Kolink Core 500W

CCW040120203481

Lab ID KL50001789

Certification ID 251789

Test Result Report ID: 21PS1789A

Certificate Issue Date: Feb 10, 2021

230V

Scheme: ETA-EMI PSU

230V



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	Kolink
Model	Core 500W
OEM/ODM	
Serial Number	CCW040120203481
Product Specifications	
Manufacturer-Provided Information	
□□□□ (Vrms)	200-240
□□□□ (Arms)	3
□□□□ (Hz)	50

□□□□ (W)	500
Operating Temperature (Continuous Full Load) (°C)	
□□	ATX12V
□□□□	Fixed cables
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
□□	120mm Sleeve Bearing Fan (WAM W 12025 HZ12SEMA)
□□□□□	✗
Cybenetics Testing Information	
Lab ID	KL50001789
Date of receipt	Jun 27, 2020
Testing Date	Feb 4, 2021
Report Issued Date	Feb 10, 2021
Engineer Name	-
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

□□□□□ (Non-accredited measurements)

□□□□				
□□	□□□□	□□□□□□	Gauge	In Cable Capacitors
ATX □□ 20+4 pin (530mm)	1	1	18-20AWG	□
4+4 pin EPS 12V □□ (580mm)	1	1	18AWG	□
6+2pin PCIe□□ (530mm)	1	1	18AWG	□
SATA□□ (430mm+150mm) / 4-pin Molex (+150mm)	2	4 / 2	18AWG	□

		3.3V	5V	12V	5VSB	-12V
		18	15	33	2.5	0.3
		100		396	12.5	3.6
	(W)	500				

Test Results

Temperature & Compliance Info

(°C /°F)	28-32 / 82.4-89.6
ErP Lot3/6	ErP Lot 6 2010: ✓ ErP Lot 6 2013: ✓ ErP Lot 3 2014 & CEC: ✗
(EU) No 617/2013	✗

Performance Summary 230V

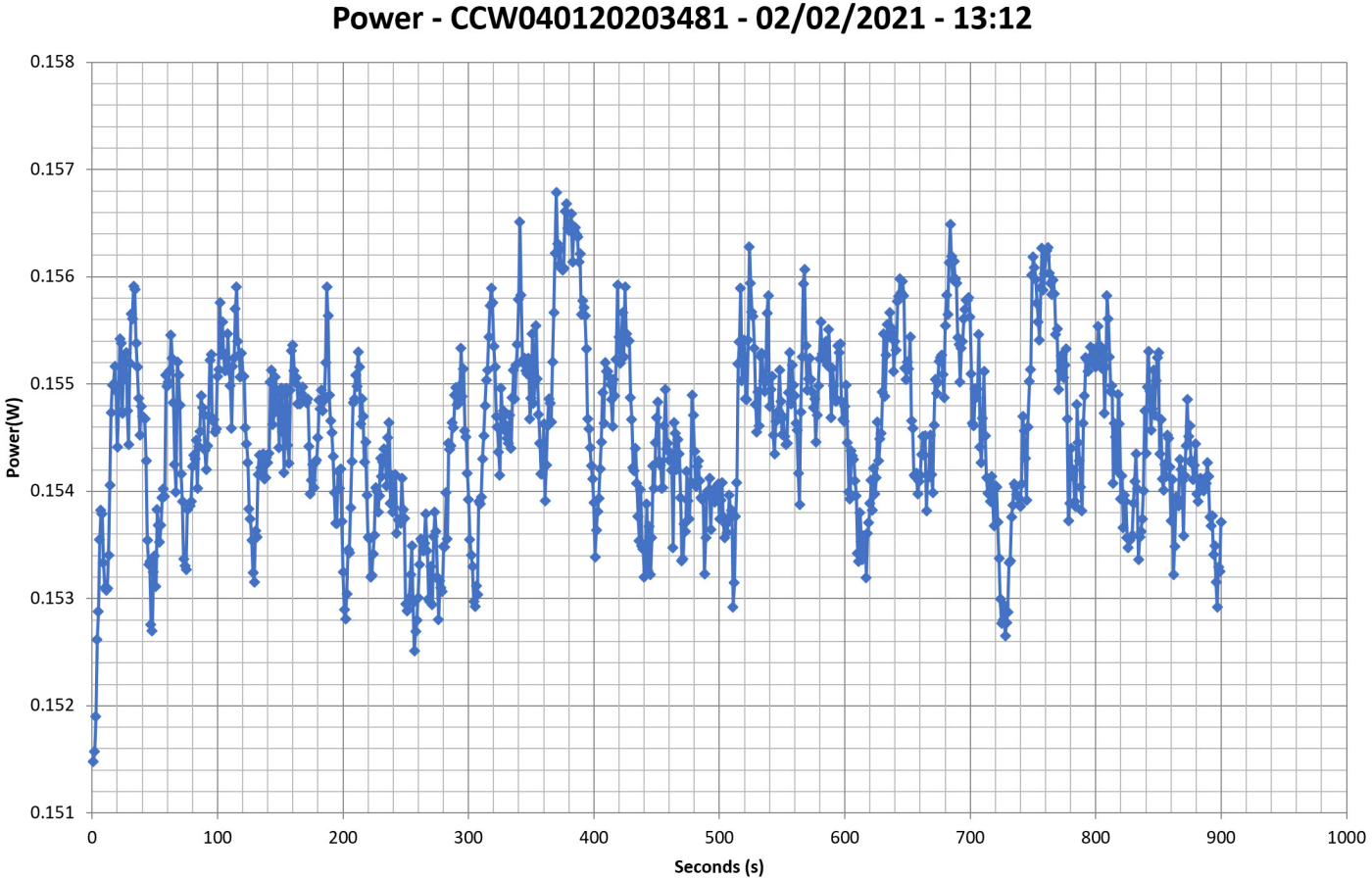
Accredited	
(>1450 load combinations)	81.920%
Average Noise Output (>1450 Load Combinations)	26.56dBA
PF (>1450 Load Combinations)	0.934
Efficiency With 10W (≤500W) or 2% (>500W) Load	-
	0.1537W
Non-Accredited	
12V Ripple (Full Load)	49.44mV
5V Ripple (Full Load)	39.18mV
3.3V Ripple (Full Load)	83.62mV
5VSB Ripple (Full Load)	32.14mV
12V Load Regulation	1.70%
5V Load Regulation	4.99%
3.3V Load Regulation	3.90%

5VSB Load Regulation		5.33%
Inrush Current		89.260A
□□□□ & PG□□		8.70ms
AC Loss to PWR_OK Hold Up Time		15.80ms
PWR_OK Inactive to DC Loss Delay		-7.10ms
PSU Timings: T1 (20% / 100%)	60.0ms	56.0ms
PSU Timings: T3 (20% / 100%)	270.0ms	286.0ms
OPP (25.80°C / 0.00°C)	104.36%	-

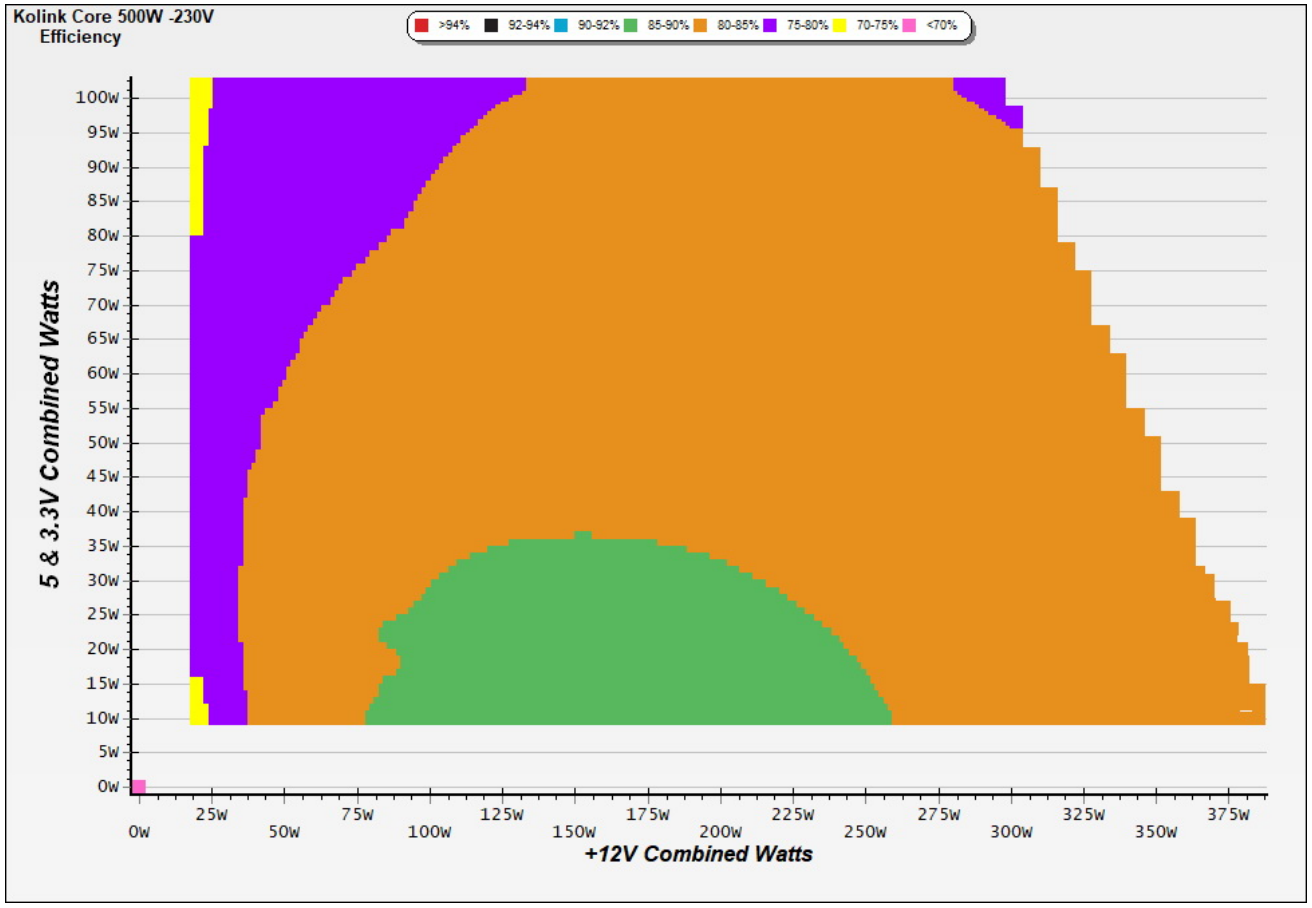
□□□□ & PG□□

Hold-Up Time (ms)	8.7
AC Loss to PWR_OK Hold Up Time (ms)	15.8
PWR_OK Inactive to DC Loss Delay (ms)	-7.1

Graphs 230V


Power - CCW040120203481 - 02/02/2021 - 13:12
Power(W)
0.158
0.157
0.156
0.155
0.154
0.153
0.152
0.151
0
100
200
300
400
500
600
700
800
900
1000
Seconds (s)

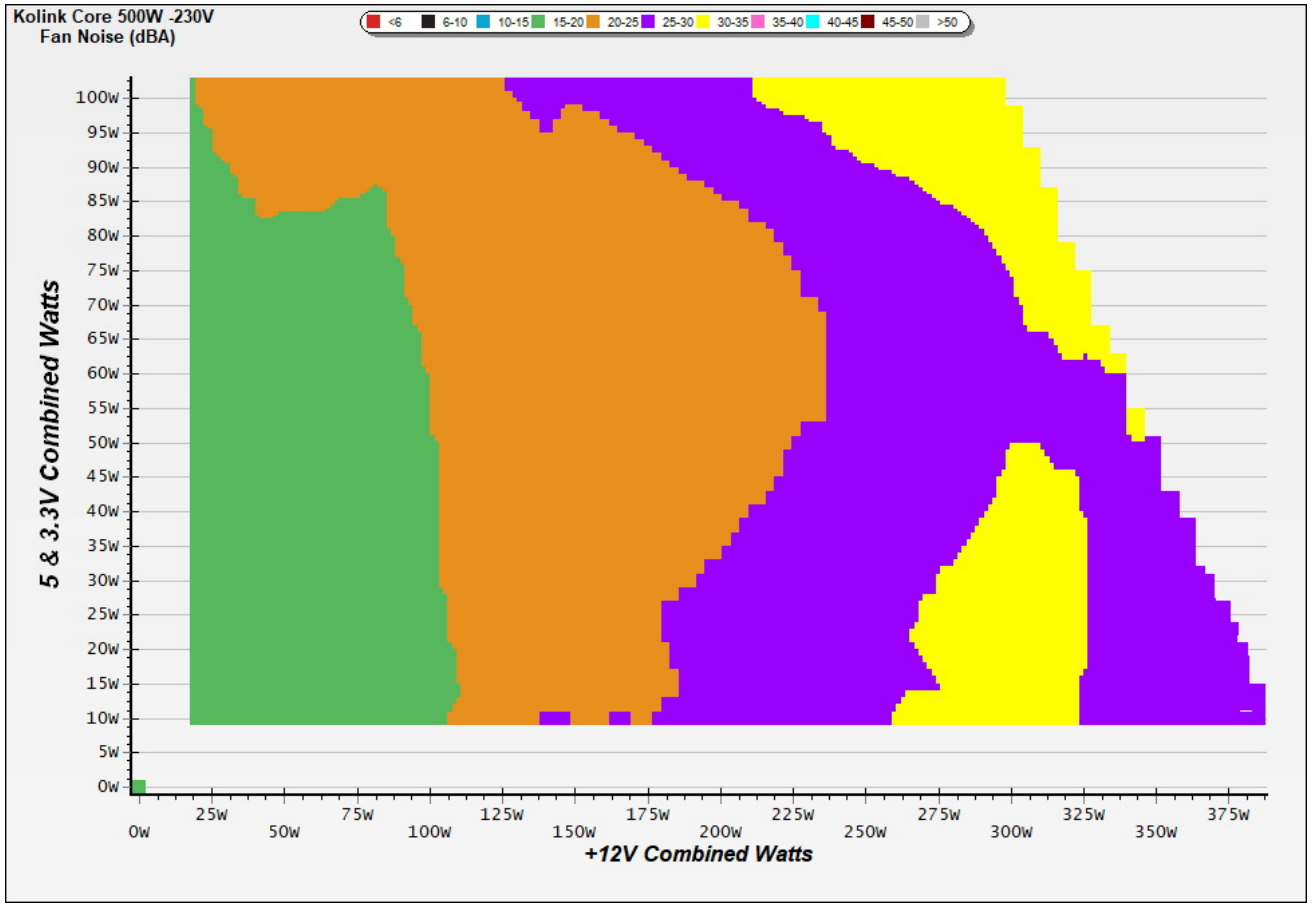
230V



□□

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

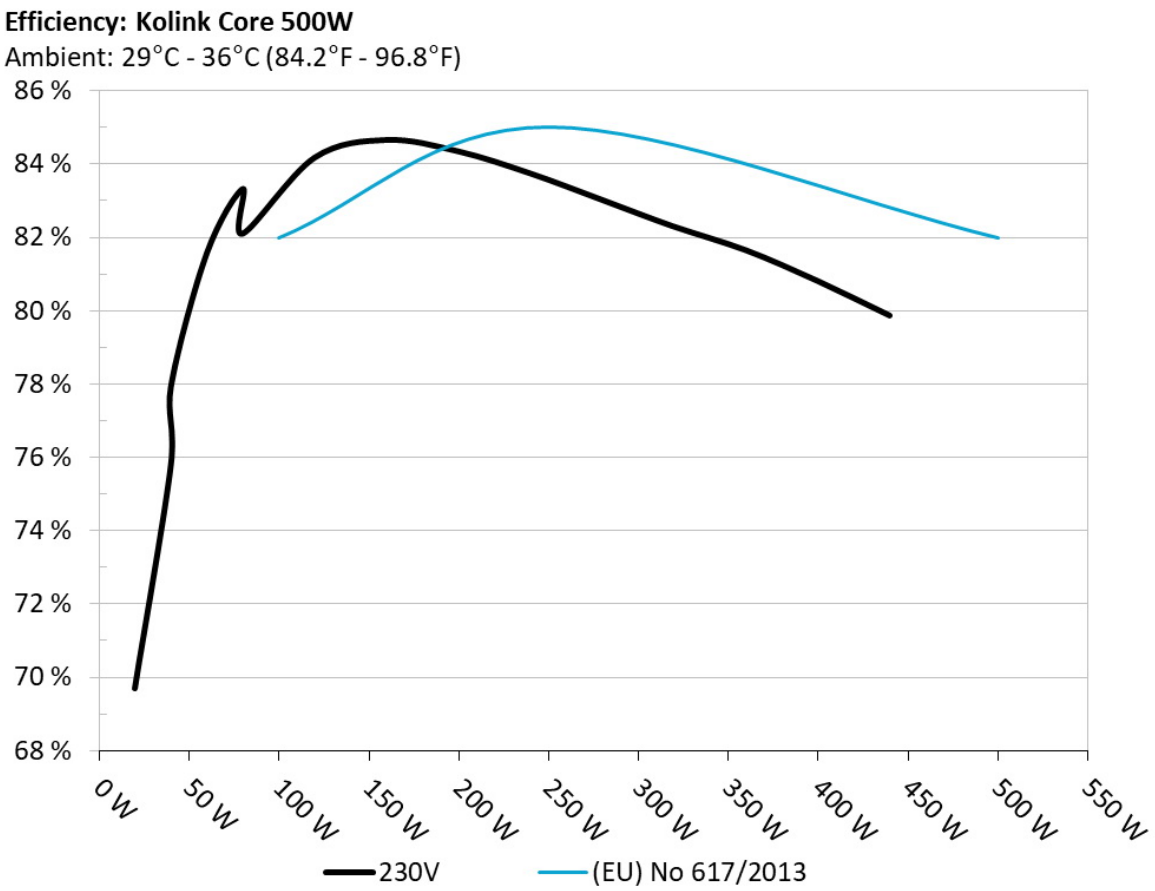
230V



□□

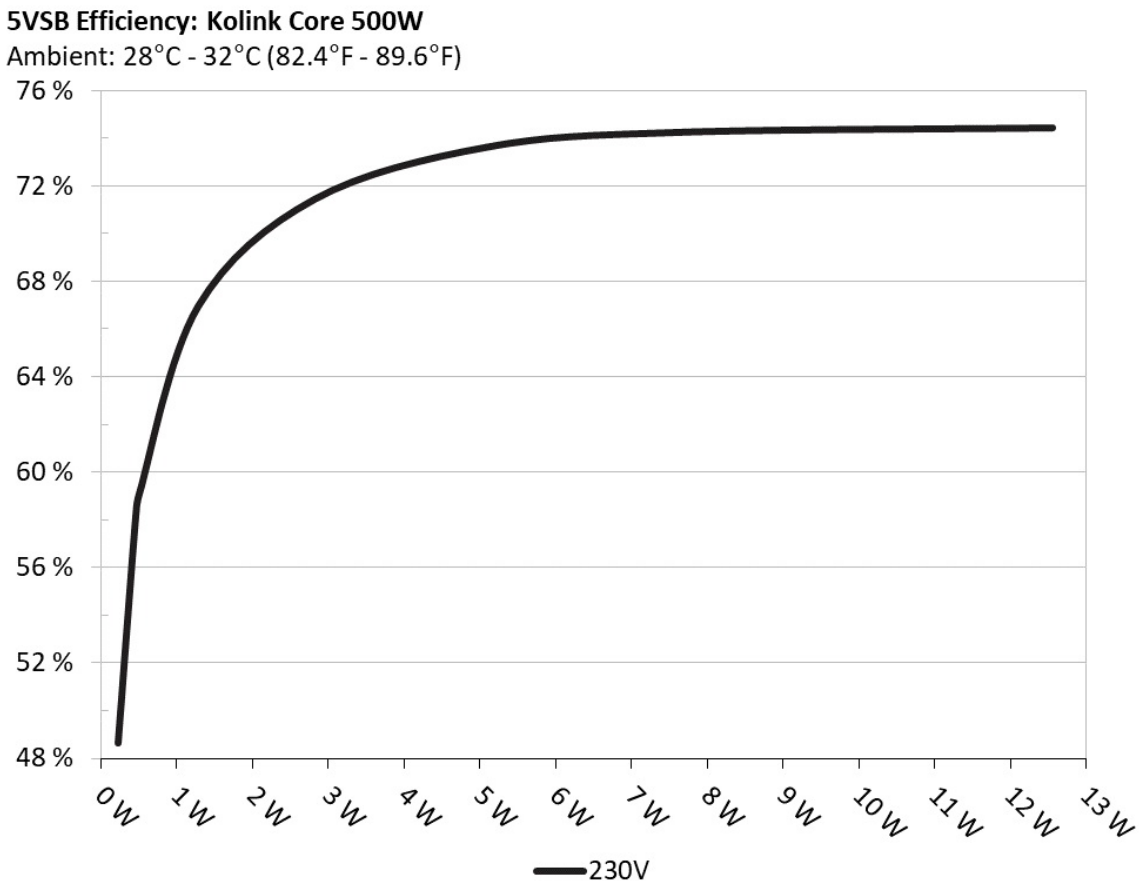
The PSU`s noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

Indicative Performance



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) 230V

□□ #	5VSB	DC/AC (□)	□□	PF/AC □□
1	0.045A	0.231	48.632%	0.014
	5.147V	0.475		230.30V

2	0.090A	0.463	58.166%	0.024
	5.144V	0.796		230.31V
3	0.550A	2.817	71.443%	0.110
	5.122V	3.943		230.30V
4	1.000A	5.095	73.638%	0.177
	5.095V	6.919		230.31V
5	1.500A	7.607	74.258%	0.233
	5.072V	10.244		230.31V
6	2.499A	12.554	74.447%	0.305
	5.023V	16.863		230.31V

Supplementary Tests (For Reference)

10-110%□□□□ 230V

□□ #	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
1	1.471A	1.977A	1.979A	0.984A	39.986	75.801%	939	21.7	30.12°C	0.579
	12.503V	5.059V	3.333V	5.078V	52.751				33.11°C	230.25V
2	3.936A	2.979A	2.981A	1.187A	80.009	82.109%	939	21.7	30.77°C	0.831
	12.478V	5.037V	3.319V	5.052V	97.442				34.19°C	230.25V
3	6.750A	3.476A	3.491A	1.392A	119.946	84.181%	940	21.7	31.26°C	0.889
	12.431V	5.033V	3.307V	5.027V	142.485				35.93°C	230.26V
4	9.591A	3.977A	4.007A	1.599A	159.979	84.662%	951	21.3	31.58°C	0.929
	12.385V	5.028V	3.294V	5.003V	188.961				36.71°C	230.26V
5	12.087A	5.000A	5.032A	1.809A	200.003	84.350%	964	21.2	32.22°C	0.948
	12.368V	5.001V	3.280V	4.976V	237.110				37.84°C	230.28V
6	14.580A	6.038A	6.064A	2.000A	239.848	83.750%	1298	28.3	32.70°C	0.958
	12.356V	4.969V	3.265V	4.948V	286.387				38.83°C	230.28V
7	17.081A	7.097A	7.115A	2.236A	280.017	83.024%	1441	31.0	33.39°C	0.964
	12.347V	4.933V	3.248V	4.919V	337.272				40.25°C	230.29V
8	19.580A	8.002A	8.163A	2.452A	319.202	82.310%	1512	32.4	33.93°C	0.967
	12.339V	4.902V	3.232V	4.892V	387.805				41.57°C	230.29V

9	22.525A	8.712A	8.696A	2.461A	359.918	81.654%	1571	33.3	34.62°C	0.970
	12.317V	4.878V	3.218V	4.875V	440.786				42.81°C	230.30V
10	25.449A	9.264A	9.265A	2.577A	399.985	80.812%	1734	36.8	35.09°C	0.973
	12.291V	4.858V	3.204V	4.851V	494.957				44.28°C	230.31V
11	28.814A	9.266A	9.302A	2.586A	439.881	79.873%	1811	37.3	35.78°C	0.975
	12.240V	4.856V	3.193V	4.834V	550.725				45.54°C	230.31V
CL1	0.000A	00.000A	00.000A	00.000A	0000.00	00.000%	0	0	00.0°C	0.000
	00.000V	00.000V	00.000V	00.000V	0000.00				00.0°C	000.0V
CL2	33.004A	1.001A	1.001A	1.000A	405.324	82.097%	1494	32.0	32.14°C	0.973
	11.875V	5.188V	3.243V	4.962V	493.714				37.53°C	230.30V

The results above are not used in the certification process

20-80□□□□ 230V

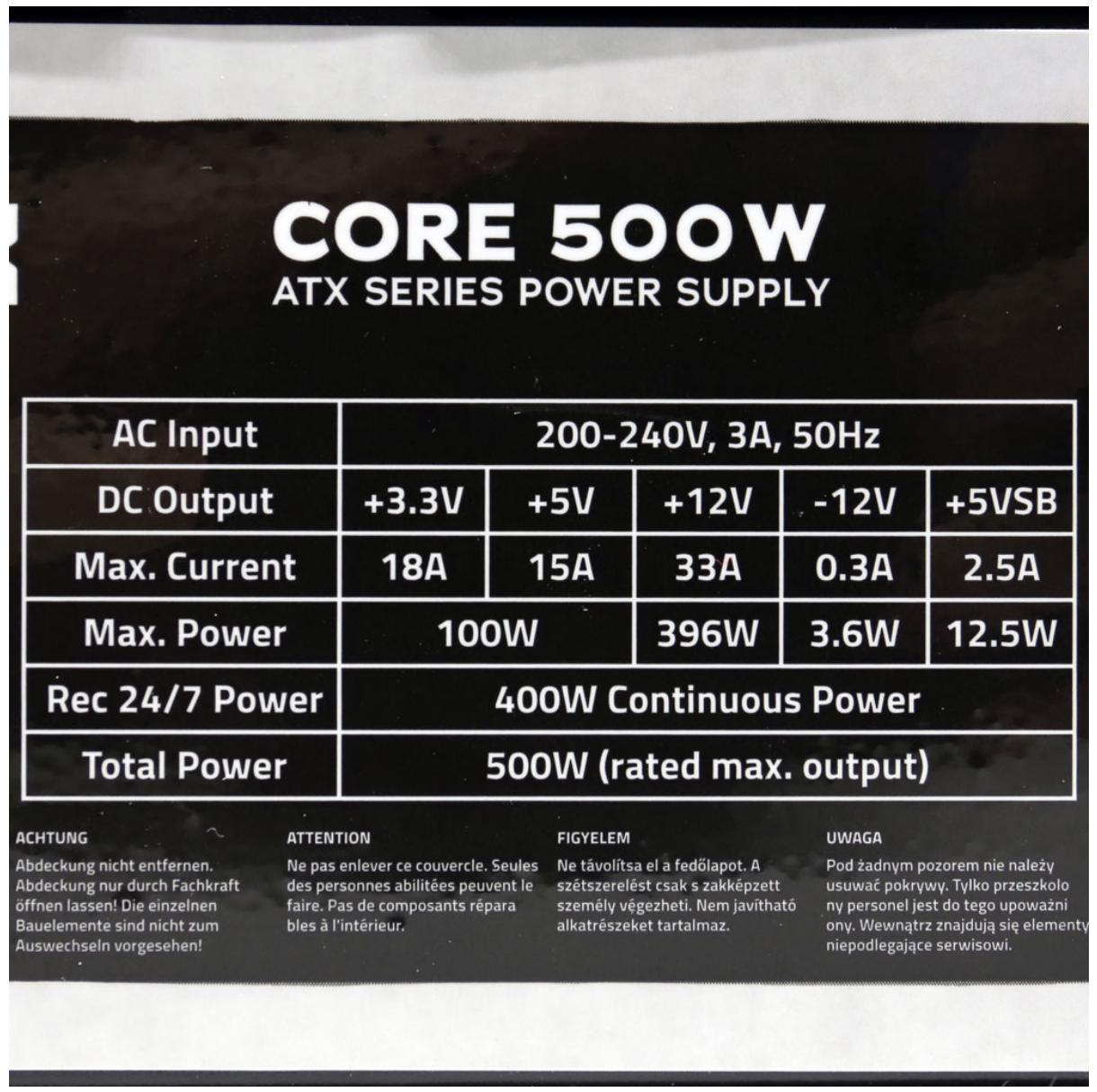
□□ #	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	PF/AC □□
1	1.191A	0.488A	0.493A	0.195A	19.974	69.705%	906	19.4	0.404
	12.447V	5.122V	3.347V	5.131V	28.655				230.21V
2	2.384A	0.978A	0.989A	0.391A	39.964	77.916%	913	19.3	0.570
	12.445V	5.105V	3.340V	5.114V	51.291				230.22V
3	3.582A	1.474A	1.483A	0.589A	59.996	81.577%	921	18.7	0.708
	12.437V	5.091V	3.332V	5.096V	73.545				230.23V
4	4.776A	1.969A	1.984A	0.788A	79.948	83.326%	926	18.9	0.825
	12.427V	5.079V	3.324V	5.077V	95.946				230.24V

The results above are not used in the certification process

□□□□ 230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	11.80mV	10.60mV	28.50mV	7.50mV	Pass
20% Load	16.50mV	16.50mV	38.10mV	13.00mV	Pass
30% Load	14.20mV	14.60mV	34.60mV	12.20mV	Pass
40% Load	16.00mV	16.50mV	43.20mV	14.30mV	Pass





Test	12V	5V	3.3V	5VSB	Pass/Fail
50% Load	17.00mV	18.00mV	43.40mV	15.40mV	Pass
60% Load	26.40mV	24.40mV	46.60mV	24.30mV	Pass
70% Load	31.10mV	27.40mV	62.00mV	27.60mV	Fail
80% Load	38.40mV	30.70mV	74.20mV	28.70mV	Fail
90% Load	41.60mV	35.30mV	76.40mV	31.10mV	Fail
100% Load	49.40mV	39.20mV	83.60mV	32.10mV	Fail
110% Load	57.40mV	42.50mV	83.00mV	33.40mV	Fail
Crossload1	0.00mV	0.00mV	0.00mV	0.00mV	Pass
Crossload2	37.50mV	30.00mV	37.10mV	12.30mV	Pass

The results above are not used in the certification process

Kolink Core 500W

Top side

Power specifications label

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。
在任何情况下都应提供原始测试结果文档的网站链接

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