Corsair RM750x

20277131000038970172

Lab ID CR75001801

Certification ID 251801

Test Result Report ID: 21PS1801A

Certificate Issue Date: Mar 30, 2021

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	Corsair
Model	RM750x
OEM/ODM	Channel Well Technology
Serial Number	20277131000038970172
Product Specifications	
Manufacturer-Provided Information	
□□□□ (Vrms)	100-240
□□□□ (Arms)	10-5
□□□□ (Hz)	47-63

□□□□ (W)	750
Operating Temperature (Continuous Full Load) (°C)	
□□	ATX12V
□□□□	Fully Modular
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
□□	140mm Magnetic Levitation Fan (NR140ML)
□□□□□	✓
Cybenetics Testing Information	
Lab ID	CR75001801
Date of receipt	Feb 10, 2021
Testing Date	Mar 2, 2021
Report Issued Date	Mar 30, 2021
Engineer Name	-
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

□□□□□ (Non-accredited measurements)

□□□□□				
□□	□□□□	□□□□□□	Gauge	In Cable Capacitors
ATX □□ 20+4 pin (610mm)	1	1	16-20AWG	□
4+4 pin EPS 12V □□ (650mm)	2	2	18AWG	□
6+2pin PCIe□□ (600mm+150mm)	2	4	16-18AWG	□
SATA□□ (500mm+110mm+110mm+110mm)	1	4	18AWG	□
SATA□□ (520mm+110mm+110mm)	2	6	18AWG	□
4-pin Molex (450mm+100mm+100mm+100mm)	1	4	18AWG	□
AC Power Cord (1400mm) - C13 coupler	1	1	18AWG	-

□□□□

□		3.3V	5V	12V	5VSB	-12V
□□□□	□□	20	20	62.5	3	0.3
	□	150		750	15	3.6
□□□□□ (W)		750				

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	✓

Performance Summary

115V

Accredited	
□□□□ (>1450 load combinations)	87.980%
Average Noise Output (>1450 Load Combinations)	27.98dBA
PF□□□ (>1450 Load Combinations)	0.992
Efficiency With 10W (≤500W) or 2% (>500W) Load	77.021%
□□□□□□	0.0354W
Non-Accredited	
12V Ripple (Full Load)	8.89mV
5V Ripple (Full Load)	4.98mV
3.3V Ripple (Full Load)	6.80mV
5VSB Ripple (Full Load)	7.33mV
12V Load Regulation	0.99%
5V Load Regulation	0.57%

3.3V Load Regulation	0.52%
5VSB Load Regulation	1.66%
Inrush Current	24.930A

230V

Accredited		
□□□□ (>1450 load combinations)		90.238%
Average Noise Output (>1450 Load Combinations)		28.00dBA
PF□□□ (>1450 Load Combinations)		0.967
Efficiency With 10W (≤500W) or 2% (>500W) Load		-
□□□□□□		0.0553W
Non-Accredited		
12V Ripple (Full Load)		8.92mV
5V Ripple (Full Load)		5.06mV
3.3V Ripple (Full Load)		7.08mV
5VSB Ripple (Full Load)		6.64mV
12V Load Regulation		0.99%
5V Load Regulation		0.57%
3.3V Load Regulation		0.48%
5VSB Load Regulation		1.70%
Inrush Current		51.640A
□□□□ & PG□□		26.60ms
AC Loss to PWR_OK Hold Up Time		23.90ms
PWR_OK Inactive to DC Loss Delay		2.70ms
PSU Timings: T1 (20% / 100%)	51.0ms	49.0ms
PSU Timings: T3 (20% / 100%)	135.0ms	137.0ms
OPP (26.30°C / 42.18°C)	127.23%	127.23%

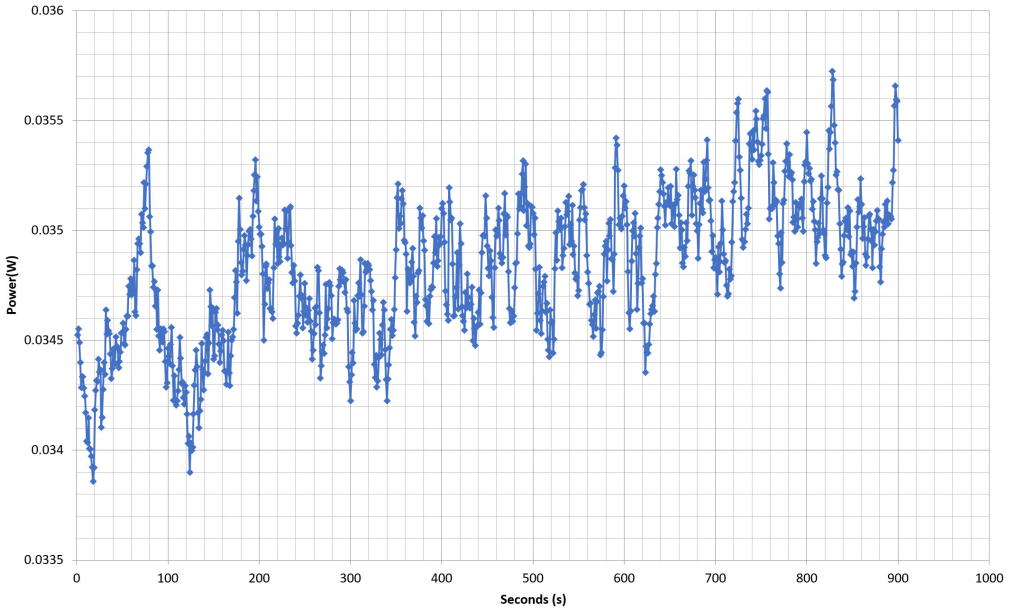
□□□□ & PG□□

Hold-Up Time (ms)	26.6
AC Loss to PWR_OK Hold Up Time (ms)	23.9
PWR_OK Inactive to DC Loss Delay (ms)	2.7

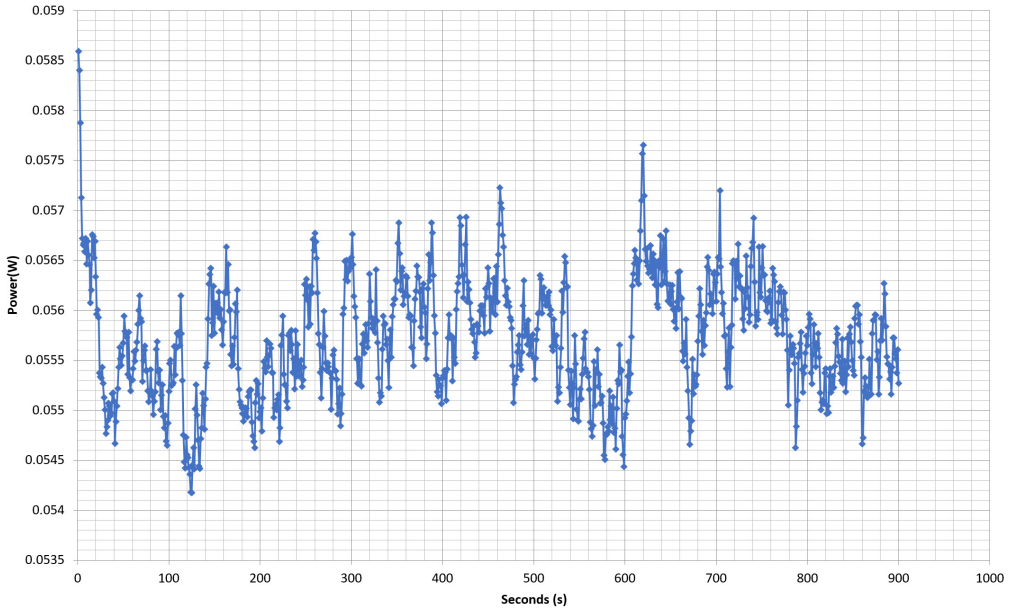
□□□□

Graphs

115V



230V



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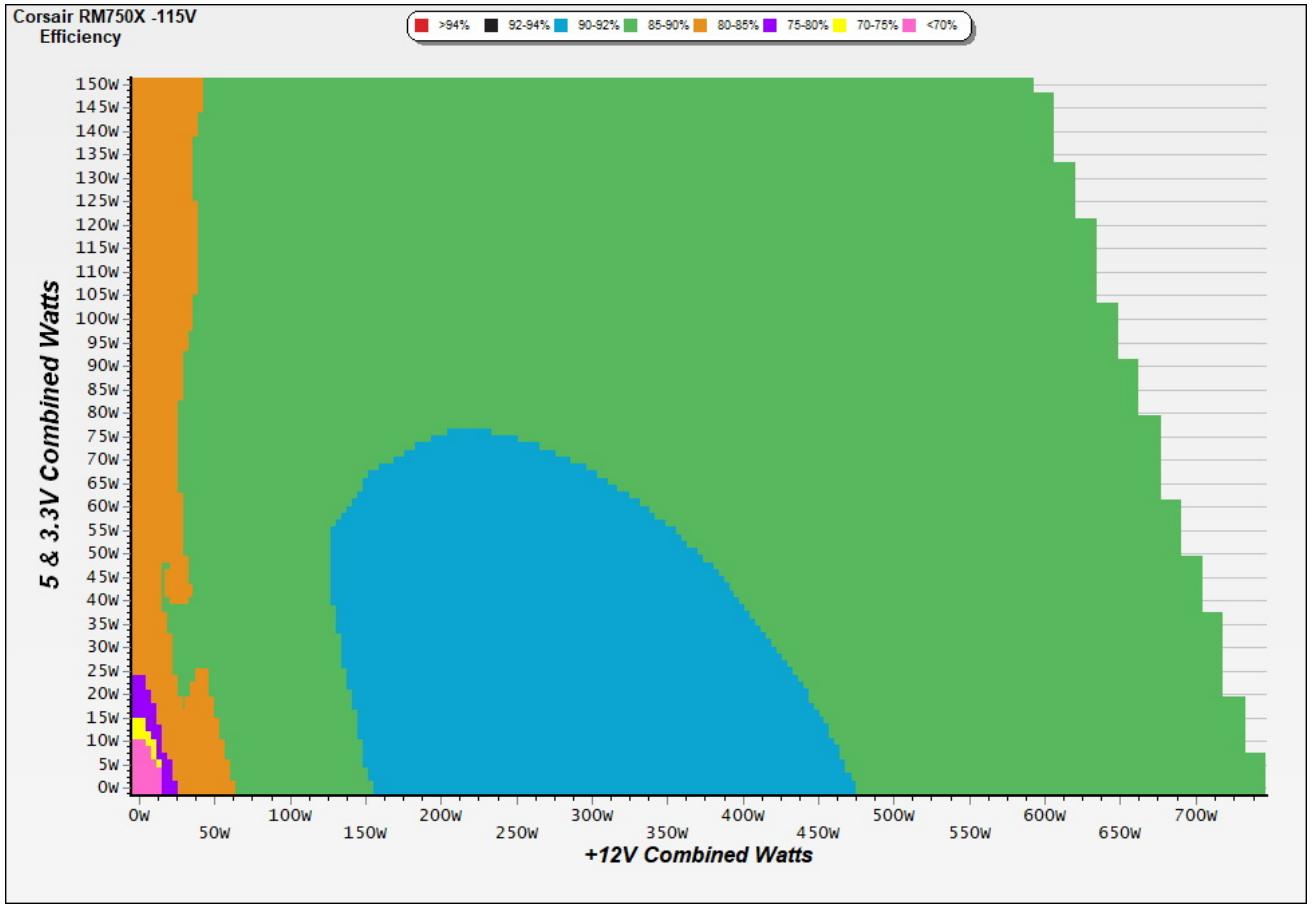
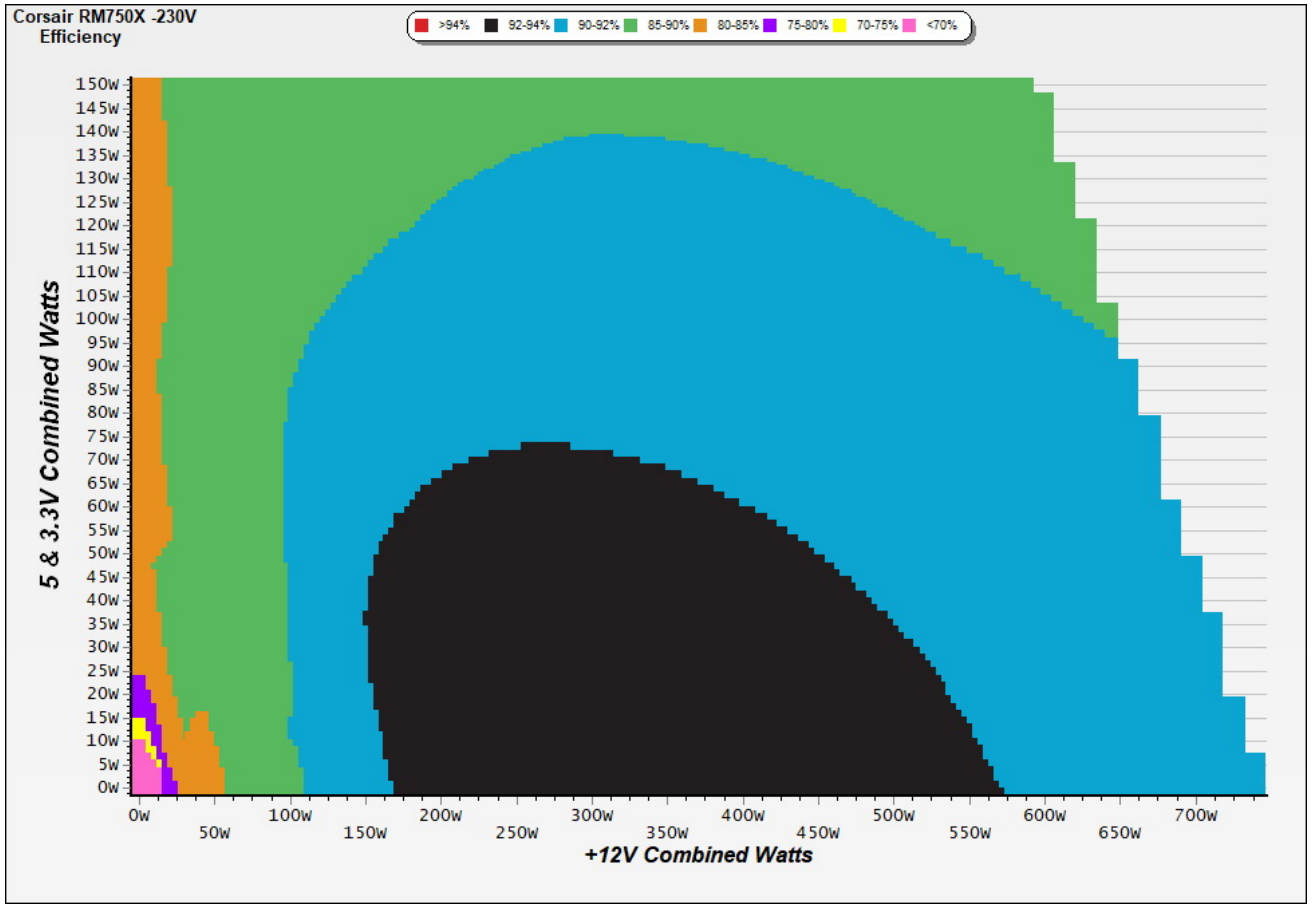
115V



□□

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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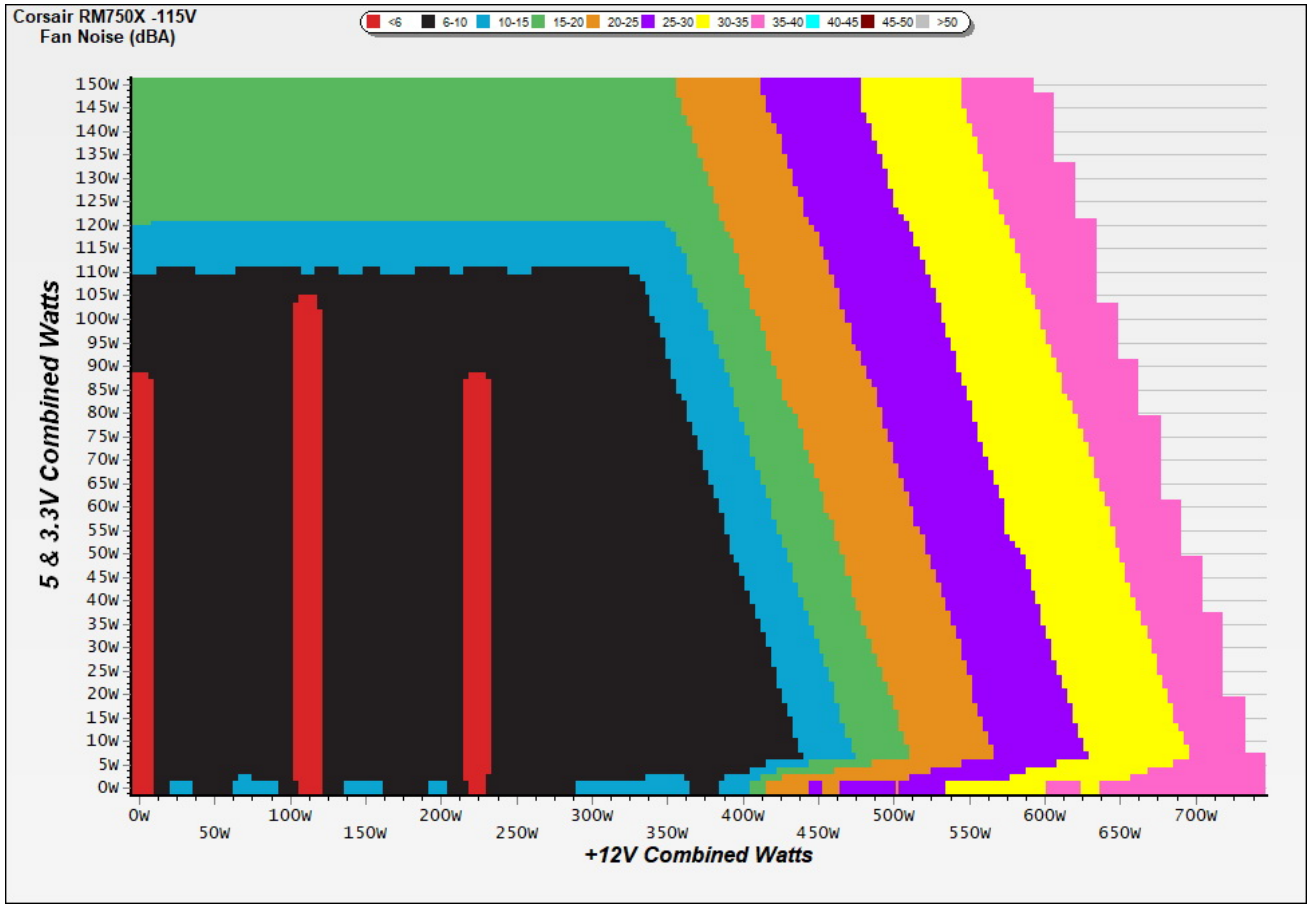
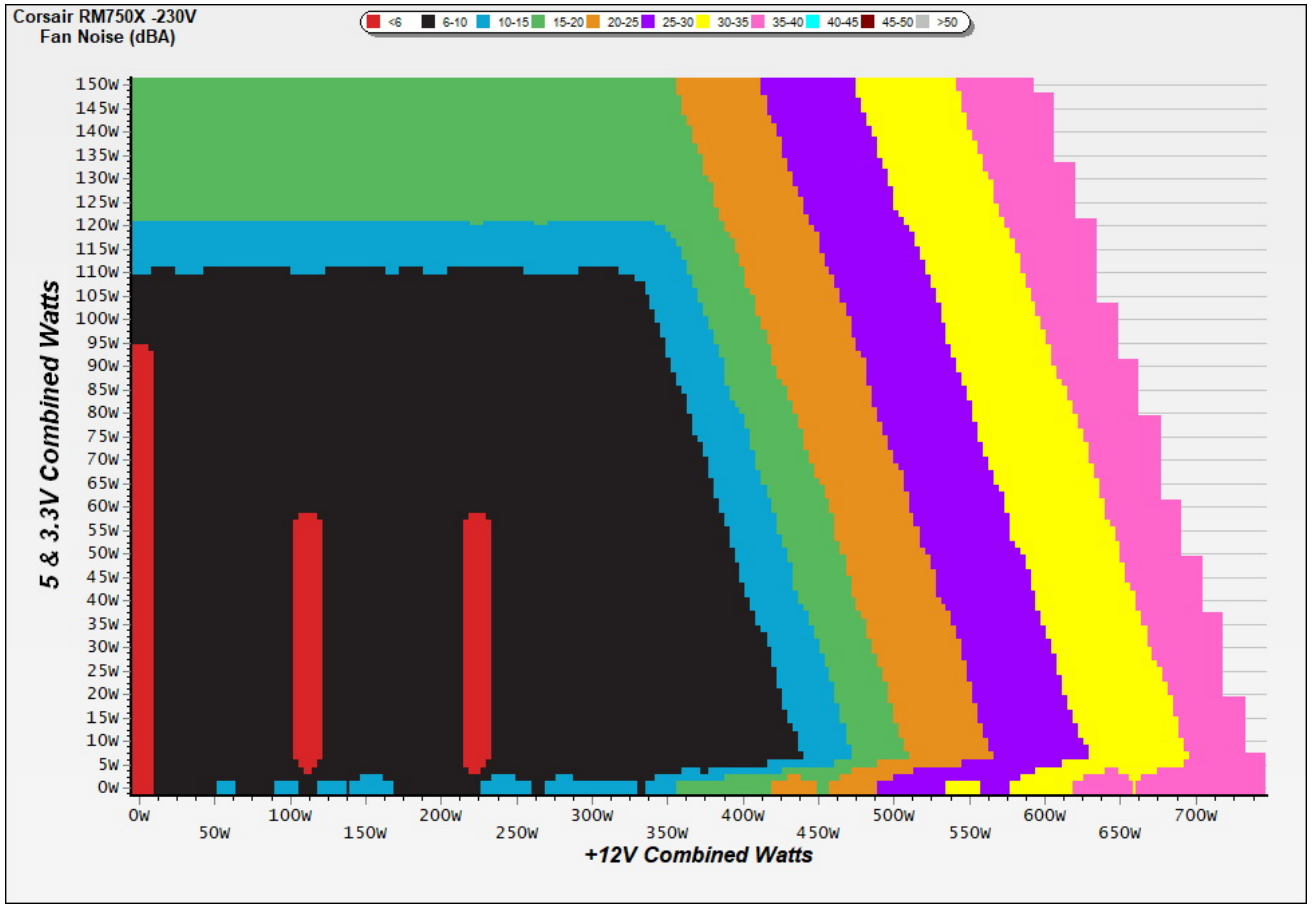
115V



□□

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 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) · 45.7 °C	0 RPM · <6.0 dB(A) · 45.7 °C	fan off in both
20%	0 RPM · <6.0 dB(A) · 46.6 °C	0 RPM · <6.0 dB(A) · 46.6 °C	fan off in both
50%	361 RPM · 7.2 dB(A) · 42.6 °C	361 RPM · 7.2 dB(A) · 42.6 °C	**+0.0 dB(A)**
100%	1512 RPM · 42.5 dB(A) · 45.2 °C	1512 RPM · 42.5 dB(A) · 45.2 °C	**+0.0 dB(A)**

230V

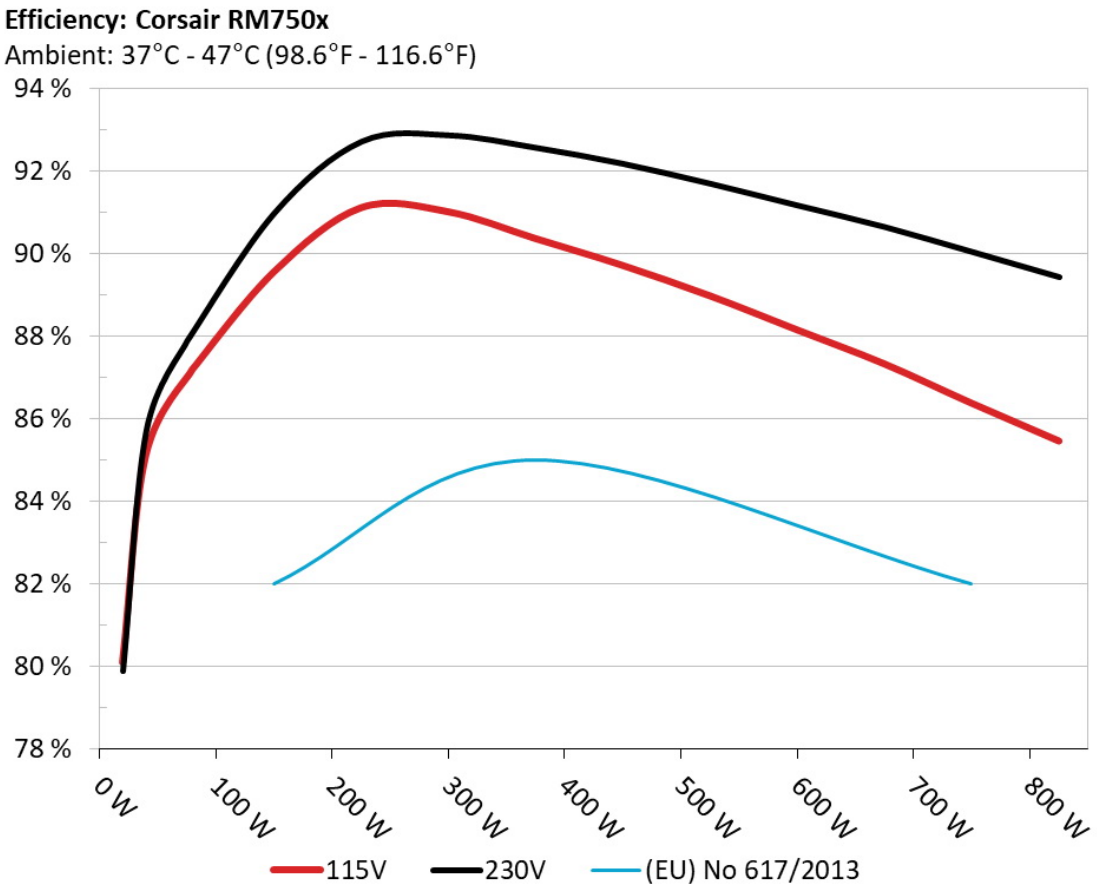
Load	Normal ambient fan · noise · intake	High ambient fan · noise · intake	Noise change
10%	0 RPM · <6.0 dB(A) · 45.2 °C	0 RPM · <6.0 dB(A) · 45.2 °C	fan off in both
20%	0 RPM · <6.0 dB(A) · 46.4 °C	0 RPM · <6.0 dB(A) · 46.4 °C	fan off in both
50%	362 RPM · 7.3 dB(A) · 42.2 °C	362 RPM · 7.3 dB(A) · 42.2 °C	**+0.0 dB(A)**
100%	1515 RPM · 42.6 dB(A) · 45.9 °C	1515 RPM · 42.6 dB(A) · 45.9 °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: the fan is stopped or too quiet to measure (the fan speed column says which); with the fan stopped, the intake sensor can read higher than the chamber air.

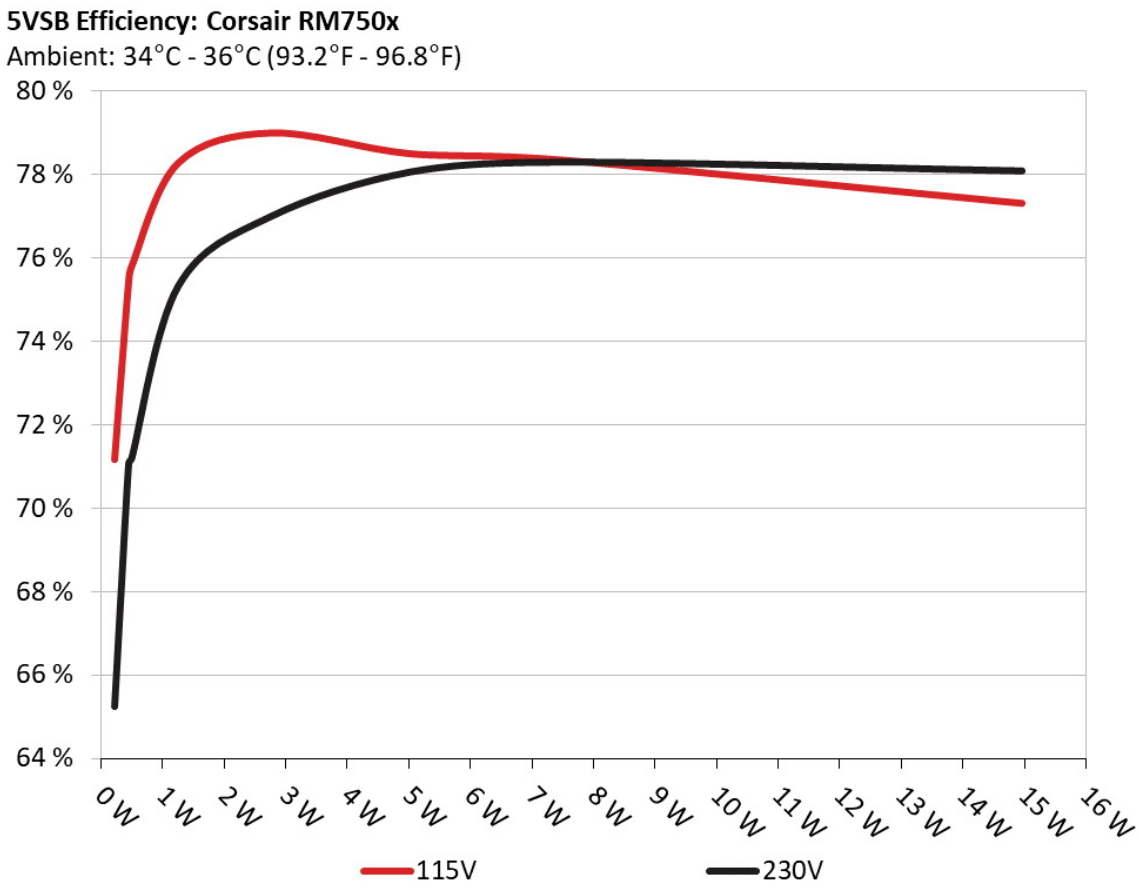
Informational. Not part of the ETA or LAMBDA rating.

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□□□□



□□

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	0.227	71.160%	0.033
	5.045V	0.319		115.15V
2	0.090A	0.454	75.415%	0.061
	5.043V	0.602		115.15V
3	0.550A	2.769	78.979%	0.262
	5.034V	3.506		115.17V
4	1.000A	5.026	78.482%	0.350
	5.025V	6.404		115.16V
5	1.500A	7.524	78.326%	0.400
	5.015V	9.606		115.15V
6	3.000A	14.959	77.296%	0.466
	4.986V	19.353		115.15V

230V

□□ #	5VSB	DC/AC (□)	□□	PF/AC □□
1	0.045A	0.227	65.230%	0.011
	5.046V	0.348		230.34V
2	0.090A	0.454	71.049%	0.020
	5.044V	0.639		230.33V
3	0.550A	2.770	76.987%	0.105
	5.036V	3.598		230.32V
4	1.000A	5.028	78.050%	0.171
	5.027V	6.442		230.32V
5	1.500A	7.528	78.286%	0.228
	5.017V	9.616		230.32V
6	3.000A	14.965	78.077%	0.327
	4.988V	19.167		230.31V

Supplementary Tests (For Reference)

10-110%□□□□

115V

□□ #	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
1	4.426A	1.981A	2.003A	0.994A	74.964	86.350%	0	<6.0	45.68°C	0.976
	12.057V	5.046V	3.296V	5.032V	86.814				40.72°C	115.17V
2	9.890A	2.974A	3.006A	1.194A	150.044	89.565%	0	<6.0	46.61°C	0.991
	12.047V	5.042V	3.294V	5.027V	167.526				40.96°C	115.17V
3	15.726A	3.473A	3.509A	1.394A	225.052	91.126%	0	<6.0	48.28°C	0.995
	12.018V	5.040V	3.292V	5.022V	246.967				41.85°C	115.17V
4	21.560A	3.971A	4.009A	1.595A	300.053	91.026%	0	<6.0	48.81°C	0.995
	12.006V	5.038V	3.291V	5.018V	329.636				41.94°C	115.12V
5	27.021A	4.964A	5.015A	1.795A	374.621	90.381%	361	7.2	42.58°C	0.994
	11.995V	5.037V	3.290V	5.015V	414.492				49.84°C	115.11V
6	32.530A	5.961A	6.022A	1.996A	449.525	89.729%	490	10.9	42.77°C	0.995
	11.980V	5.034V	3.289V	5.011V	500.982				50.70°C	115.11V
7	38.080A	6.958A	7.027A	2.198A	524.855	88.989%	712	21.0	43.51°C	0.995
	11.968V	5.031V	3.288V	5.006V	589.795				52.37°C	115.11V
8	43.636A	7.957A	8.034A	2.400A	600.168	88.158%	942	29.7	43.88°C	0.996
	11.957V	5.028V	3.286V	5.002V	680.789				53.14°C	115.11V
9	49.566A	8.461A	8.525A	2.400A	674.727	87.338%	1244	38.2	44.80°C	0.996
	11.948V	5.025V	3.284V	5.000V	772.544				54.75°C	115.10V
10	55.308A	8.964A	9.048A	3.009A	749.982	86.381%	1512	42.5	45.23°C	0.997
	11.938V	5.022V	3.282V	4.986V	868.225				55.74°C	115.10V
11	61.658A	8.969A	9.052A	3.011A	825.230	85.461%	1914	48.1	46.58°C	0.997
	11.929V	5.019V	3.281V	4.982V	965.625				57.40°C	115.12V
CL1	0.116A	18.002A	17.999A	0.000A	151.036	82.569%	592	15.2	42.86°C	0.992
	12.024V	5.026V	3.287V	5.076V	182.921				49.79°C	115.15V

CL2	62.528A	1.000A	1.000A	1.000A	760.339	86.946%	1907	48.4	45.44°C	0.997
	11.947V	5.025V	3.282V	5.011V	874.498				55.98°C	115.20V

The results above are not used in the certification process

230V

□□ #	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
1	4.426A	1.981A	2.003A	0.994A	74.959	87.221%	0	<6.0	45.19°C	0.839
	12.056V	5.046V	3.296V	5.032V	85.941				40.29°C	230.36V
2	9.889A	2.975A	3.004A	1.194A	150.031	90.974%	0	<6.0	46.41°C	0.938
	12.047V	5.042V	3.294V	5.027V	164.916				40.76°C	230.36V
3	15.725A	3.473A	3.508A	1.394A	225.037	92.710%	0	<6.0	47.30°C	0.965
	12.018V	5.040V	3.292V	5.023V	242.732				41.18°C	230.36V
4	21.559A	3.970A	4.011A	1.595A	300.045	92.863%	0	<6.0	48.61°C	0.977
	12.006V	5.039V	3.291V	5.018V	323.105				41.96°C	230.36V
5	27.020A	4.965A	5.017A	1.795A	374.594	92.563%	362	7.3	42.16°C	0.983
	11.994V	5.037V	3.290V	5.015V	404.691				49.44°C	230.36V
6	32.529A	5.962A	6.021A	1.996A	449.515	92.175%	491	10.9	42.60°C	0.986
	11.980V	5.034V	3.289V	5.011V	487.677				50.61°C	230.36V
7	38.083A	6.957A	7.028A	2.198A	524.858	91.691%	712	21.0	43.07°C	0.988
	11.967V	5.032V	3.288V	5.006V	572.419				51.52°C	230.37V
8	43.638A	7.958A	8.035A	2.400A	600.165	91.163%	942	29.7	43.91°C	0.990
	11.956V	5.029V	3.286V	5.002V	658.345				53.08°C	230.39V
9	49.570A	8.459A	8.525A	2.400A	674.714	90.643%	1218	37.5	44.30°C	0.991
	11.947V	5.025V	3.284V	5.000V	744.361				54.23°C	230.40V
10	55.310A	8.961A	9.046A	3.009A	749.938	90.040%	1515	42.6	45.91°C	0.992
	11.937V	5.022V	3.283V	4.986V	832.890				56.20°C	230.43V
11	61.658A	8.967A	9.053A	3.011A	825.169	89.427%	1913	48.1	46.60°C	0.992
	11.928V	5.019V	3.281V	4.983V	922.732				57.45°C	230.46V
CL1	0.116A	18.001A	17.998A	0.000A	151.044	83.635%	591	15.2	42.31°C	0.946
	12.021V	5.026V	3.288V	5.077V	180.598				49.74°C	230.39V

CL2	62.516A	1.000A	1.002A	1.000A	760.207	90.506%	1912	48.1	45.69°C	0.992
	11.947V	5.026V	3.283V	5.012V	839.955				56.16°C	230.40V

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 □□
1	1.239A	0.493A	0.500A	0.197A	19.992	80.087%	0	<6.0	0.832
	11.976V	5.072V	3.310V	5.070V	24.963				115.17V
2	2.478A	0.990A	1.000A	0.397A	39.983	85.115%	0	<6.0	0.937
	11.977V	5.051V	3.299V	5.047V	46.975				115.17V
3	3.720A	1.486A	1.501A	0.595A	60.013	87.199%	0	<6.0	0.967
	11.979V	5.048V	3.298V	5.041V	68.823				115.17V
4	4.925A	1.982A	2.000A	0.795A	79.963	86.916%	0	<6.0	0.978
	12.054V	5.046V	3.296V	5.036V	92.000				115.17V

The results above are not used in the certification process

230V

□□ #	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	PF/AC □□
1	1.239A	0.493A	0.499A	0.197A	19.989	79.883%	0	<6.0	0.446
	11.975V	5.072V	3.310V	5.070V	25.023				230.36V
2	2.478A	0.990A	1.001A	0.396A	39.979	85.696%	0	<6.0	0.663
	11.976V	5.051V	3.300V	5.046V	46.652				230.37V
3	3.720A	1.485A	1.501A	0.595A	60.008	87.875%	0	<6.0	0.780
	11.979V	5.048V	3.298V	5.041V	68.288				230.36V
4	4.925A	1.982A	2.001A	0.794A	79.958	87.707%	0	<6.0	0.852
	12.054V	5.045V	3.296V	5.036V	91.165				230.36V

The results above are not used in the certification process

115V

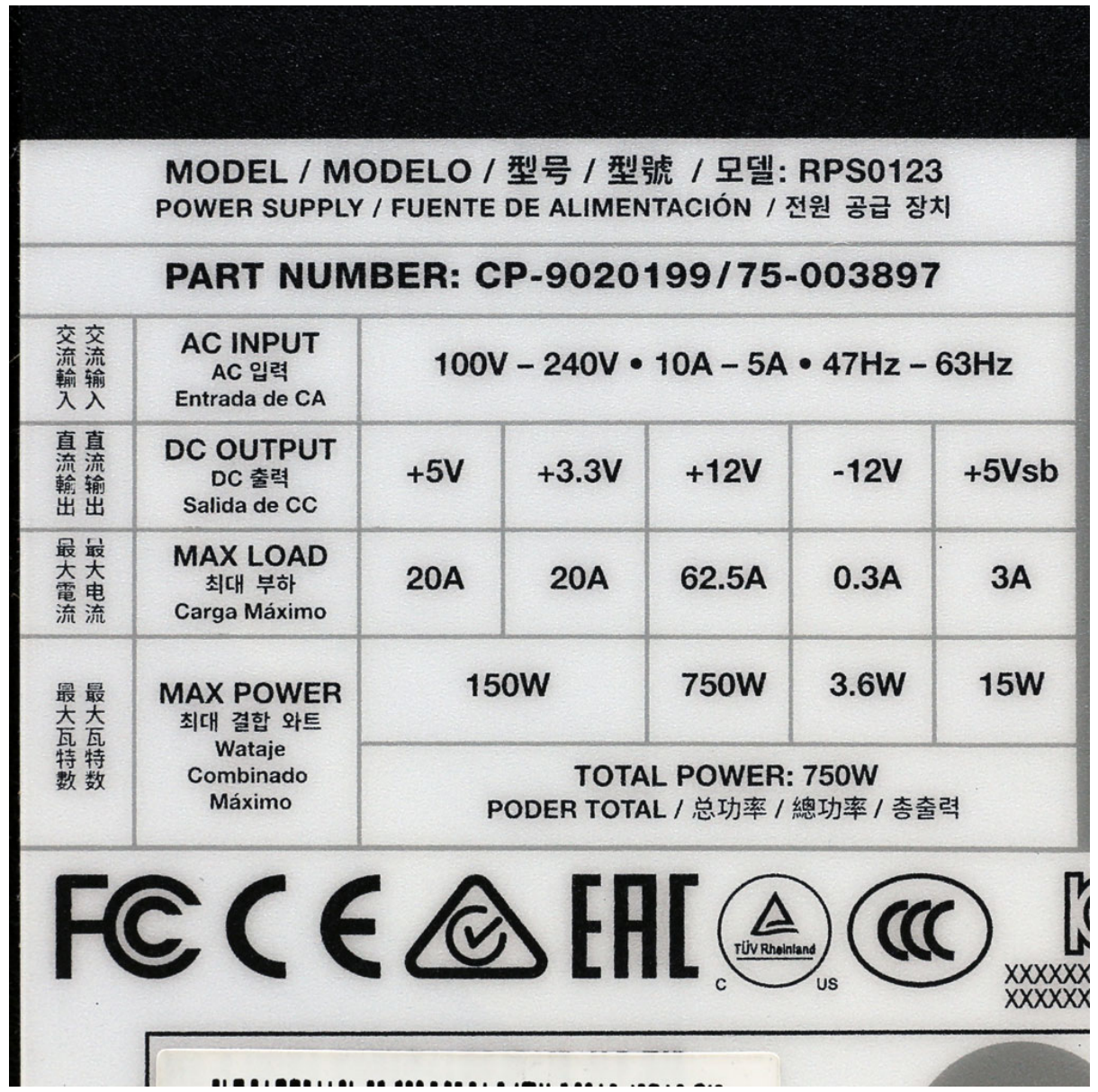
Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	4.50mV	3.30mV	3.30mV	4.90mV	Pass
20% Load	4.90mV	3.60mV	3.00mV	4.90mV	Pass
30% Load	8.10mV	3.50mV	3.30mV	5.20mV	Pass
40% Load	6.90mV	3.50mV	3.00mV	4.90mV	Pass
50% Load	6.40mV	3.80mV	3.10mV	5.00mV	Pass
60% Load	6.30mV	6.80mV	9.70mV	7.30mV	Pass
70% Load	6.10mV	4.00mV	3.50mV	5.40mV	Pass
80% Load	6.10mV	4.50mV	6.20mV	5.30mV	Pass
90% Load	5.90mV	4.30mV	7.60mV	5.30mV	Pass
100% Load	8.90mV	5.00mV	6.80mV	7.30mV	Pass
110% Load	9.00mV	5.10mV	9.80mV	6.40mV	Pass
Crossload1	5.30mV	4.60mV	7.90mV	6.10mV	Pass
Crossload2	9.30mV	4.50mV	3.70mV	5.80mV	Pass

The results above are not used in the certification process

230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	4.90mV	3.50mV	3.30mV	5.30mV	Pass
20% Load	4.70mV	3.40mV	2.90mV	5.10mV	Pass
30% Load	8.10mV	3.50mV	3.00mV	4.90mV	Pass
40% Load	7.20mV	3.70mV	3.20mV	5.50mV	Pass
50% Load	6.60mV	3.70mV	3.00mV	5.70mV	Pass
60% Load	6.40mV	7.20mV	9.80mV	7.90mV	Pass
70% Load	6.70mV	3.90mV	3.70mV	5.30mV	Pass
80% Load	6.70mV	4.40mV	6.60mV	5.50mV	Pass





Test	12V	5V	3.3V	5VSB	Pass/Fail
90% Load	6.20mV	4.90mV	7.10mV	5.50mV	Pass
100% Load	8.90mV	5.10mV	7.10mV	6.60mV	Pass
110% Load	9.50mV	5.30mV	9.00mV	6.20mV	Pass
Crossload1	5.20mV	4.10mV	7.70mV	5.40mV	Pass
Crossload2	5.30mV	4.50mV	8.00mV	6.30mV	Pass

The results above are not used in the certification process

Corsair RM750x

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

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）

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