Kolink SFX-450

1942090011491450BRP1H02000128

Lab ID KL45001788

Certification ID 251788

Test Result Report ID: 21PS1788A

Certificate Issue Date: Feb 8, 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	SFX-450
OEM/ODM	
Serial Number	1942090011491450BRP1H02000128
Product Specifications	
Manufacturer-Provided Information	
□□□□ (Vrms)	230
□□□□ (Arms)	3.5
□□□□ (Hz)	50

□□□□ (W)	450
Operating Temperature (Continuous Full Load) (°C)	
□□	SFX
□□□□	Fixed cables
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
□□	80mm Sleeve Bearing Fan (S0801512H)
□□□□□	✗
Cybenetics Testing Information	
Lab ID	KL45001788
Date of receipt	Jun 27, 2021
Testing Date	Feb 4, 2021
Report Issued Date	Feb 8, 2021
Engineer Name	-
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

□□□□ (Non-accredited measurements)

□□□□				
□□	□□□□	□□□□□□	Gauge	In Cable Capacitors
ATX □□ 20+4 pin (360mm)	1	1	18-22AWG	□
4+4 pin EPS 12V □□ (400mm)	1	1	18-20AWG	□
6+2pin PCIe□□ (500mm+110mm)	1	2	18-20AWG	□
SATA□□ (300mm+150mm) / 4-pin Molex (+150mm)	2	4 / 2	20AWG	□

□□□□

□		3.3V	5V	12V	5VSB	-12V
□□□□	□□	21	22	36	3	0.5
	□	120		432	15	6
□□□□□ (W)		450				

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: Partially
□□ (EU) No 617/2013□□	✓

Performance Summary 230V

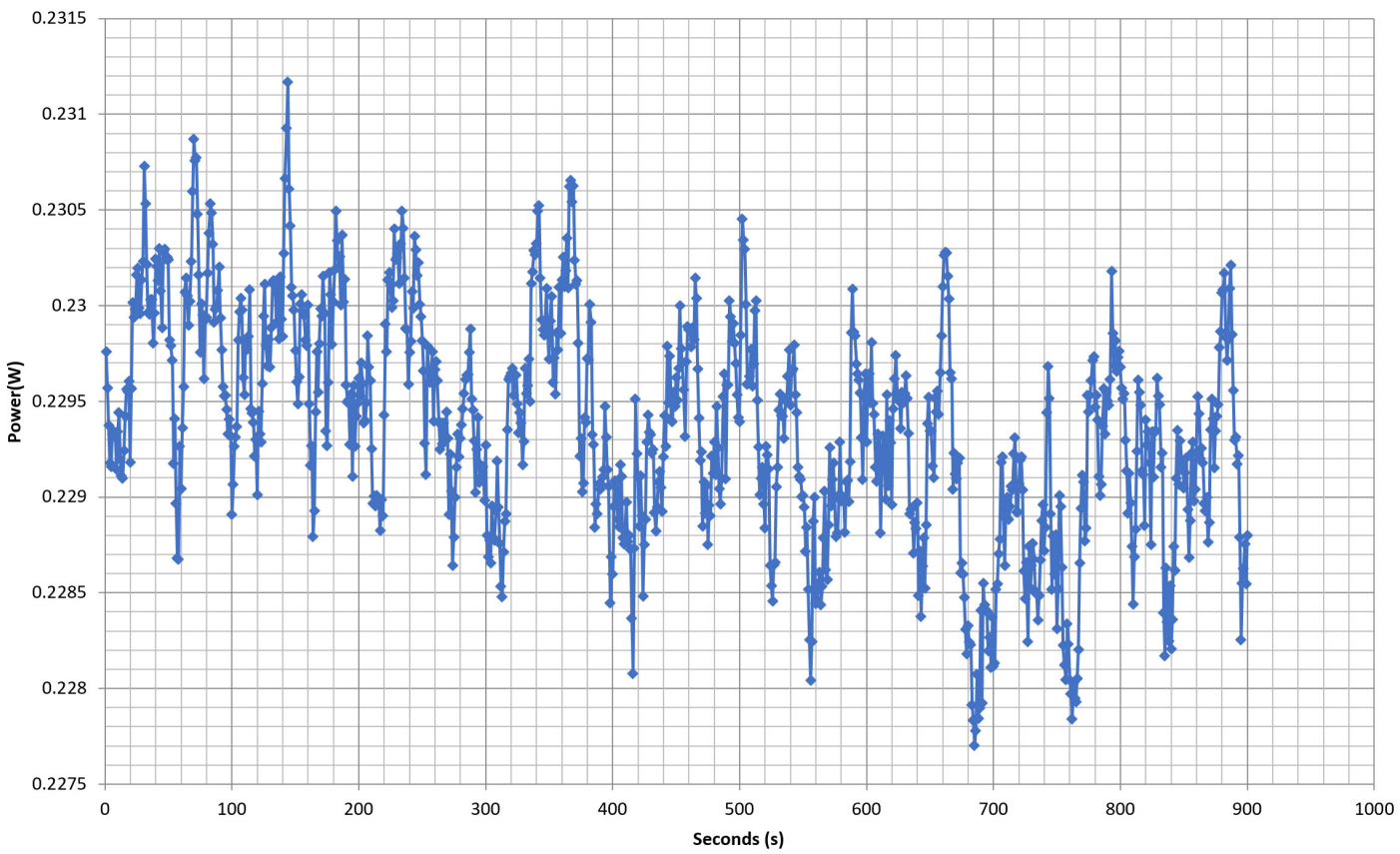
Accredited	
□□□□ (>1450 load combinations)	83.902%
Average Noise Output (>1450 Load Combinations)	38.31dBA
PF□□□ (>1450 Load Combinations)	0.979
Efficiency With 10W (≤500W) or 2% (>500W) Load	-
□□□□□□	0.2288W
Non-Accredited	
12V Ripple (Full Load)	66.32mV
5V Ripple (Full Load)	33.44mV
3.3V Ripple (Full Load)	30.03mV
5VSB Ripple (Full Load)	24.71mV
12V Load Regulation	1.79%
5V Load Regulation	2.76%
3.3V Load Regulation	2.51%

5VSB Load Regulation		3.75%
Inrush Current		73.800A
□□□□ & PG□□		7.70ms
AC Loss to PWR_OK Hold Up Time		24.90ms
PWR_OK Inactive to DC Loss Delay		-17.20ms
PSU Timings: T1 (20% / 100%)	56.0ms	56.0ms
PSU Timings: T3 (20% / 100%)	284.0ms	284.0ms
OPP (27.40°C / 0.00°C)	126.68%	-

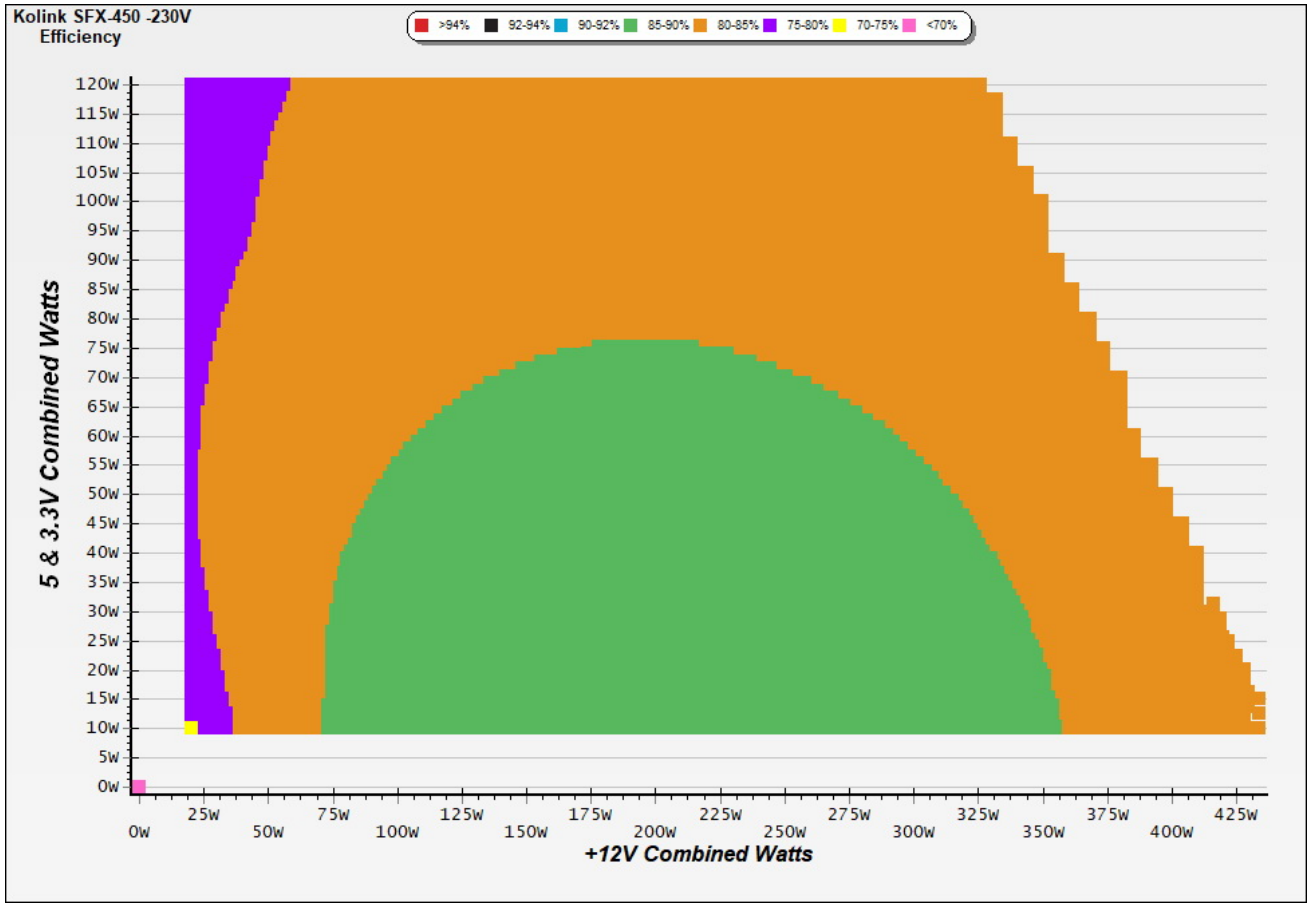
□□□□ & PG□□

Hold-Up Time (ms)	7.7
AC Loss to PWR_OK Hold Up Time (ms)	24.9
PWR_OK Inactive to DC Loss Delay (ms)	-17.2

Graphs 230V


Power - 1942090011491450BRP1H02000128 - 02/02/2021 - 13:07
Power(W)
0.2315
0.231
0.2305
0.23
0.2295
0.229
0.2285
0.228
0.2275
0
100
200
300
400
500
600
700
800
900
1000
Seconds (s)

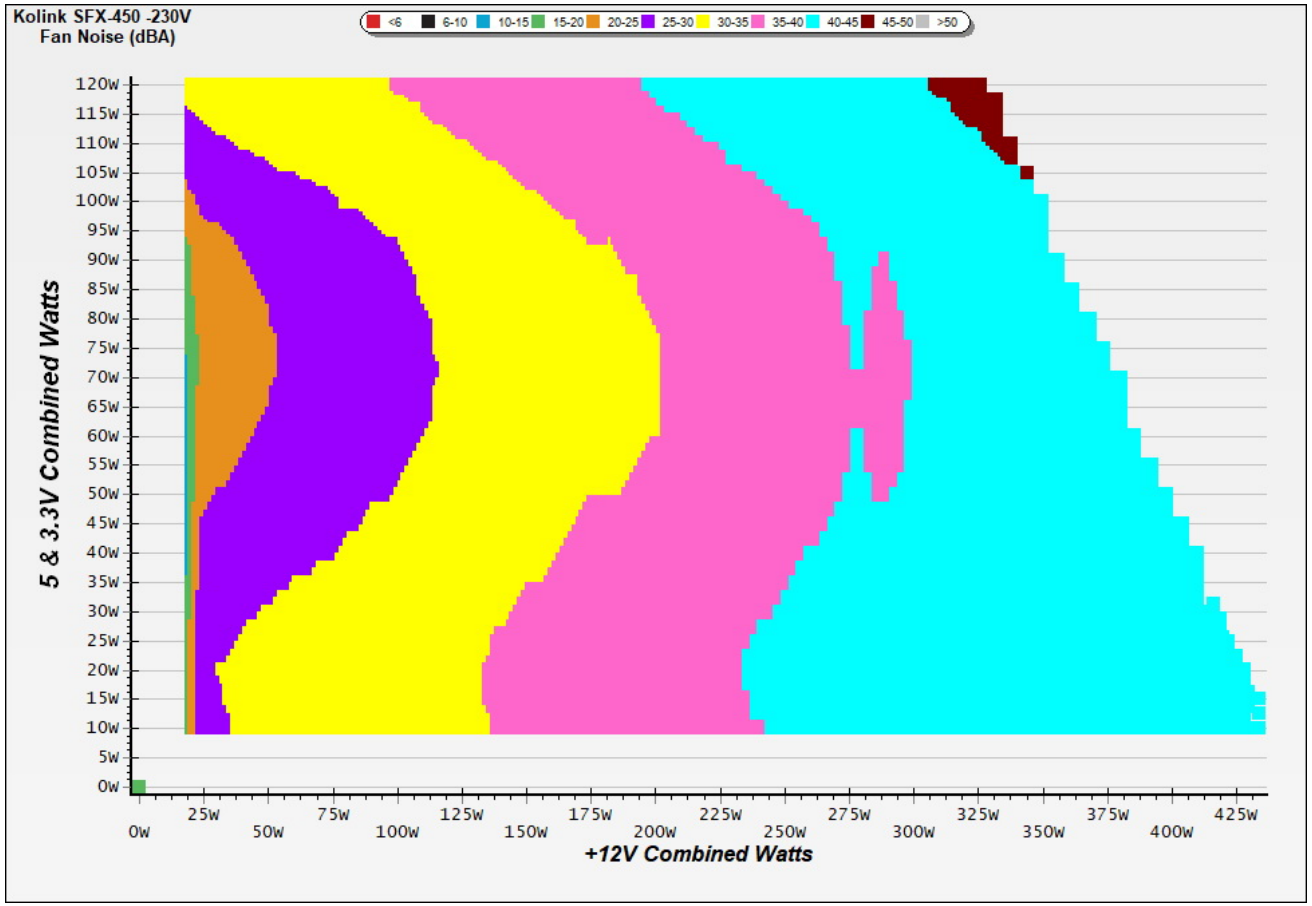
230V



□□

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

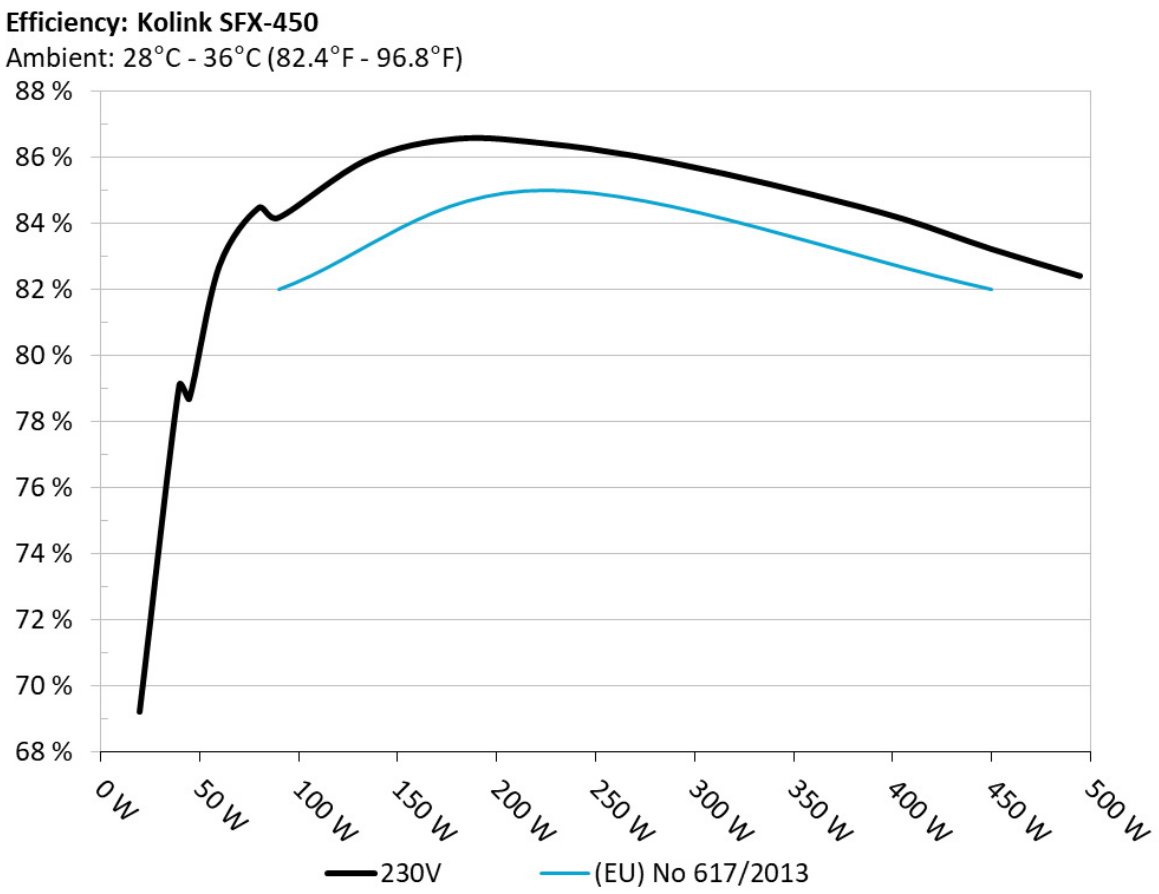
230V



□□

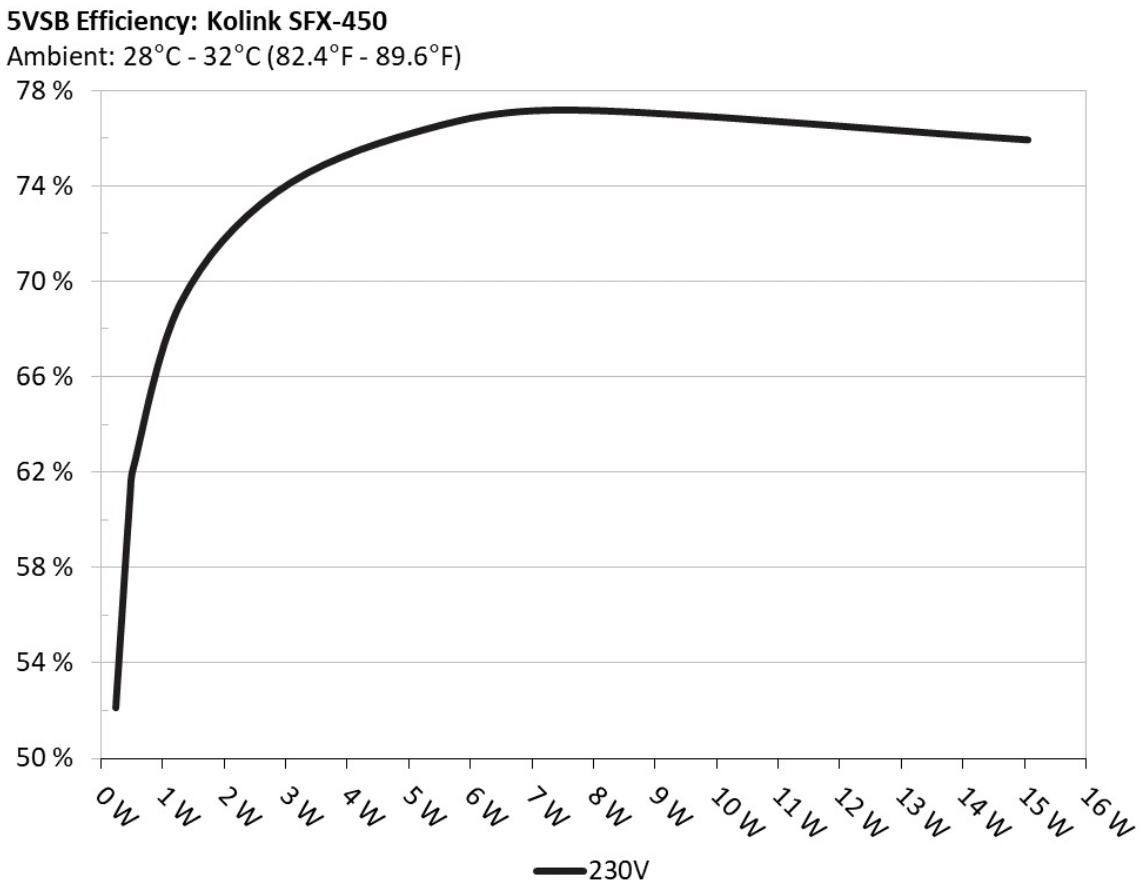
The PSU`s noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

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	0.232	52.135%	0.029
	5.159V	0.445		230.35V

2	0.090A	0.464	61.053%	0.049
	5.157V	0.760		230.35V
3	0.550A	2.827	73.697%	0.202
	5.139V	3.836		230.35V
4	1.000A	5.121	76.251%	0.286
	5.120V	6.716		230.34V
5	1.500A	7.662	77.160%	0.337
	5.107V	9.930		230.34V
6	3.000A	15.049	75.913%	0.406
	5.016V	19.824		230.34V

Supplementary Tests (For Reference)

10-110%□□□□ 230V

□□ #	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
1	1.948A	1.956A	1.973A	0.977A	44.957	78.679%	950	11.2	30.71°C	0.872
	11.989V	5.113V	3.345V	5.118V	57.140				35.15°C	230.38V
2	4.938A	2.942A	2.966A	1.176A	90.015	84.170%	1064	13.2	31.08°C	0.946
	11.973V	5.098V	3.336V	5.101V	106.944				36.16°C	230.39V
3	8.288A	3.436A	3.471A	1.376A	135.012	85.934%	1380	20.4	31.63°C	0.967
	11.940V	5.094V	3.328V	5.086V	157.112				37.56°C	230.40V
4	11.658A	3.929A	3.976A	1.577A	180.006	86.564%	1607	25.4	32.38°C	0.977
	11.907V	5.090V	3.319V	5.073V	207.945				38.91°C	230.40V
5	14.670A	4.930A	4.983A	1.780A	224.999	86.417%	2019	31.7	32.88°C	0.983
	11.895V	5.072V	3.310V	5.057V	260.363				40.28°C	230.39V
6	17.688A	5.937A	6.000A	1.985A	269.985	86.043%	2260	35.0	33.09°C	0.986
	11.882V	5.055V	3.300V	5.040V	313.779				41.19°C	230.38V
7	20.722A	6.947A	7.021A	2.191A	315.056	85.501%	2515	37.9	33.99°C	0.986
	11.869V	5.038V	3.291V	5.021V	368.482				42.65°C	230.37V
8	23.748A	7.968A	8.040A	2.404A	360.022	84.860%	2628	39.1	34.83°C	0.987
	11.859V	5.021V	3.282V	4.992V	424.253				43.96°C	230.36V

9	27.289A	8.469A	8.553A	2.404A	404.851	84.142%	2903	42.9	35.47°C	0.987
	11.813V	5.017V	3.273V	4.993V	481.151				45.43°C	230.35V
10	30.575A	8.980A	9.096A	3.029A	449.680	83.224%	3082	45.5	35.72°C	0.987
	11.774V	5.011V	3.264V	4.953V	540.326				46.89°C	230.36V
11	34.574A	8.964A	9.118A	3.032A	494.508	82.405%	3121	46.1	36.02°C	0.986
	11.709V	5.019V	3.256V	4.948V	600.095				47.87°C	230.34V
CL1	4.000A	14.000A	14.000A	0.000A	163.252	79.886%	2667	40.1	33.26°C	0.977
	12.372V	4.830V	3.296V	5.093V	204.356				40.76°C	230.39V
CL2	36.004A	2.001A	1.999A	1.000A	433.323	84.028%	2780	40.5	35.68°C	0.987
	11.423V	5.211V	3.287V	5.051V	515.688				45.62°C	230.35V

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	1.243A	0.485A	0.493A	0.194A	19.986	69.204%	870	10.0	0.600
	11.933V	5.156V	3.355V	5.149V	28.880				230.41V
2	2.486A	0.973A	0.984A	0.389A	39.975	79.093%	919	9.9	0.848
	11.936V	5.145V	3.350V	5.139V	50.542				230.39V
3	3.733A	1.460A	1.480A	0.585A	60.004	82.677%	927	10.3	0.908
	11.936V	5.134V	3.345V	5.129V	72.576				230.39V
4	4.972A	1.952A	1.978A	0.781A	79.953	84.468%	941	11.1	0.938
	11.936V	5.124V	3.340V	5.119V	94.655				230.39V

The results above are not used in the certification process

□□□□ 230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	32.70mV	17.60mV	21.50mV	16.30mV	Pass
20% Load	34.60mV	18.20mV	20.60mV	16.60mV	Pass
30% Load	35.60mV	18.00mV	20.30mV	16.80mV	Pass
40% Load	37.30mV	19.00mV	21.30mV	17.00mV	Pass





Test	12V	5V	3.3V	5VSB	Pass/Fail
50% Load	37.20mV	19.30mV	20.60mV	17.00mV	Pass
60% Load	35.80mV	18.50mV	20.70mV	16.70mV	Pass
70% Load	34.20mV	18.40mV	20.90mV	17.40mV	Pass
80% Load	35.00mV	17.80mV	24.90mV	19.10mV	Pass
90% Load	35.80mV	18.00mV	22.80mV	18.50mV	Pass
100% Load	66.30mV	33.40mV	30.00mV	24.70mV	Pass
110% Load	70.10mV	34.40mV	27.90mV	25.70mV	Pass
Crossload1	58.80mV	29.50mV	33.90mV	33.40mV	Pass
Crossload2	61.70mV	28.80mV	22.40mV	20.70mV	Pass

The results above are not used in the certification process

Kolink SFX-450

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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