Make It Yours.

Cooler Master V750 SFX Gold (2021)

MPY7501SFHAGVEU1211500061

Lab ID CM75001904

Certification ID 251904

Test Result Report ID: 21PS1904A

Certificate Issue Date: Sep 15, 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	Cooler Master
Model	V750 SFX Gold (2021)
OEM/ODM	Gospower
Serial Number	MPY7501SFHAGVEU1211500061
Product Specifications	
Manufacturer-Provided Information	
□□□□ (Vrms)	100-240
□□□□ (Arms)	10-5
□□□□ (Hz)	50-60

□□□□ (W)	750
Operating Temperature (Continuous Full Load) (°C)	
□□	SFX
□□□□	Fully Modular
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
□□	92mm Fluid Dynamic Bearing Fan (HA9215VH12FD-F00)
□□□□□	✓
Cybenetics Testing Information	
Lab ID	CM75001904
Date of receipt	Sep 6, 2021
Testing Date	Sep 13, 2021
Report Issued Date	Sep 15, 2021
Engineer Name	-
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

□□□□□ (Non-accredited measurements)

□□□□□				
□□	□□□□	□□□□□□	Gauge	In Cable Capacitors
ATX □□ 20+4 pin (300mm)	1	1	18-22AWG	□
4+4 pin EPS 12V □□ (460mm)	1	1	18AWG	□
8 pin EPS 12V □□ (460mm)	1	1	18AWG	□
6+2pin PCIe□□ (400mm+120mm)	2	4	16-18AWG	□
SATA□□ (100mm+110mm+110mm+110mm)	2	8	18AWG	□
□ 4pin Molex□□ (100mm+110mm+110mm+110mm)	1	4	18AWG	□
AC Power Cord (1380mm) - C13 coupler	1	1	18AWG	-

□□□□

□		3.3V	5V	12V	5VSB	-12V
□□□□	□□	20	20	62.5	3	0.3
	□	120		750	15	3.6
□□□□□ (W)		750				

Parts Description

General Data	-
Manufacturer (OEM)	Gospower
PCB Type	Double Sided
Primary Side	-
Transient Filter	4x Y caps, 2x X caps, 2x CM chokes, 1x MOV, 1x MPS HF81 (Discharge IC)
Inrush Protection	NTC Thermistor & Relay
Bridge Rectifier(s)	1x
APFC MOSFETs	2x STMicroelectronics STF33N60DM2 (600V, 15.5A @ 100°C, Rds(on): 0.13Ohm)
APFC Boost Diode	1x
Bulk Cap(s)	1x Nichicon (450V, 560uF, 2,000h @ 105°C, LGM)
Main Switchers	2x Sanrise Tech SRC60R140BTFE (600V, 11.2A @ 125°C, Rds(on): 0.14Ohm)
APFC Controller	Champion CM6500UNX & CM03AX
Resonant Controller	Champion CU6901VAC
Topology	Primary side: APFC, Half-Bridge & LLC converter Secondary side: Synchronous Rectification & DC-DC converters
Secondary Side	-
+12V MOSFETs	6x NCE Power NCEP40T15GU (40V, 106A @ 100°C, Rds(on): 1.35mOhm)
5V & 3.3V	DC-DC Converters: 6x On Semiconductor NTMFS4C022N (30V, 136A, Rds(on): 1.7mOhm) PWM Controller(s): ANPEC APW7159C
Filtering Capacitors	Electrolytic: 4x Rubycon (4-10,000h @ 105°C, YXF) Polymer: 28x FPCAP, 1x Nippon Chemi-Con
Supervisor IC	IN1S313I-SAG
Fan Model	Hong Hua HA9215VH12FD-F00 (92mm, 12V, 0.36A, Fluid Dynamic Bearing Fan)
5VSB Circuit	-

Standby PWM Controller	On-Bright OB2365SP

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)	88.850%
Average Noise Output (>1450 Load Combinations)	37.51dBA
PF□□□ (>1450 Load Combinations)	0.972
Efficiency With 10W (≤500W) or 2% (>500W) Load	63.242%
□□□□□□	0.0420W
Non-Accredited	
12V Ripple (Full Load)	16.30mV
5V Ripple (Full Load)	13.38mV
3.3V Ripple (Full Load)	7.97mV
5VSB Ripple (Full Load)	24.02mV
12V Load Regulation	1.23%
5V Load Regulation	1.15%
3.3V Load Regulation	1.89%
5VSB Load Regulation	7.24%
Inrush Current	64.240A

230V

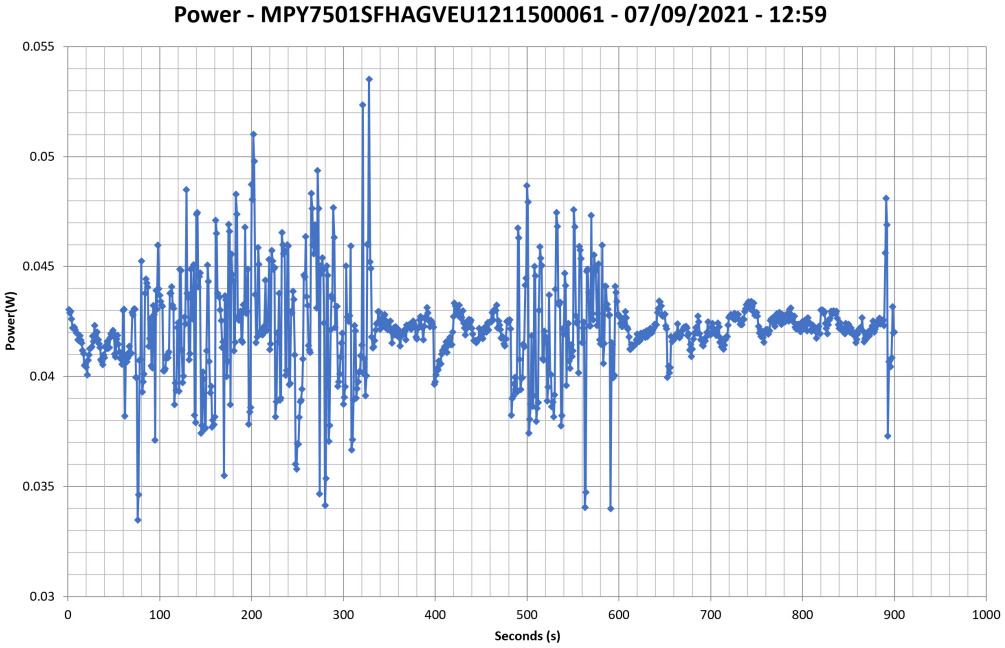
Accredited		
□□□□ (>1450 load combinations)		91.125%
Average Noise Output (>1450 Load Combinations)		36.82dBA
PF□□□ (>1450 Load Combinations)		0.936
Efficiency With 10W (≤500W) or 2% (>500W) Load		-
□□□□□□		0.0835W
Non-Accredited		
12V Ripple (Full Load)		17.18mV
5V Ripple (Full Load)		12.67mV
3.3V Ripple (Full Load)		7.27mV
5VSB Ripple (Full Load)		25.46mV
12V Load Regulation		1.21%
5V Load Regulation		1.15%
3.3V Load Regulation		1.89%
5VSB Load Regulation		8.32%
Inrush Current		87.250A
□□□□ & PG□□		19.30ms
AC Loss to PWR_OK Hold Up Time		16.20ms
PWR_OK Inactive to DC Loss Delay		3.10ms
PSU Timings: T1 (20% / 100%)	48.0ms	48.0ms
PSU Timings: T3 (20% / 100%)	136.0ms	136.0ms
OPP (22.10°C / 39.53°C)	122.75%	120.61%

□□□□ & PG□□

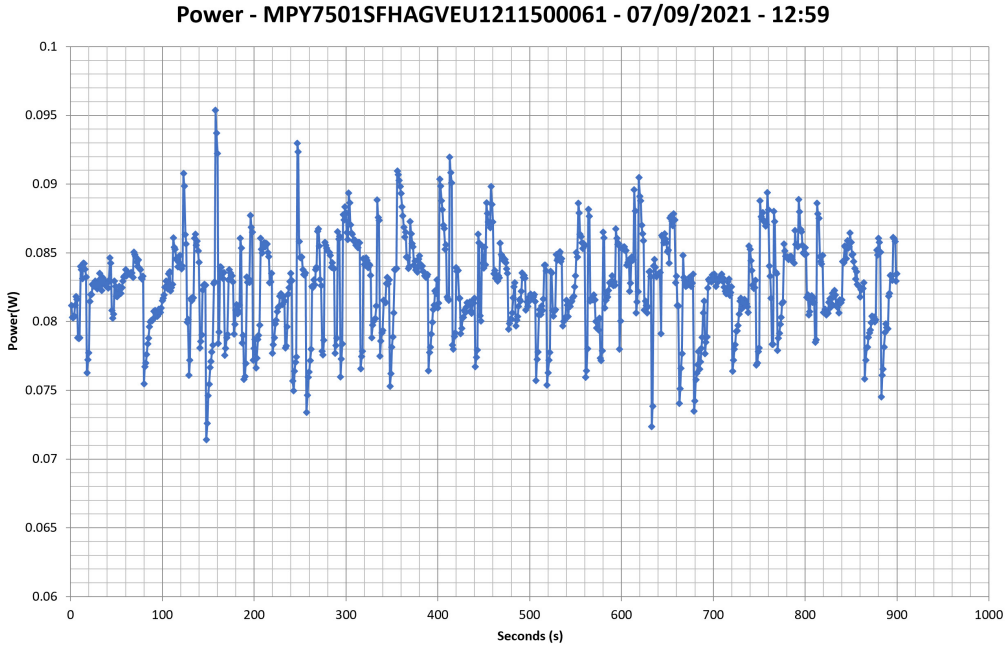
Hold-Up Time (ms)	19.3
AC Loss to PWR_OK Hold Up Time (ms)	16.2
PWR_OK Inactive to DC Loss Delay (ms)	3.1

Graphs

115V



230V



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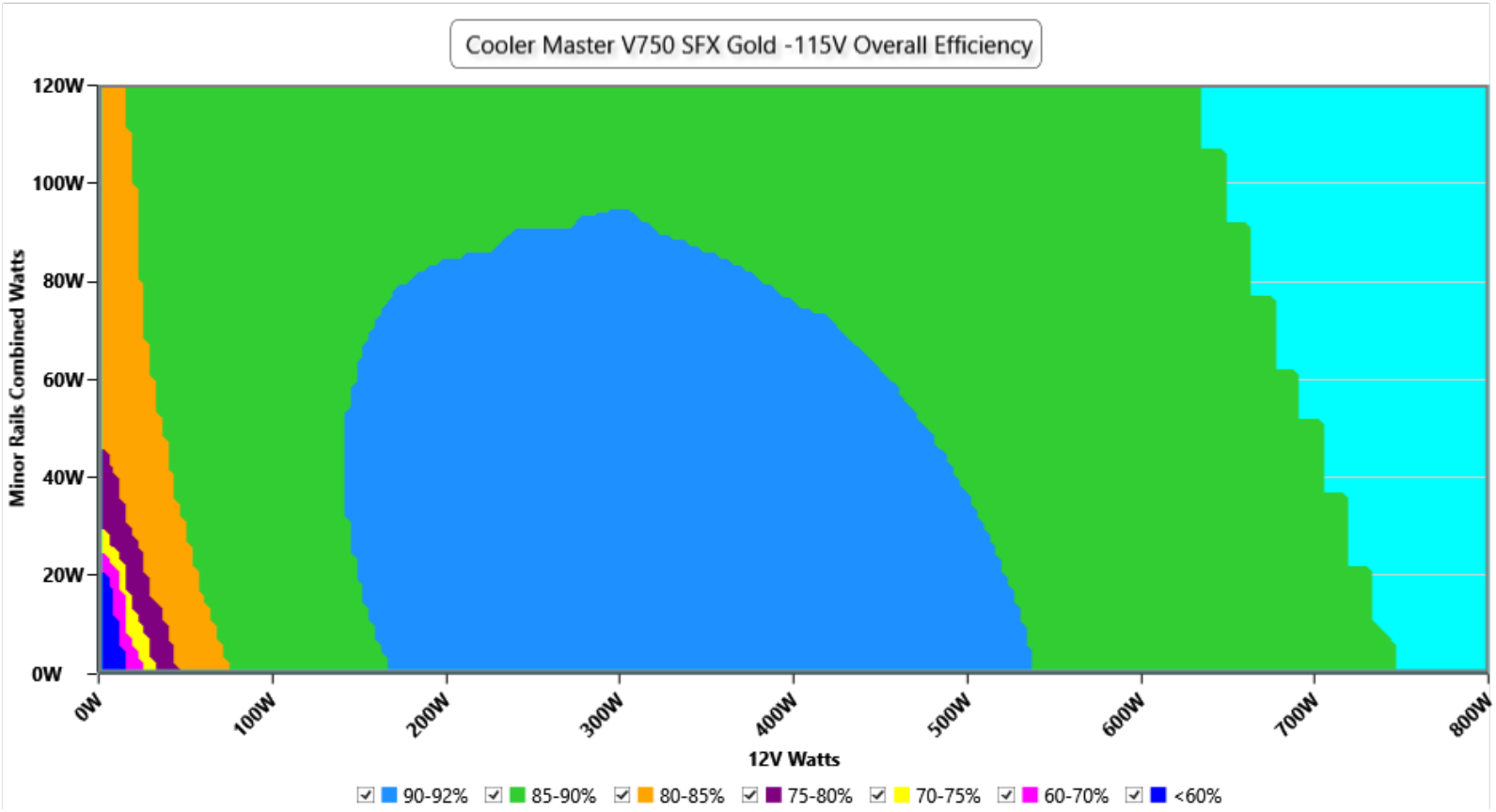
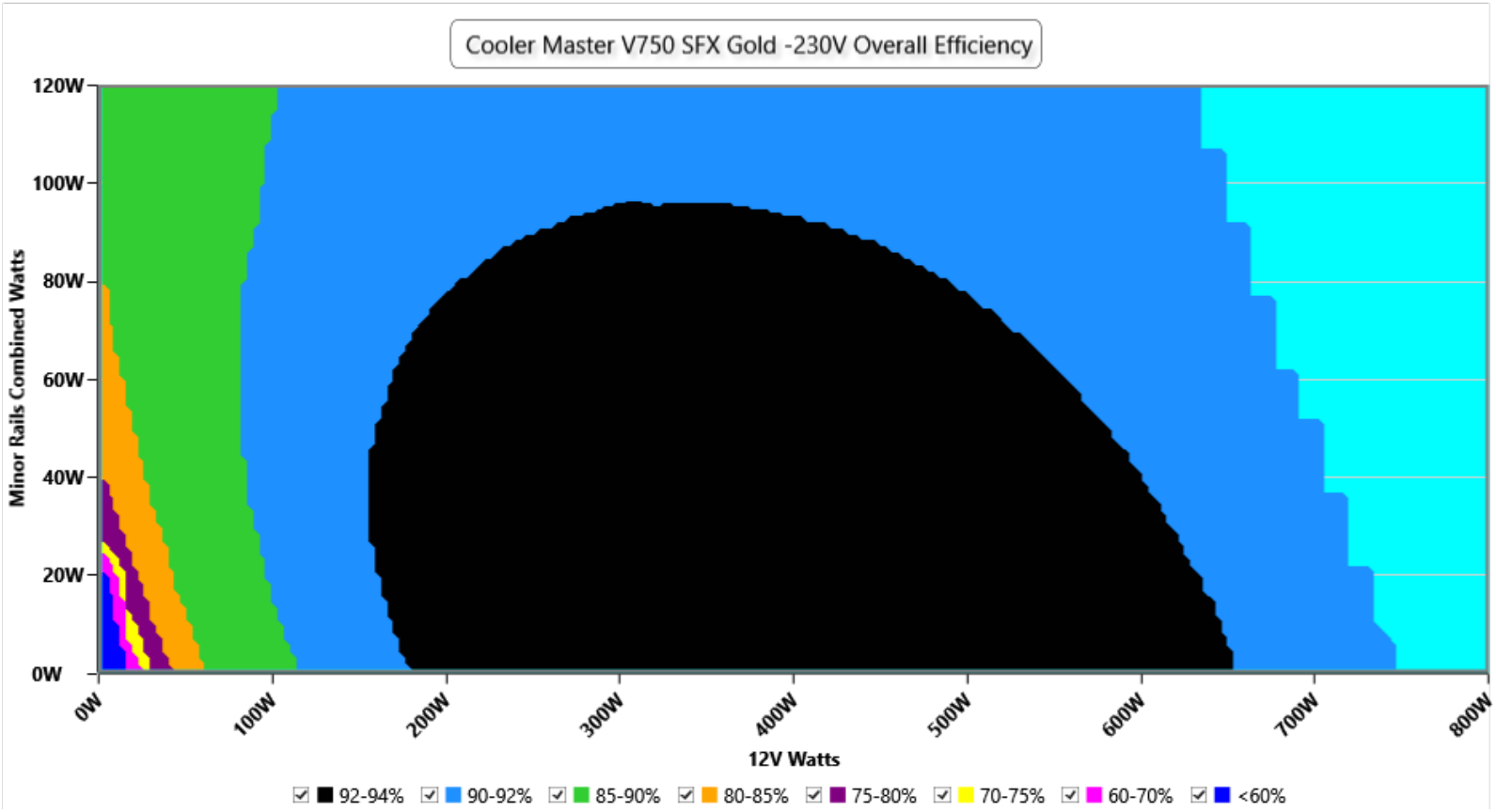
115V



□□

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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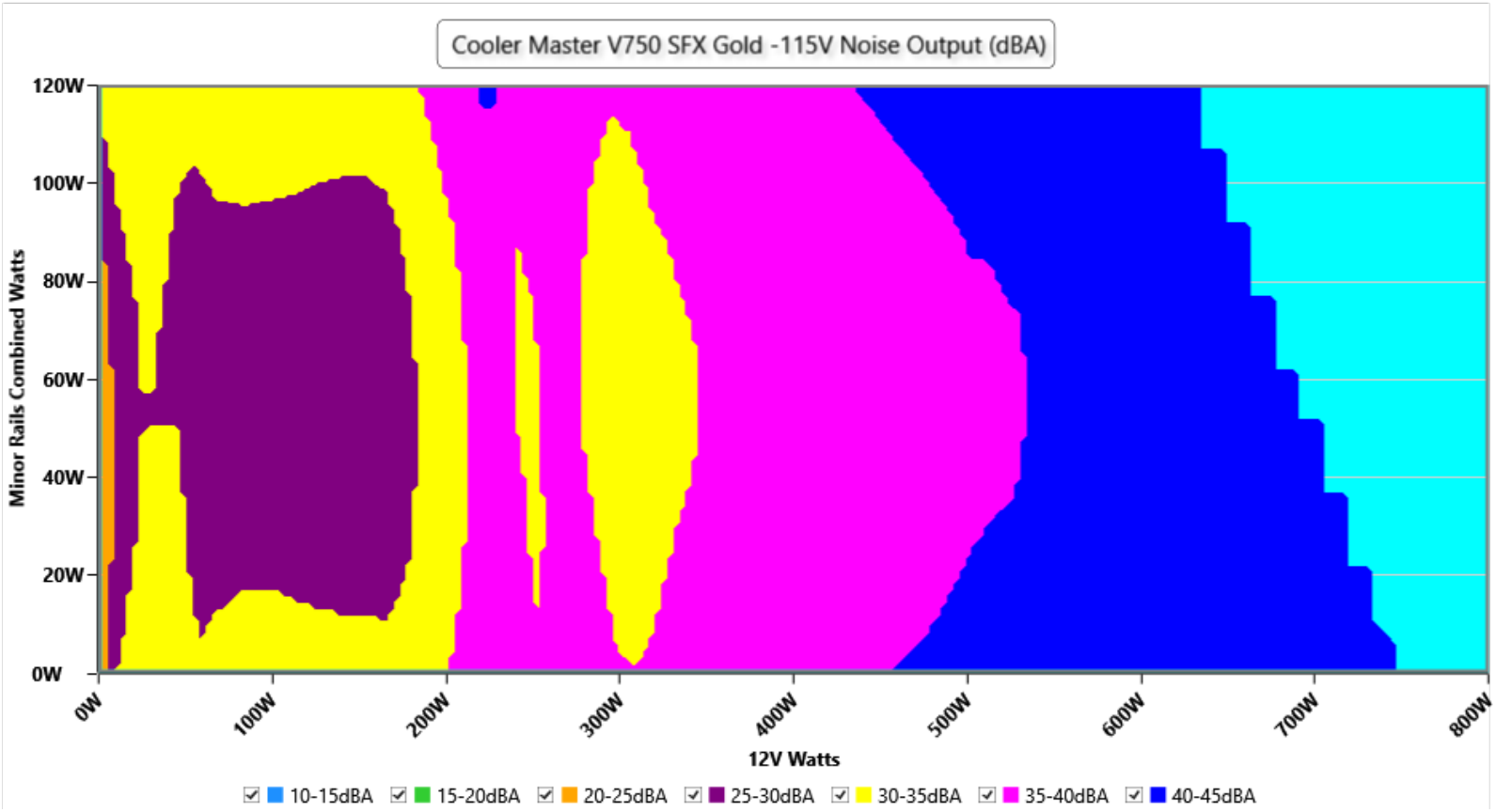
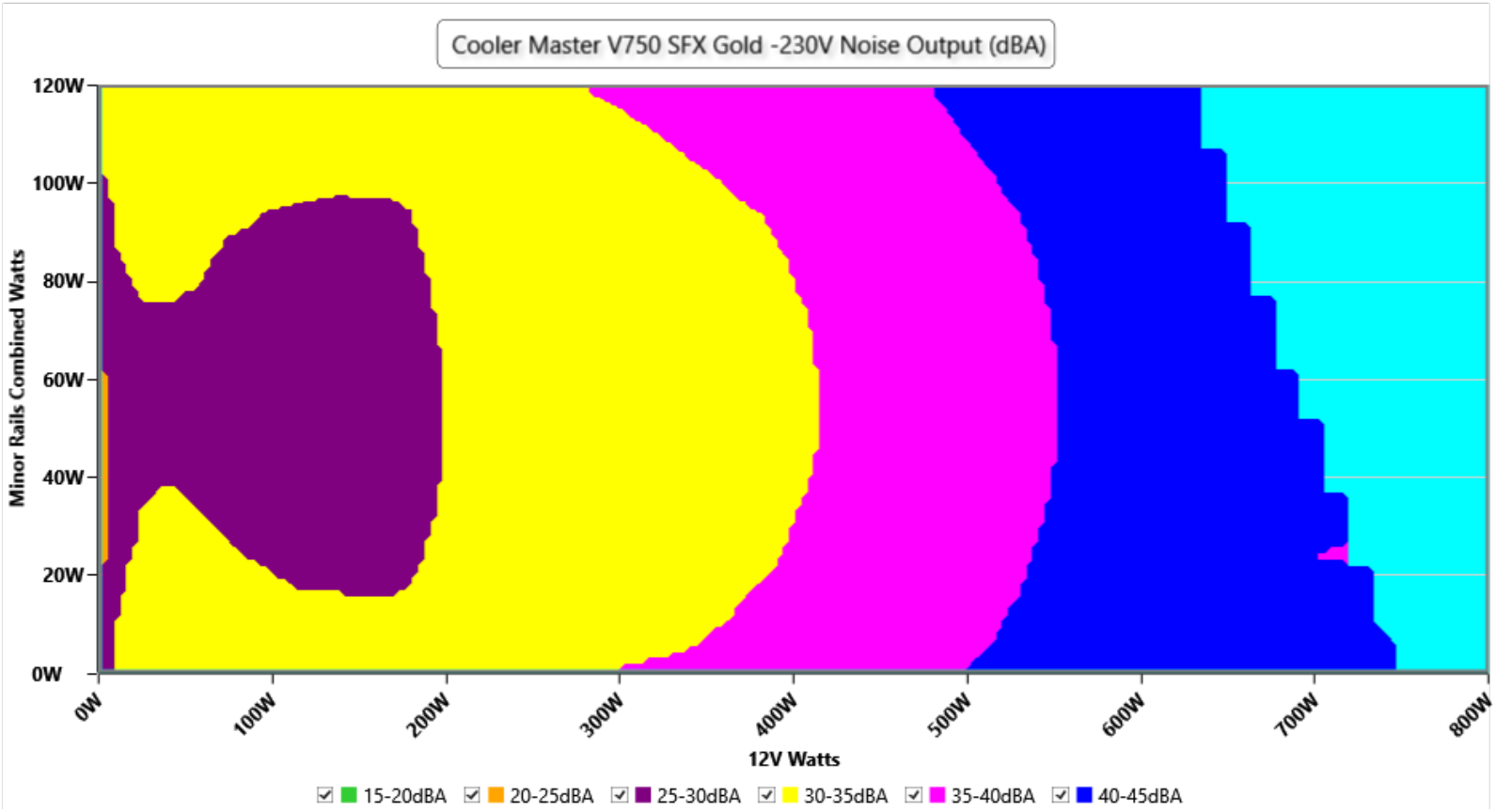
115V



□□

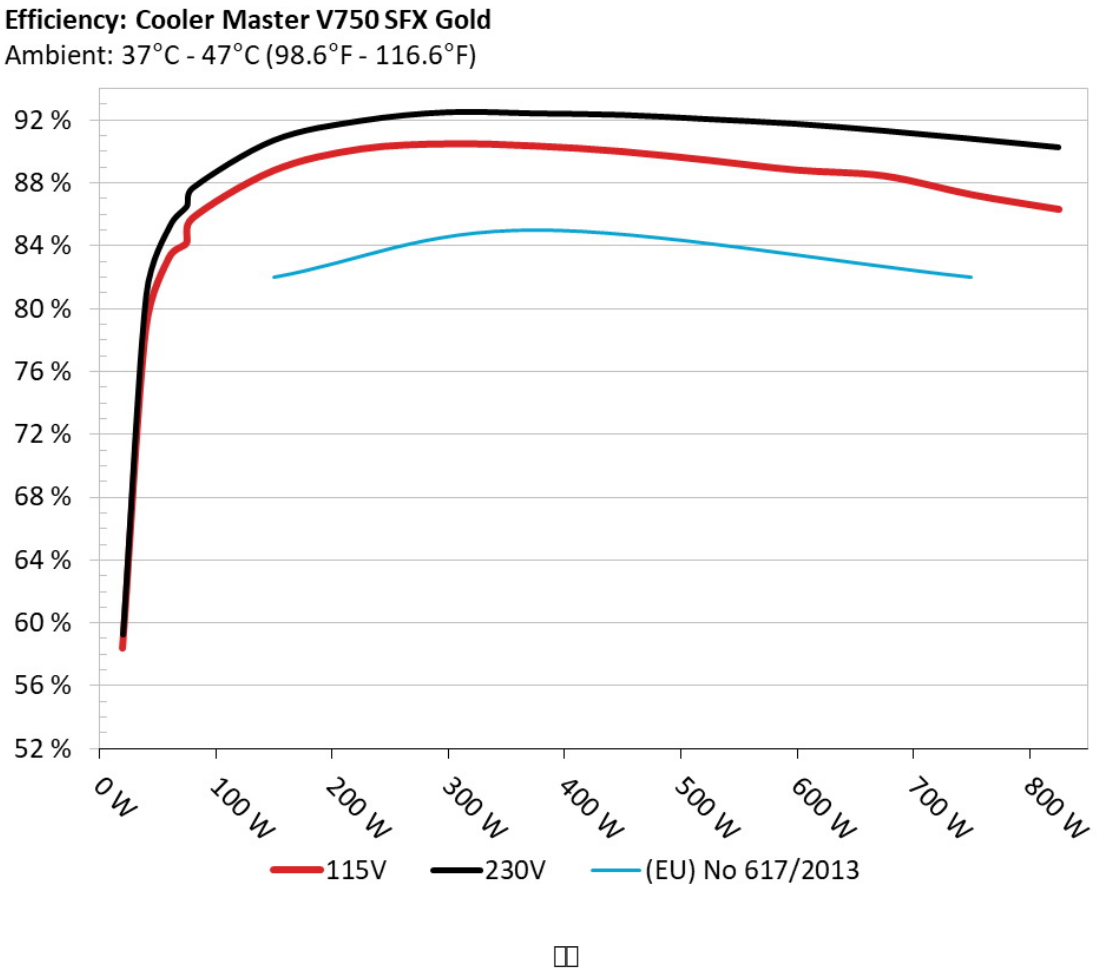
The PSU`s noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

230V



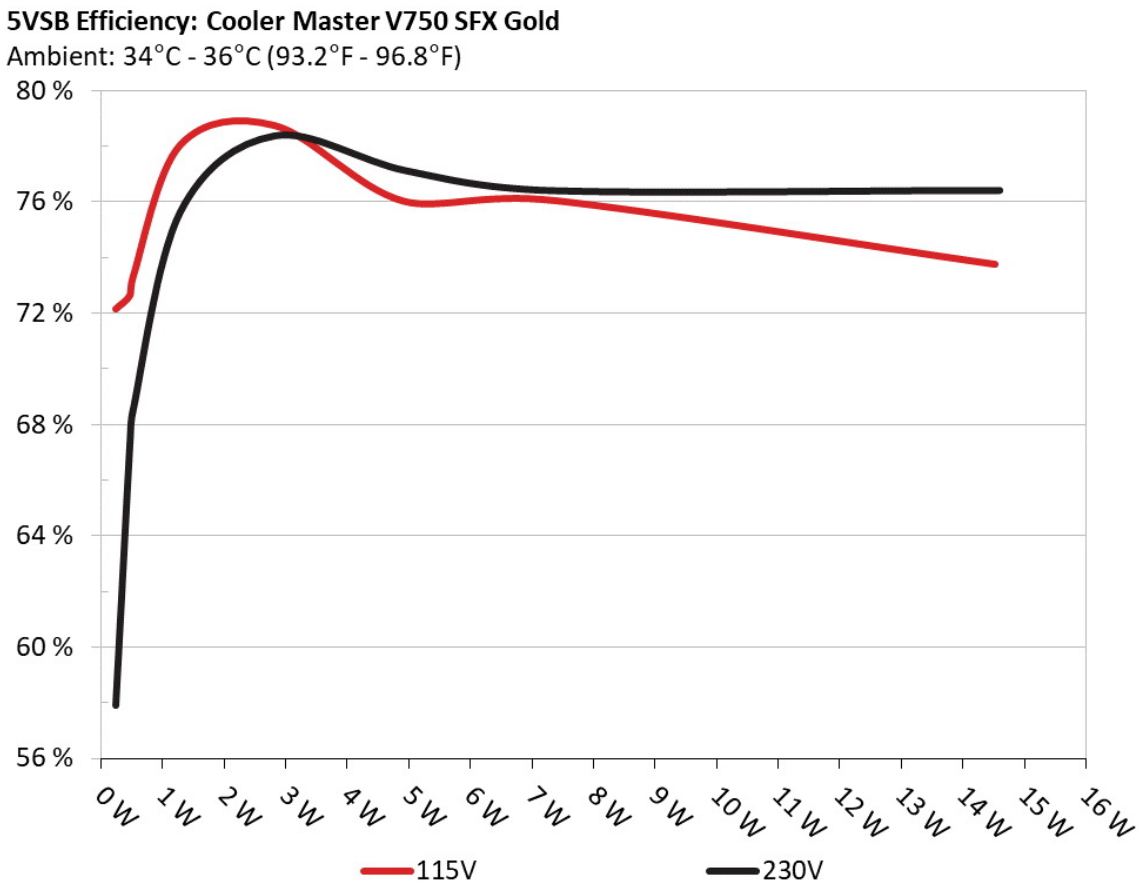
The PSU`s noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

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	0.231W	72.158%	0.03
	5.134V	0.219W		115.15V
2	0.09A	0.462W	72.655%	0.07
	5.132V	0.636W		115.15V
3	0.55A	2.811W	78.747%	0.291
	5.111V	3.569W		115.15V
4	1A	4.904W	76.031%	0.386
	4.905V	6.45W		115.15V
5	1.5A	7.349W	76.056%	0.437
	4.9V	9.663W		115.14V
6	2.999A	14.513W	73.763%	0.495
	4.839V	19.675W		115.14V

230V

□□ #	5VSB	DC/AC (□)	□□	PF/AC □□
1	0.045A	0.231W	57.916%	0.014
	5.133V	0.399W		230.29V
2	0.09A	0.462W	67.391%	0.023
	5.131V	0.686W		230.29V
3	0.55A	2.807W	78.377%	0.115
	5.106V	3.581W		230.3V
4	1A	4.957W	77.122%	0.189
	4.957V	6.427W		230.3V
5	1.5A	7.316W	76.41%	0.25
	4.878V	9.575W		230.3V
6	2.999A	14.602W	76.415%	0.352
	4.869V	19.108W		230.3V

Supplementary Tests (For Reference)

10-110%□□□□

115V

□□	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
10%	4.403A	2.004A	1.975A	1.013A	74.996	84.174%	2037	34.4	40.08°C	0.888
	12.128V	4.989V	3.342V	4.937V	89.096				43.53°C	115.17V
20%	9.828A	3.01A	2.968A	1.22A	149.924	88.787%	2196	36.6	41.14°C	0.946
	12.112V	4.983V	3.335V	4.918V	168.858				44.87°C	115.17V
30%	15.612A	3.516A	3.469A	1.437A	224.923	90.156%	2276	37.7	41.27°C	0.969
	12.098V	4.977V	3.329V	4.871V	249.482				45.78°C	115.17V
40%	21.413A	4.023A	3.972A	1.66A	300	90.479%	2485	40.1	42.06°C	0.98
	12.086V	4.972V	3.324V	4.822V	331.57				47.23°C	115.17V
50%	26.830A	5.035A	4.974A	1.871A	374.418	90.349%	2538	41.1	42.18°C	0.985
	12.073V	4.966V	3.317V	4.81V	414.413				48.14°C	115.16V
60%	32.300A	6.05A	5.981A	2A	448.924	89.997%	2711	42.7	42.24°C	0.988
	12.060V	4.96V	3.311V	4.791V	498.821				48.84°C	115.16V
70%	37.780A	7.066A	6.992A	2.284A	524.261	89.434%	2895	44.5	43.49°C	0.99
	12.048V	4.954V	3.304V	4.815V	586.199				50.52°C	115.16V
80%	43.340A	8.003A	8.005A	2.42A	599.058	88.815%	3004	46.3	43.69°C	0.991
	12.034V	4.948V	3.297V	4.75V	674.502				51.39°C	115.16V
90%	49.282A	8.6A	8.508A	2.45A	674.438	88.445%	2916	44.8	44.37°C	0.991
	12.012V	4.941V	3.29V	4.896V	762.554				52.81°C	115.17V
100%	54.990A	9.114A	9.039A	3.128A	749.685	87.246%	3065	46.6	45.71°C	0.992
	12.002V	4.937V	3.285V	4.794V	859.277				54.75°C	115.18V
110%	60.603A	10.139A	10.157A	3.139A	824.728	86.314%	3055	46.5	46.55°C	0.992
	11.987V	4.931V	3.278V	4.777V	955.5				56.42°C	115.19V
CL1	0.114A	14.484A	14.339A	0A	121.282	83.527%	2837	43.5	42.69°C	0.936
	12.133V	4.985V	3.326V	5.114V	145.201				48.54°C	115.18V

CL2	0.114A	20.046A	0A	0A	101.382	82.505%	2548	41.2	43.54°C	0.922
	12.130V	4.989V	3.33V	5.122V	122.88				50.39°C	115.18V
CL4	62.530A	0A	0A	0.001A	749.527	88.218%	2747	42.9	45.14°C	0.992
	11.987V	4.944V	3.297V	5.091V	849.638				54.03°C	115.18V

The results above are not used in the certification process

230V

□□	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
10%	4.404A	2.004A	1.975A	0.991A	74.994	86.509%	2067	34.8	40.07°C	0.779
	12.126V	4.99V	3.342V	5.042V	86.689				44.37°C	230.31V
20%	9.828A	3.01A	2.968A	1.203A	149.915	90.696%	2337	38.5	40.22°C	0.878
	12.110V	4.984V	3.336V	4.986V	165.294				45.28°C	230.31V
30%	15.610A	3.515A	3.468A	1.43A	224.908	91.936%	2414	39.5	41.7°C	0.919
	12.099V	4.979V	3.33V	4.893V	244.636				47.55°C	230.31V
40%	21.417A	4.023A	3.972A	1.653A	299.981	92.48%	2376	39.0	41.78°C	0.941
	12.083V	4.972V	3.323V	4.841V	324.374				48.27°C	230.32V
50%	26.828A	5.034A	4.973A	1.895A	374.369	92.402%	2622	41.3	42.85°C	0.954
	12.072V	4.967V	3.318V	4.75V	405.153				49.71°C	230.32V
60%	32.300A	6.048A	5.98A	2A	448.779	92.308%	2710	42.7	43.19°C	0.963
	12.059V	4.961V	3.311V	4.742V	486.178				50.49°C	230.31V
70%	37.785A	7.065A	6.991A	2.329A	524.219	92.035%	2863	43.9	43.97°C	0.97
	12.045V	4.955V	3.304V	4.722V	569.587				51.73°C	230.31V
80%	43.353A	8.002A	8.005A	2.409A	599.044	91.737%	2963	45.4	44.04°C	0.973
	12.031V	4.948V	3.297V	4.773V	653				52.17°C	230.32V
90%	49.262A	8.596A	8.505A	2.493A	674.488	91.299%	3076	46.5	44.81°C	0.977
	12.018V	4.943V	3.291V	4.812V	738.765				53.63°C	230.32V
100%	54.990A	9.114A	9.039A	3.125A	749.709	90.793%	3073	46.5	45.02°C	0.979
	12.003V	4.937V	3.285V	4.799V	825.73				54.23°C	230.32V
110%	60.608A	10.139A	10.156A	3.153A	824.737	90.247%	3072	46.5	46.9°C	0.982
	11.986V	4.931V	3.278V	4.757V	913.871				56.78°C	230.32V

CL1	0.114A	14.485A	14.338A	0A	121.282	85.284%	2877	44.2	42.61°C	0.858
	12.132V	4.984V	3.326V	5.114V	142.209				49.42°C	230.33V
CL2	0.113A	20.044A	0A	0A	101.383	84.263%	2612	41.3	43.26°C	0.832
	12.132V	4.989V	3.331V	5.121V	120.317				50.98°C	230.33V
CL4	62.522A	0A	0A	0.001A	749.541	91.585%	2719	42.8	45.08°C	0.979
	11.988V	4.945V	3.298V	5.091V	818.411				54.37°C	230.33V

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	1.222A	0.501A	0.493A	0.196A	19.99	58.379%	1848	31.9	36.86°C	0.779
	12.147V	4.994V	3.347V	5.094V	34.242				38.09°C	115.16V
40W	2.690A	0.701A	0.691A	0.296A	39.992	78.703%	1736	30.0	37.06°C	0.823
	12.149V	4.992V	3.346V	5.072V	50.814				38.81°C	115.16V
60W	4.166A	0.902A	0.888A	0.396A	59.992	83.246%	1676	28.9	38.44°C	0.863
	12.127V	4.99V	3.343V	5.05V	72.066				40.69°C	115.16V
80W	5.635A	1.102A	1.086A	0.497A	79.935	85.742%	1858	31.9	39.54°C	0.894
	12.122V	4.989V	3.342V	5.028V	93.228				42.37°C	115.16V

The results above are not used in the certification process

230V

□□	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
20W	1.222A	0.501A	0.493A	0.196A	19.988	59.244%	1825	31.5	36.86°C	0.568
	12.145V	4.994V	3.347V	5.115V	33.738				39.25°C	230.3V
40W	2.690A	0.701A	0.69A	0.294A	39.99	80.865%	1777	30.7	37.54°C	0.662
	12.147V	4.993V	3.346V	5.105V	49.453				40.43°C	230.3V

60W	4.166A	0.901A	0.888A	0.392A	59.99	85.19%	1985	33.7	38.68°C	0.739
	12.128V	4.992V	3.345V	5.095V	70.418				41.83°C	230.31V
80W	5.634A	1.102A	1.086A	0.492A	79.93	87.661%	2071	34.9	39.45°C	0.788
	12.124V	4.99V	3.343V	5.085V	91.181				43.15°C	230.31V

The results above are not used in the certification process

□□□□

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	17.39mV	5.84mV	4.55mV	16.80mV	Pass
20% Load	10.66mV	7.06mV	6.12mV	7.64mV	Pass
30% Load	9.54mV	7.11mV	4.85mV	9.82mV	Pass
40% Load	9.55mV	8.28mV	5.31mV	17.92mV	Pass
50% Load	8.74mV	8.64mV	5.06mV	18.32mV	Pass
60% Load	8.53mV	9.00mV	4.90mV	12.75mV	Pass
70% Load	8.64mV	9.96mV	5.15mV	14.12mV	Pass
80% Load	8.89mV	10.62mV	6.37mV	14.27mV	Pass
90% Load	9.75mV	11.94mV	7.13mV	24.44mV	Pass
100% Load	16.30mV	13.38mV	7.97mV	24.02mV	Pass
110% Load	16.89mV	14.16mV	7.92mV	21.62mV	Pass
Crossload1	16.12mV	9.86mV	7.99mV	8.25mV	Pass
Crossload2	13.04mV	8.99mV	5.51mV	7.08mV	Pass
Crossload3	0.00mV	0.00mV	0.00mV	0.00mV	Pass
Crossload4	15.81mV	12.81mV	6.34mV	12.42mV	Pass

The results above are not used in the certification process

230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	20.33mV	6.61mV	5.41mV	7.54mV	Pass
20% Load	12.43mV	7.27mV	6.47mV	15.69mV	Pass
30% Load	10.86mV	8.08mV	5.16mV	10.88mV	Pass
40% Load	10.81mV	8.33mV	5.36mV	13.31mV	Pass
50% Load	9.75mV	8.99mV	5.21mV	11.79mV	Pass
60% Load	10.25mV	9.35mV	5.46mV	12.45mV	Pass
70% Load	10.36mV	10.01mV	5.16mV	24.39mV	Pass
80% Load	11.17mV	10.47mV	6.07mV	15.84mV	Pass
90% Load	10.91mV	10.36mV	6.07mV	27.08mV	Pass
100% Load	17.18mV	12.67mV	7.27mV	25.46mV	Pass
110% Load	17.96mV	13.02mV	7.36mV	40.27mV	Pass
Crossload1	16.94mV	9.17mV	8.33mV	8.33mV	Pass
Crossload2	15.32mV	8.74mV	5.21mV	7.54mV	Pass
Crossload3	0.00mV	0.00mV	0.00mV	0.00mV	Pass
Crossload4	17.31mV	11.07mV	5.93mV	13.32mV	Pass

The results above are not used in the certification process





Cooler Master V750 SFX Gold (2021)

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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