



Make It Yours.

Cooler Master MWE Gold 550 V2 (Fixed)

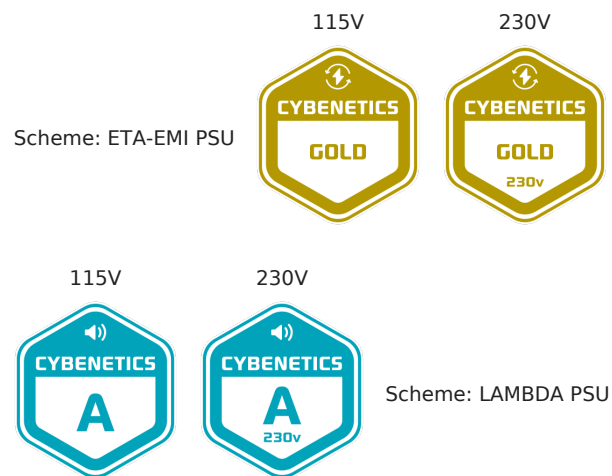
Serial Number MPE5501ACAAGU21205200002

Lab ID CM55001851

Certification ID 251851

Test Result Report ID: 21PS1851A

Certificate Issue Date: May 28, 2021



A handwritten signature in blue ink, appearing to read "A. Bitziopoulos", is written over a faint circular stamp.

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	MWE Gold 550 V2 (Fixed)
OEM/ODM	Huizhou Xin Hui Yuan Tech (Fusion Power)
Serial Number	MPE5501ACAAGU21205200002
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	10-5
Rated Frequency (Hz)	50-60

Rated Power (W)	550
Operating Temperature (Continuous Full Load) (°C)	
Type	ATX12V
Cable Design	Fully Modular
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
Cooling	120mm Fluid Dynamic Bearing Fan (HA1225M12F-Z)
Semi-Passive Operation	X
Cybenetics Testing Information	
Lab ID	CM55001851
Date of receipt	May 6, 2021
Testing Date	May 27, 2021
Report Issued Date	May 28, 2021
Engineer Name	-
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

Cables and Connectors(Non-accredited measurements)

Captive Cables				
Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 20+4 pin (620mm)	1	1	18-22AWG	No
8 pin EPS12V (640mm) / 4+4 pin EPS12V (+125mm)	1	1 / 1	18AWG	No
6+2 pin PCIe (570mm+120mm)	1	2	18AWG	No
SATA (530mm+125mm+125mm+125mm)	2	8	18AWG	No
4-pin Molex (530mm+125mm+125mm+125mm)	1	4	18AWG	No
Modular Cables				
AC Power Cord (1370mm) - C13 coupler	1	1	18AWG	-

Power Specifications

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	20	20	45.8	3	0.3
	Watts	100		549.6	15	3.6
Total Max. Power (W)		550				

Test Results

Temperature & Compliance Info

Temperature Range (°C /°F)	28-32 / 82.4-89.6
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓
ALPM (Alternative Low Power Mode) compatible	✓

Performance Summary

115V

Accredited	
Average Efficiency (>1450 load combinations)	87.928%
Average Noise Output (>1450 Load Combinations)	24.95dBA
Average PF (>1450 Load Combinations)	0.986
Efficiency With 10W (≤500W) or 2% (>500W) Load	54.848%
Standby Power Consumption	0.1103W
Non-Accredited	
12V Ripple (Full Load)	48.10mV
5V Ripple (Full Load)	20.00mV
3.3V Ripple (Full Load)	32.99mV
5VSB Ripple (Full Load)	12.19mV
12V Load Regulation	0.36%
5V Load Regulation	0.73%

3.3V Load Regulation	1.14%
5VSB Load Regulation	2.58%
Inrush Current	66.120A

230V

Accredited		
Average Efficiency (>1450 load combinations)	90.086%	
Average Noise Output (>1450 Load Combinations)	24.11dBA	
Average PF (>1450 Load Combinations)	0.935	
Efficiency With 10W (≤500W) or 2% (>500W) Load	-	
Standby Power Consumption	0.1718W	
Non-Accredited		
12V Ripple (Full Load)	49.52mV	
5V Ripple (Full Load)	20.27mV	
3.3V Ripple (Full Load)	32.81mV	
5VSB Ripple (Full Load)	11.72mV	
12V Load Regulation	0.37%	
5V Load Regulation	0.73%	
3.3V Load Regulation	1.14%	
5VSB Load Regulation	2.55%	
Inrush Current	85.360A	
Hold-Up Time & PWR_OK Signal	19.90ms	
AC Loss to PWR_OK Hold Up Time	16.60ms	
PWR_OK Inactive to DC Loss Delay	3.30ms	
PSU Timings: T1 (20% / 100%)	65.0ms	67.0ms
PSU Timings: T3 (20% / 100%)	133.0ms	133.0ms
OPP (28.80°C / 43.78°C)	140.53%	119.78%

Hold-Up Time & PWR_OK Signal

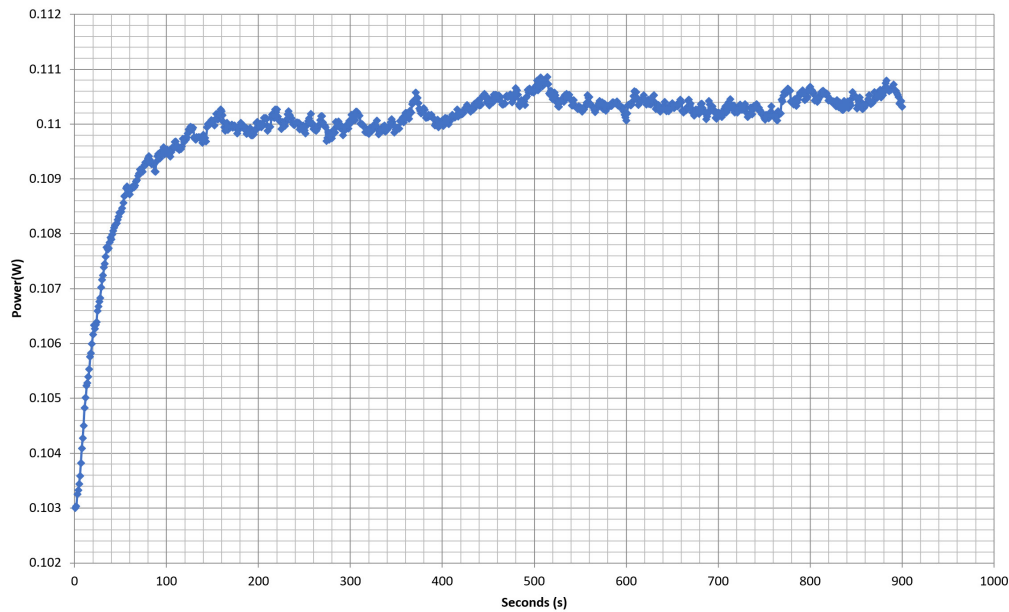
Hold-Up Time (ms)	19.9
AC Loss to PWR_OK Hold Up Time (ms)	16.6
PWR_OK Inactive to DC Loss Delay (ms)	3.3

Vampire Power

Graphs

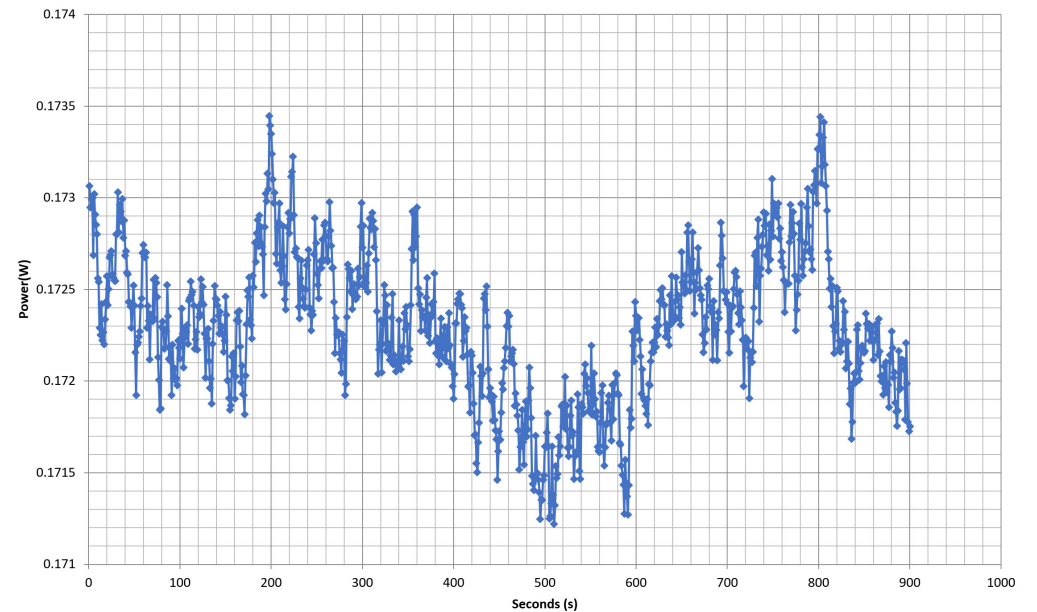
115V

Power - MPE5501ACAAGU21205200002 - 24/05/2021 - 11:47



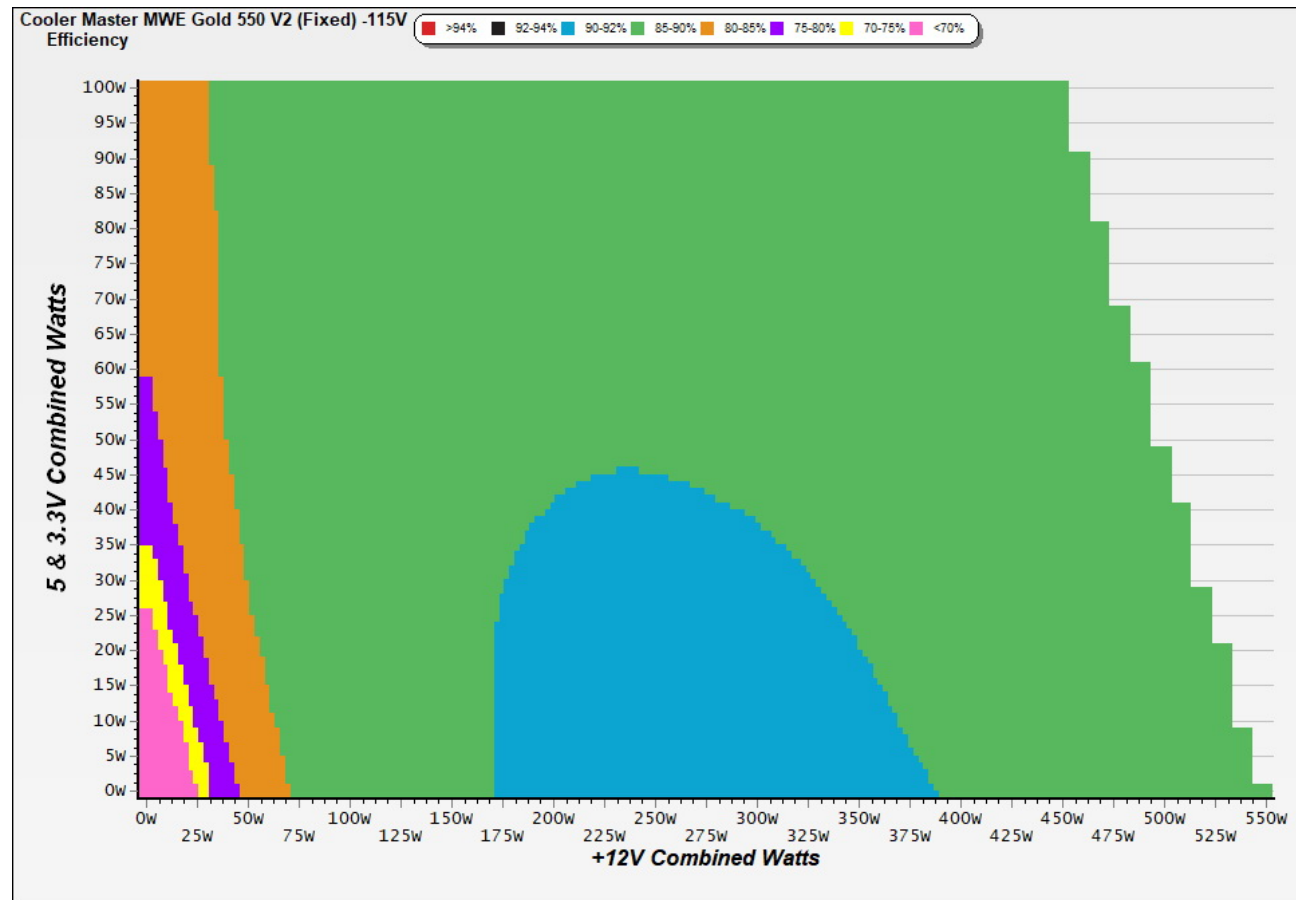
230V

Power - MPE5501ACAAGU21205200002 - 24/05/2021 - 11:47



Efficiency Graph

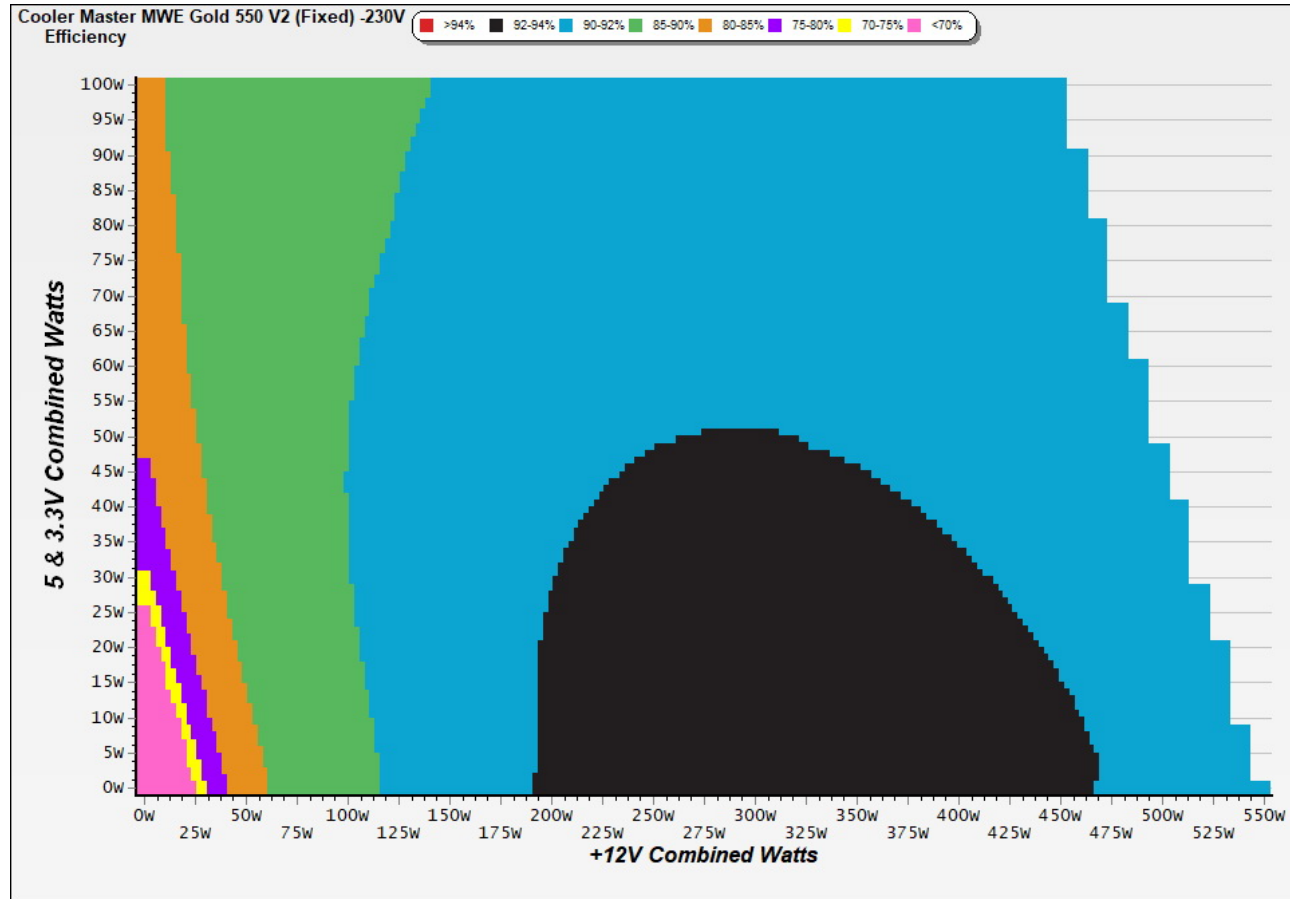
115V



INFO

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

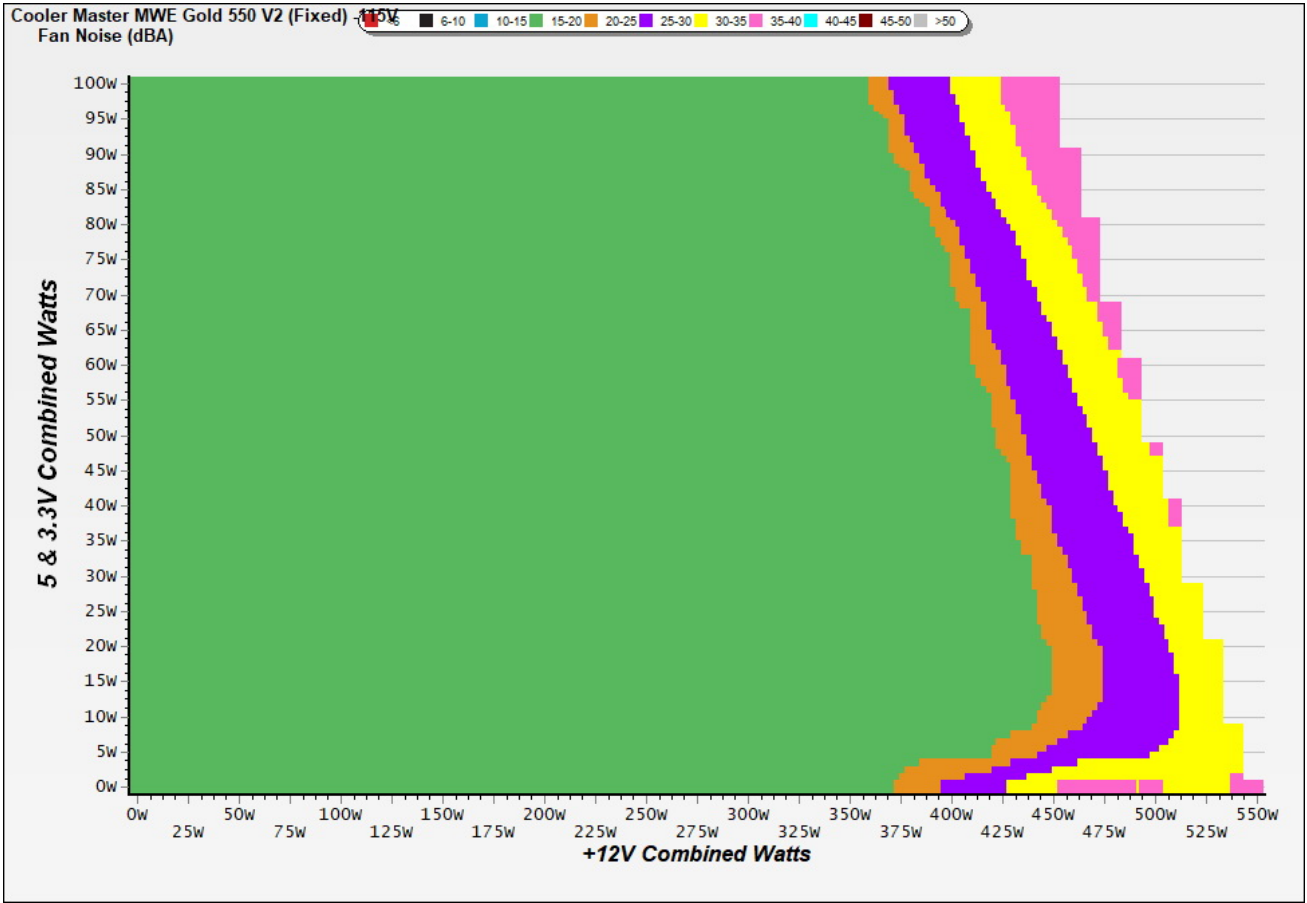


INFO

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Noise Graph

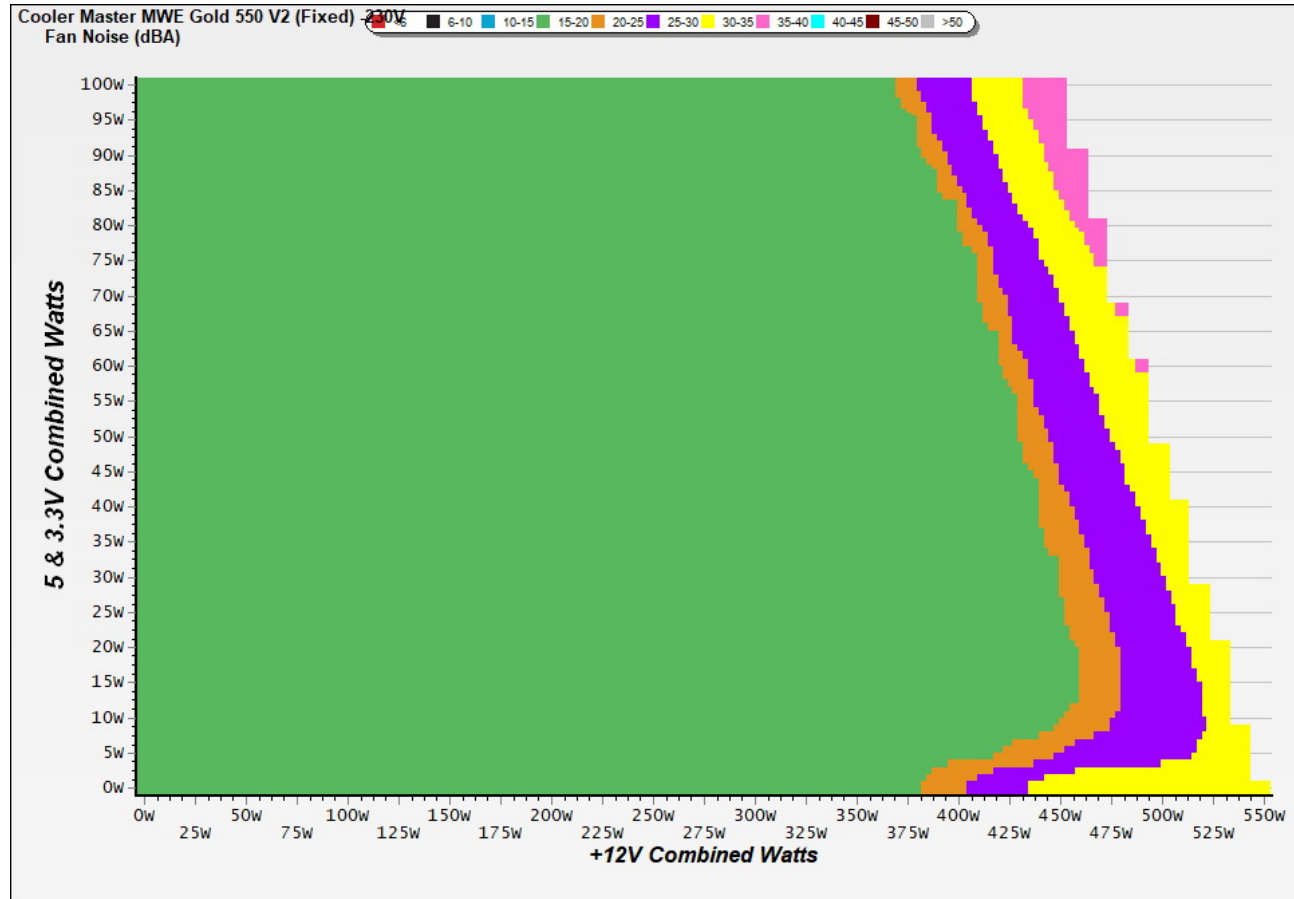
115V



INFO

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



INFO

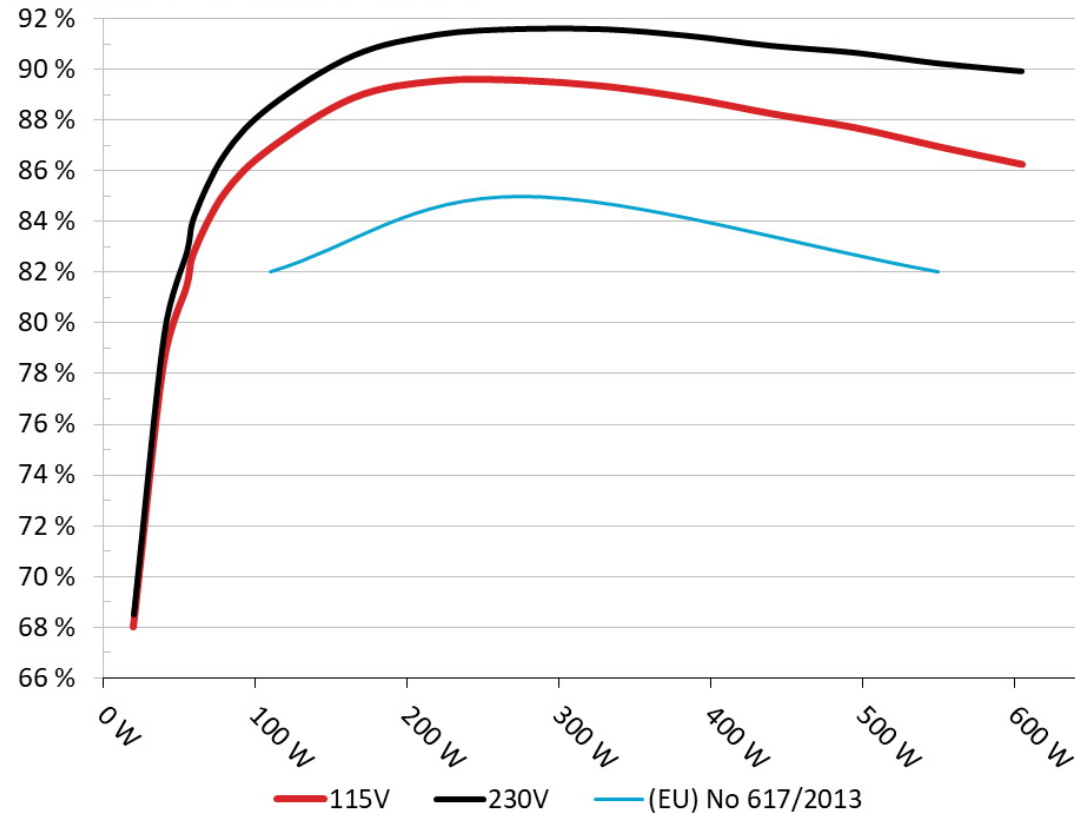
The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

Indicative Performance

Efficiency under high ambient temperature

Efficiency: Cooler Master MWE Gold 550 V2 (Fixed)

Ambient: 37°C - 47°C (98.6°F - 116.6°F)



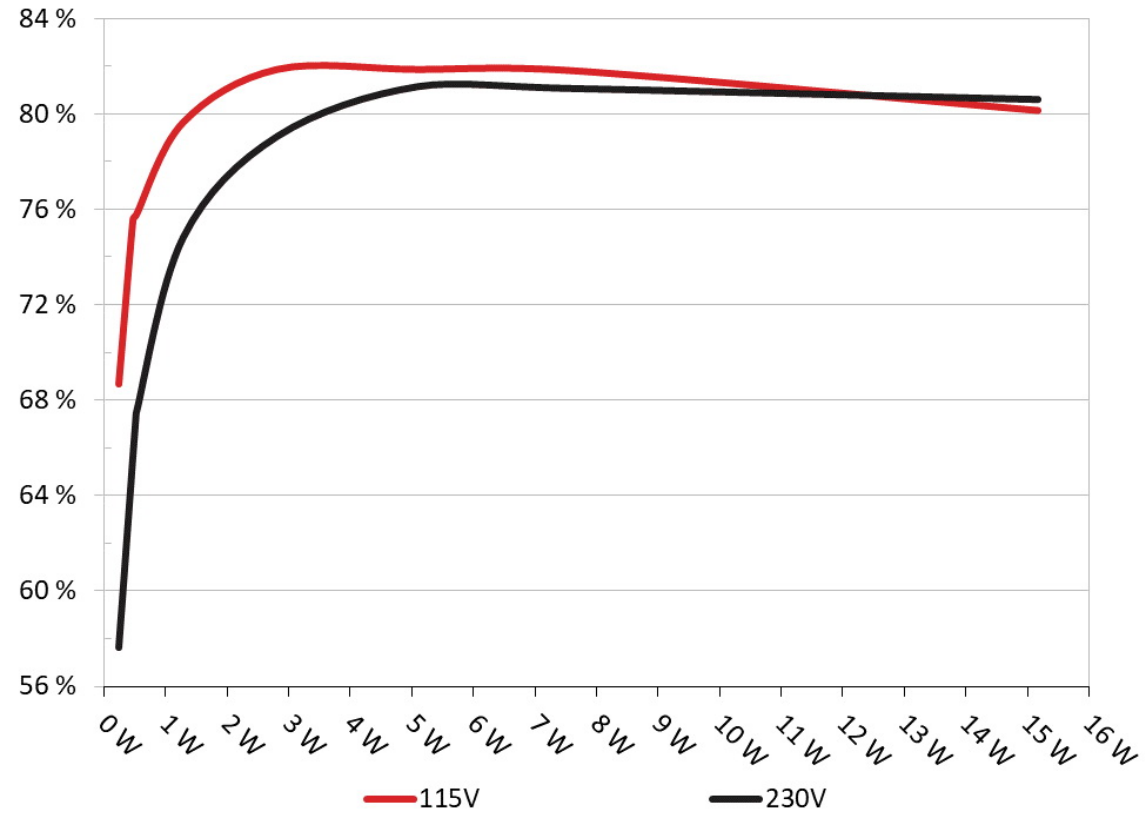
INFO

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 Efficiency

5VSB Efficiency: Cooler Master MWE Gold 550 V2 (Fixed)

Ambient: 34°C - 36°C (93.2°F - 96.8°F)



INFO

This graph depicts the efficiency levels of the 5VSB rail with 115V and 230V input

5VSB Efficiency (ERP LOT 3/6 & CEC)

115V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.230	68.657%	0.028
	5.087V	0.335		115.12V
2	0.090A	0.460	75.534%	0.073
	5.113V	0.609		115.12V
3	0.550A	2.808	81.842%	0.295
	5.105V	3.431		115.12V
4	1.000A	5.097	81.840%	0.385
	5.096V	6.228		115.12V
5	1.500A	7.632	81.783%	0.433
	5.087V	9.332		115.12V
6	3.000A	15.178	80.120%	0.495
	5.059V	18.944		115.11V

230V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.230	57.644%	0.015
	5.114V	0.399		230.24V
2	0.090A	0.460	67.449%	0.025
	5.113V	0.682		230.24V
3	0.550A	2.808	79.054%	0.120
	5.105V	3.552		230.25V
4	1.000A	5.097	81.137%	0.192
	5.096V	6.282		230.25V
5	1.500A	7.632	81.054%	0.254
	5.087V	9.416		230.25V
6	3.000A	15.179	80.594%	0.354
	5.059V	18.834		230.25V

Supplementary Tests (For Reference)

Typical Load Tests

115V

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
1	2.730A	1.983A	1.971A	0.983A	54.969	81.416%	856	18.8	40.07°C	0.951
	12.226V	5.041V	3.346V	5.087V	67.516				44.39°C	115.12V
2	6.476A	2.977A	2.962A	1.183A	110.041	86.867%	855	18.8	40.71°C	0.981
	12.221V	5.037V	3.342V	5.075V	126.678				45.70°C	115.12V
3	10.559A	3.477A	3.458A	1.383A	165.041	88.869%	858	18.6	41.46°C	0.988
	12.216V	5.034V	3.339V	5.064V	185.712				47.29°C	115.12V
4	14.645A	3.976A	3.959A	1.584A	220.051	89.526%	859	18.6	41.81°C	0.987
	12.212V	5.030V	3.335V	5.053V	245.796				48.27°C	115.12V
5	18.393A	4.974A	4.954A	1.786A	275.049	89.550%	863	18.7	42.34°C	0.989
	12.208V	5.027V	3.331V	5.040V	307.145				49.54°C	115.12V
6	22.146A	5.974A	5.951A	1.989A	330.054	89.320%	870	18.9	42.67°C	0.991
	12.203V	5.023V	3.327V	5.028V	369.517				50.68°C	115.11V
7	25.910A	6.977A	6.953A	2.194A	385.145	88.858%	1379	32.6	43.38°C	0.992
	12.197V	5.018V	3.323V	5.016V	433.440				51.63°C	115.11V
8	29.675A	7.982A	7.957A	2.399A	440.185	88.236%	1655	37.9	43.44°C	0.994
	12.191V	5.013V	3.318V	5.003V	498.875				52.29°C	115.11V
9	33.822A	8.485A	8.448A	2.403A	494.698	87.688%	1666	38.2	44.60°C	0.994
	12.187V	5.010V	3.314V	4.995V	564.158				53.85°C	115.11V
10	37.778A	8.992A	8.970A	3.016A	549.924	86.938%	1668	38.1	45.24°C	0.995
	12.182V	5.006V	3.310V	4.976V	632.545				55.27°C	115.10V
11	42.322A	8.996A	8.982A	3.020A	605.129	86.238%	1675	38.3	46.87°C	0.996
	12.178V	5.004V	3.308V	4.968V	701.699				57.81°C	115.10V
CL1	0.118A	12.003A	11.999A	0.000A	101.762	83.049%	859	18.6	42.25°C	0.981
	12.214V	5.027V	3.332V	5.079V	122.533				49.72°C	115.13V

CL2	45.847A	1.001A	1.001A	1.000A	572.294	87.653%	1673	38.3	45.49°C	0.995
	12.191V	5.018V	3.321V	5.026V	652.907				55.03°C	115.11V

The results above are not used in the certification process

230V

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
1	2.729A	1.984A	1.972A	0.983A	54.968	82.804%	856	18.8	40.31°C	0.733
	12.227V	5.041V	3.346V	5.086V	66.383				44.50°C	230.27V
2	6.476A	2.977A	2.961A	1.183A	110.037	88.551%	858	18.6	40.90°C	0.867
	12.221V	5.037V	3.342V	5.074V	124.264				45.67°C	230.27V
3	10.558A	3.477A	3.460A	1.383A	165.037	90.556%	859	18.6	41.24°C	0.924
	12.216V	5.034V	3.339V	5.064V	182.248				46.65°C	230.26V
4	14.644A	3.975A	3.958A	1.584A	220.044	91.375%	861	18.7	41.62°C	0.947
	12.213V	5.030V	3.335V	5.052V	240.813				47.64°C	230.26V
5	18.392A	4.975A	4.954A	1.786A	275.037	91.601%	861	18.7	42.05°C	0.960
	12.208V	5.026V	3.331V	5.040V	300.256				48.85°C	230.26V
6	22.144A	5.975A	5.953A	1.989A	330.037	91.588%	876	20.9	42.54°C	0.969
	12.203V	5.022V	3.327V	5.028V	360.351				50.15°C	230.26V
7	25.908A	6.977A	6.955A	2.194A	385.120	91.330%	1389	32.9	43.39°C	0.974
	12.197V	5.018V	3.322V	5.016V	421.679				51.52°C	230.25V
8	29.673A	7.982A	7.954A	2.399A	440.159	90.934%	1657	37.9	43.84°C	0.979
	12.191V	5.014V	3.318V	5.003V	484.044				52.88°C	230.25V
9	33.816A	8.485A	8.449A	2.403A	494.670	90.665%	1665	38.1	44.72°C	0.981
	12.188V	5.010V	3.315V	4.995V	545.599				54.31°C	230.25V
10	37.776A	8.993A	8.971A	3.015A	549.902	90.240%	1671	38.3	45.69°C	0.982
	12.182V	5.006V	3.310V	4.976V	609.375				55.73°C	230.25V
11	42.310A	8.996A	8.978A	3.019A	605.001	89.929%	1676	38.3	47.20°C	0.985
	12.179V	5.003V	3.308V	4.969V	672.757				57.95°C	230.25V
CL1	0.118A	12.002A	11.999A	0.000A	101.732	84.655%	860	18.6	42.40°C	0.862
	12.215V	5.025V	3.332V	5.080V	120.172				48.94°C	230.26V

CL2	45.843A	1.000A	1.002A	1.000A	572.244	91.071%	1671	38.3	45.22°C	0.983
	12.191V	5.018V	3.321V	5.027V	628.351				55.26°C	230.25V

The results above are not used in the certification process

Light Load Tests

115V

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	PF/AC Volts
1	1.215A	0.495A	0.491A	0.196A	20.000	68.011%	847	19.5	0.837
	12.228V	5.045V	3.351V	5.108V	29.407				115.12V
2	2.428A	0.992A	0.986A	0.392A	39.989	78.421%	851	19.4	0.924
	12.226V	5.043V	3.348V	5.101V	50.993				115.12V
3	3.646A	1.488A	1.479A	0.589A	60.019	82.800%	853	19.1	0.957
	12.224V	5.041V	3.347V	5.094V	72.487				115.12V
4	4.858A	1.983A	1.972A	0.786A	79.970	85.101%	853	19.1	0.971
	12.223V	5.040V	3.345V	5.088V	93.971				115.12V

The results above are not used in the certification process

230V

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	PF/AC Volts
1	1.215A	0.494A	0.493A	0.196A	20.002	68.491%	851	19.4	0.524
	12.228V	5.045V	3.350V	5.108V	29.204				230.28V
2	2.428A	0.992A	0.986A	0.392A	39.991	79.545%	850	19.4	0.665
	12.227V	5.043V	3.348V	5.101V	50.275				230.28V
3	3.646A	1.488A	1.479A	0.589A	60.021	84.240%	854	18.9	0.751
	12.225V	5.041V	3.346V	5.094V	71.250				230.28V
4	4.858A	1.982A	1.974A	0.786A	79.970	86.666%	857	18.6	0.809
	12.223V	5.040V	3.345V	5.087V	92.274				230.27V

The results above are not used in the certification process

Ripple Measurements

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	11.40mV	12.80mV	18.50mV	7.50mV	Pass
20% Load	15.50mV	13.20mV	20.20mV	7.90mV	Pass
30% Load	20.00mV	12.20mV	16.90mV	8.00mV	Pass
40% Load	22.30mV	13.40mV	17.10mV	8.20mV	Pass
50% Load	24.30mV	13.50mV	19.60mV	8.90mV	Pass
60% Load	24.80mV	15.50mV	19.60mV	9.30mV	Pass
70% Load	26.50mV	16.10mV	21.90mV	9.80mV	Pass
80% Load	29.90mV	17.00mV	23.40mV	10.60mV	Pass
90% Load	32.50mV	18.70mV	30.30mV	11.30mV	Pass
100% Load	48.10mV	20.00mV	33.00mV	12.20mV	Pass
110% Load	52.40mV	20.90mV	35.80mV	12.60mV	Pass
Crossload1	24.00mV	18.00mV	25.80mV	9.60mV	Pass
Crossload2	49.40mV	20.60mV	29.50mV	11.90mV	Pass

The results above are not used in the certification process

230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	12.50mV	12.30mV	18.10mV	7.50mV	Pass
20% Load	16.90mV	13.50mV	20.00mV	7.70mV	Pass
30% Load	21.00mV	12.10mV	17.60mV	7.80mV	Pass
40% Load	24.50mV	13.10mV	18.10mV	8.20mV	Pass
50% Load	27.30mV	13.40mV	19.50mV	8.70mV	Pass
60% Load	25.10mV	14.60mV	20.70mV	9.20mV	Pass
70% Load	28.20mV	16.00mV	21.60mV	9.70mV	Pass
80% Load	31.40mV	17.00mV	25.20mV	10.00mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
90% Load	34.30mV	18.60mV	30.60mV	10.80mV	Pass
100% Load	49.50mV	20.30mV	32.80mV	11.70mV	Pass
110% Load	54.80mV	21.50mV	35.20mV	12.50mV	Pass
Crossload1	25.50mV	19.00mV	25.70mV	9.10mV	Pass
Crossload2	49.70mV	19.90mV	29.30mV	11.90mV	Pass

The results above are not used in the certification process

Cooler Master MWE Gold 550 V2 (Fixed)



Top side

All data and graphs included in this test report can be used by any individual on the following conditions:

- › It should be mentioned that the test results are provided by Cybenetics
- › The link to the original test results document should be provided in any case

CYBENETICS LTD Syrou 6, Latsia, 2231, Nicosia Cyprus

550W

MOD Switch

AC INPUT	100-240V~, 10-5A, 50-60Hz				
交流輸入/交流輸入	200-240V~, 6A, 50-60Hz, 适用于中国地区使用				
DC OUTPUT	+5V	+3.3V	+12V	-12V	+5VSB
直流輸出/直流輸出	20A	20A	45.8A	0.3A	3A
TOTAL POWER	100W		549.6W	3.6W	15W
總功率/总功率	550W				

Power specifications label

Cybenetics runs voluntary certification programs for power supplies - ETA for efficiency, LAMBDA for noise and SAFE for safety and correct operation - and for cooling products, with DELTA for chassis soundproofing and PHI for fan airflow and static pressure. THETA rates cooler performance on AMD AM5 and Intel LGA1851 outside ISO 17065 and accreditation scope

www.cybenetics.com - info@cybenetics.com