, 50 and 100 % load, from the two load regulation tests: at normal ambient (about 30-32 °C) and at high ambient (about 40-47 °C). These are stabilized readings at fixed loads, not averages over the certification sweep, so they are indicative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

Conducted Emissions EN 55032 & CISPR 32

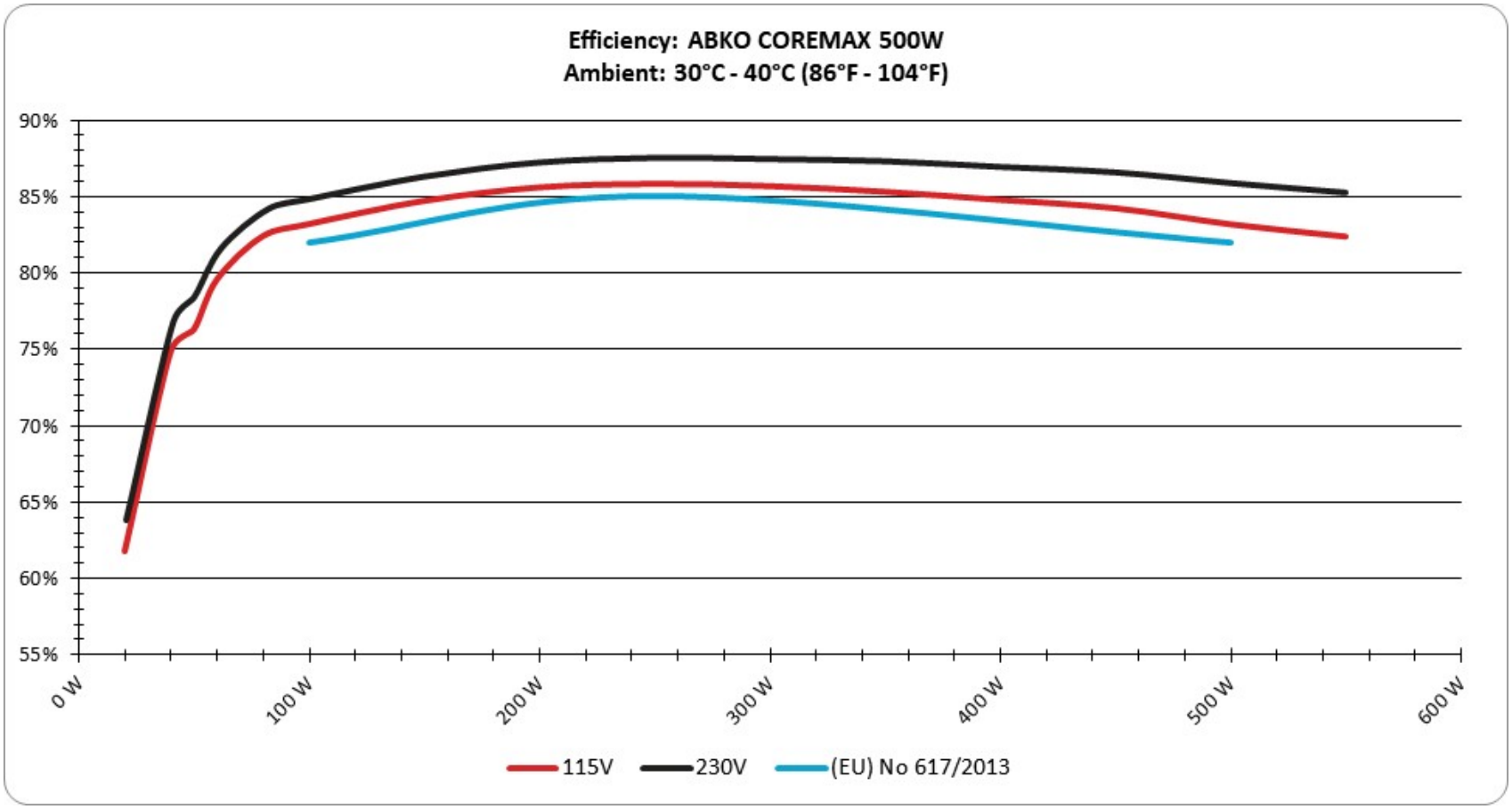


NEUTRAL



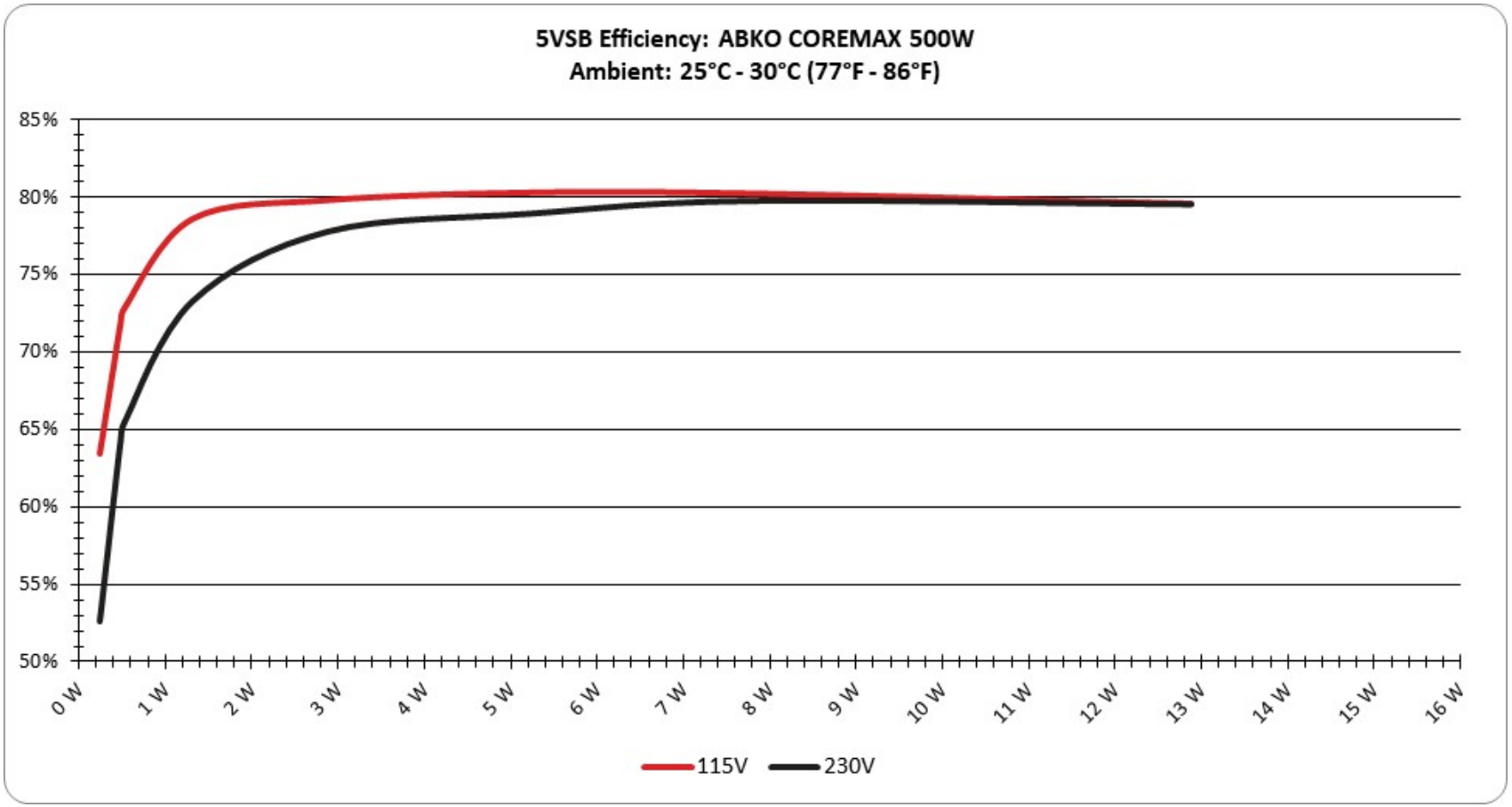
PHASE

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) 115V

□□ #	5VSB	DC/AC (□)	□□	PF/AC □□
1	**0.045A**	0.236W	63.378%	0.08
	5.25V	0.373W		114.95V

2	**0.09A**	0.473W	71.68%	0.133
	5.25V	0.659W		114.93V
3	**0.55A**	2.879W	79.766%	0.341
	5.233V	3.609W		114.93V
4	**1A**	5.218W	80.248%	0.378
	5.216V	6.502W		114.93V
5	**1.5A**	7.797W	80.189%	0.404
	5.197V	9.723W		114.94V
6	**2.501A**	12.892W	79.53%	0.433
	5.156V	16.21W		114.93V

Protection Features

OCP (Normal @ 27.2°C)	12V: 47.600A (114.24%), 12.146V — shut down 5V: 30.900A (154.50%), 4.916V — shut down 3.3V: 29.800A (149.00%), 3.341V — shut down 5VSB: 4.300A (172.00%), 5.056V — shut down
OCP (Hot @ 38.1°C)	12V: 45.800A (109.92%), 11.612V — shut down 5V: 31.000A (155.00%), 4.913V — shut down 3.3V: 25.300A (126.50%), 3.347V — shut down 5VSB: 4.300A (172.00%), 5.051V — shut down
OPP (Normal @ 24.9°C)	608.02W (121.60%) — shut down
OPP (Hot @ 40.1°C)	581.00W (116.20%) — shut down
OTP	✓ (140°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: None Inrush: NTC & Bypass Relay

Supplementary Tests (For Reference)

10-110%□□□□ 115V

□□	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
10%	**2.306A**	**1.981A**	**1.957A**	**0.96A**	50.006	76.32%	731	16.5	34.43°C	0.952
	12.317V	5.05V	3.372V	5.211V	65.521				37.26°C	114.93V
20%	**5.608A**	**2.977A**	**2.943A**	**1.154A**	99.956	83.199%	735	17.1	34.59°C	0.986
	12.311V	5.041V	3.364V	5.199V	120.141				38.59°C	114.91V
30%	**9.260A**	**3.478A**	**3.44A**	**1.35A**	149.997	84.717%	1349	35.8	35.07°C	0.973
	12.305V	5.034V	3.358V	5.187V	177.057				39.64°C	114.9V
40%	**12.914A**	**3.979A**	**3.938A**	**1.546A**	200.039	85.594%	1606	40.6	35.57°C	0.974
	12.299V	5.028V	3.352V	5.175V	233.705				41.46°C	114.85V
50%	**16.228A**	**4.982A**	**4.935A**	**1.744A**	249.989	85.82%	1722	42.6	36.17°C	0.976
	12.292V	5.02V	3.344V	5.163V	291.293				41.88°C	114.84V
60%	**19.550A**	**5.989A**	**5.937A**	**1.942A**	300.01	85.67%	1837	45.6	36.63°C	0.978
	12.286V	5.01V	3.335V	5.15V	350.191				43.58°C	114.83V
70%	**22.875A**	**7A**	**6.943A**	**2.142A**	350.045	85.302%	1868	46.3	37.18°C	0.98
	12.280V	5.001V	3.328V	5.137V	410.362				47.02°C	114.82V
80%	**26.205A**	**8.014A**	**7.952A**	**2.242A**	399.572	84.778%	1870	46.3	37.82°C	0.982
	12.275V	4.992V	3.319V	5.129V	471.318				49.39°C	114.81V
90%	**29.935A**	**8.526A**	**8.449A**	**2.343A**	449.802	84.226%	1871	46.3	38.91°C	0.983
	12.270V	4.985V	3.313V	5.122V	534.04				51.13°C	114.78V
100%	**33.669A**	**9.039A**	**8.979A**	**2.445A**	500.141	83.173%	1869	46.3	39.3°C	0.985
	12.264V	4.978V	3.307V	5.114V	601.326				53.35°C	114.77V
110%	**37.025A**	**10.063A**	**10.094A**	**2.447A**	549.532	82.38%	1885	46.4	40.06°C	0.985
	12.254V	4.969V	3.298V	5.108V	667.388				53.39°C	114.75V

CL1	**0.113A**	**15.184A**	**15.051A**	**0.001A**	126.288	77.569%	1663	41.7	34.22°C	0.974
	12.297V	4.959V	3.295V	5.231V	162.808				40.76°C	114.9V
CL2	**0.113A**	**20.197A**	**0.001A**	**0.001A**	101.395	76.207%	1578	40.4	34.58°C	0.98
	12.307V	4.951V	3.363V	5.242V	133.052				39.37°C	114.91V
CL3	**0.113A**	**0A**	**20.063A**	**0.001A**	67.388	70.59%	1346	35.8	34.89°C	0.978
	12.307V	5.04V	3.289V	5.239V	95.464				38.96°C	114.94V
CL4	**40.734A**	**0A**	**0A**	**0A**	500.059	84.23%	1875	46.4	39.95°C	0.985
	12.276V	5.041V	3.36V	5.231V	593.68				51.68°C	114.78V

The results above are not used in the certification process

20-80□□□□ 115V

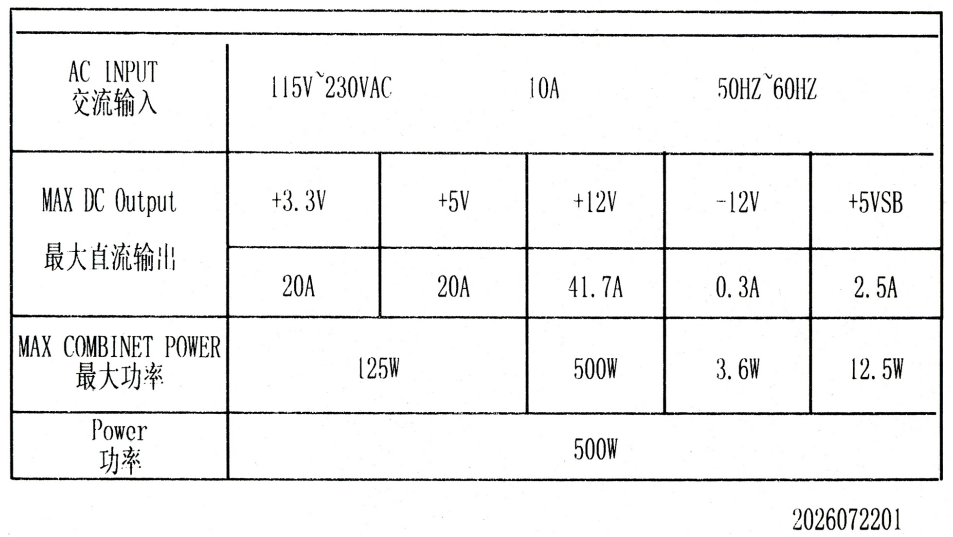
□□	**12V**	**5V**	**3.3V**	**5VSB**	**DC/AC (□)**	□□	□□□□ **(RPM)**	□□□□□□□ **(dB[A])**	□□ **(□□ /□□)**	**PF/AC □□**
20W	**1.206A**	**0.494A**	**0.488A**	**0.191A**	20	61.822%	617	12.3	30.26°C	0.897
	12.317V	5.062V	3.381V	5.244V	32.351				30.65°C	114.94V
40W	**2.654A**	**0.692A**	**0.683A**	**0.286A**	39.999	74.909%	664	14.1	31.05°C	0.96
	12.317V	5.06V	3.379V	5.24V	53.397				32.82°C	114.93V
60W	**4.102A**	**0.89A**	**0.879A**	**0.382A**	59.999	79.588%	703	15.6	32.26°C	0.951
	12.316V	5.057V	3.378V	5.235V	75.387				35.38°C	114.92V
80W	**5.548A**	**1.088A**	**1.075A**	**0.478A**	79.96	82.413%	724	16.5	33.59°C	0.98
	12.315V	5.055V	3.375V	5.23V	97.023				37.09°C	114.92V

The results above are not used in the certification process

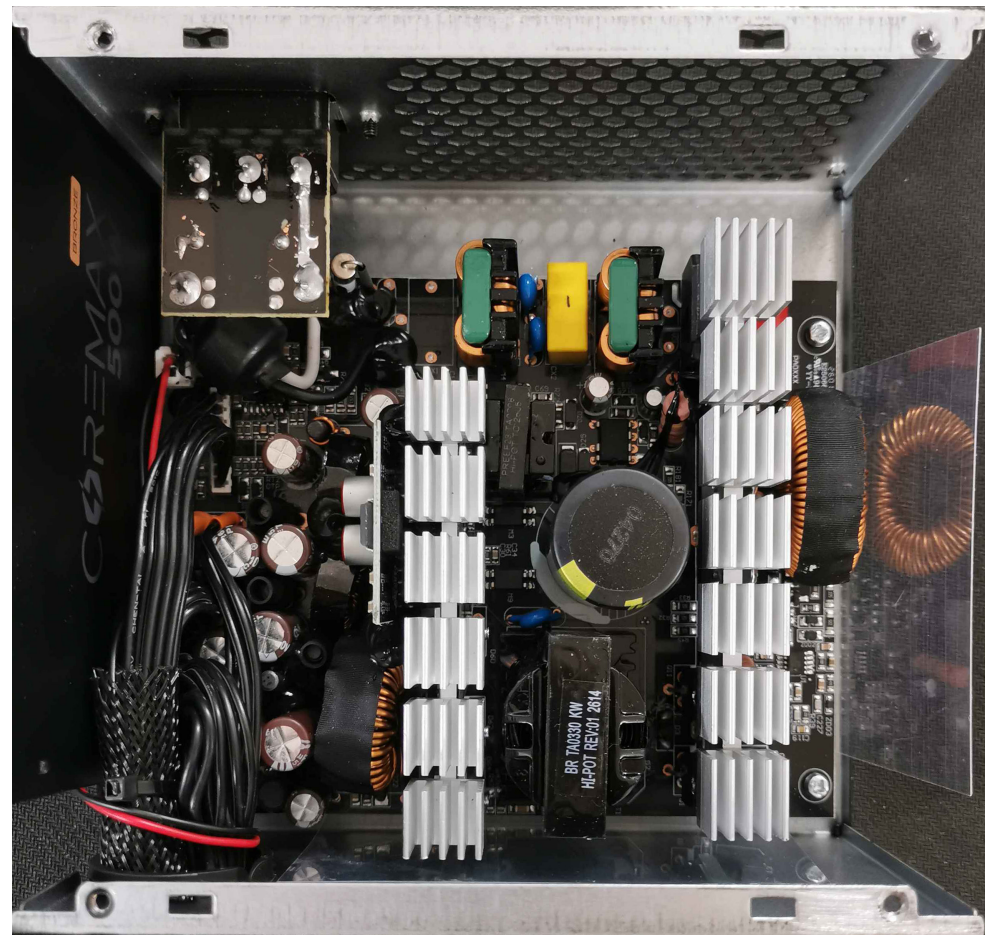
□□□□ **115V**

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	16.84mV	16.93mV	11.59mV	21.75mV	Pass
20% Load	16.84mV	17.80mV	11.44mV	19.41mV	Pass
30% Load	21.07mV	18.26mV	12.31mV	18.75mV	Pass
40% Load	20.56mV	18.57mV	12.92mV	18.95mV	Pass
50% Load	23.15mV	19.33mV	13.83mV	18.59mV	Pass
60% Load	27.38mV	20.91mV	15.05mV	19.92mV	Pass









Test	12V	5V	3.3V	5VSB	Pass/Fail
70% Load	30.58mV	21.52mV	16.28mV	17.68mV	Pass
80% Load	37.14mV	22.90mV	20.50mV	18.90mV	Pass
90% Load	47.73mV	23.77mV	21.92mV	18.24mV	Pass
100% Load	65.44mV	25.35mV	22.63mV	19.61mV	Pass
110% Load	71.41mV	28.61mV	22.89mV	22.06mV	Pass
Crossload1	20.40mV	27.95mV	23.70mV	20.63mV	Pass
Crossload2	24.02mV	33.11mV	20.24mV	21.45mV	Pass
Crossload3	25.09mV	18.72mV	24.72mV	15.90mV	Pass
Crossload4	71.69mV	21.78mV	16.84mV	16.00mV	Pass

The results above are not used in the certification process

ABKO COREMAX 500W BRONZE

Top side

AC INPUT 交流输入	115V~230VAC		10A	50HZ~60HZ	
MAX DC Output 最大直流输出	+3.3V	+5V	+12V	-12V	+5VSB
	20A	20A	41.7A	0.3A	2.5A
MAX COMBINET POWER 最大功率	125W		500W	3.6W	12.5W
Power 功率	500W				

2026072201

Power specifications label

Fan

PSU Internals

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。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)

在任何情况下都应提供原始测试结果文档的网站链接