



Make It Yours.

Cooler Master G GOLD 550 V2 (MWE GOLD 550 V3 Non-Modular)

Serial Number MPE5502ACAAGEU1241400151

Lab ID CM55002484

Certification ID 252484

Test Result Report ID: 24PS2484A

Certificate Issue Date: Jul 1, 2024

115V 230V

Scheme: ETA-EMI PSU



115V

230V



Scheme: LAMBDA PSU



Outside Validation Scope

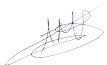
General Information

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	G GOLD 550 V2 (MWE GOLD 550 V3 Non-Modular)
OEM/ODM	Gospower
Serial Number	MPPE5502ACAAGEU1241400151
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	8-4

Rated Frequency (Hz)	50-60
Rated Power (W)	550
Operating Temperature (Continuous Full Load) (°C)	
Type	ATX12V
Cable Design	Fixed cables
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
Cooling	120mm Fluid Dynamic Bearing Fan (HA1225H12F-Z)
Semi-Passive Operation	✓
Cybenetics Testing Information	
Lab ID	CM55002484
Date of receipt	May 29, 2024
Testing Date	Jun 19, 2024
Report Issued Date	Jul 1, 2024
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 24 pin (500mm)	1	1	18AWG	No
4+4 pin EPS12V (580mm)	1	1	18AWG	No
6+2 pin PCIe (600mm+125mm)	1	2	16-18AWG	No
SATA (410mm+150mm+150mm)	2	6	18AWG	No
4-pin Molex (400mm+150mm+150mm)	1	3	18AWG	No
Modular Cables				
AC Power Cord (1380mm) - C13 coupler	1	1	18AWG	-

Protection Features(Manufacturer)

Over Voltage Protection	✓
Under Voltage Protection	✓
Over Power Protection	✓
Over Current (+12V) Protection	✓
Over Temperature Protection	✓
Short Circuit Protection	✓
Surge Protection	✓

Power Specifications

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	20	20	45.8	3	0.3
	Watts	120		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	✓
ATX v3.1 PSU Power Excursion	✓

Performance Summary

115V	
Accredited	
Average Efficiency (>1450 load combinations)	87.721%

Average Noise Output (>1450 Load Combinations)	22.82dBA
Average PF (>1450 Load Combinations)	0.977
Efficiency With 10W ($\leq$ 500W) or 2% (>500W) Load	71.339%
Standby Power Consumption	0.0743W
Non-Accredited	
12V Ripple (Full Load)	73.10mV
5V Ripple (Full Load)	22.02mV
3.3V Ripple (Full Load)	18.33mV
5VSB Ripple (Full Load)	44.44mV
12V Load Regulation	1.42%
5V Load Regulation	2.99%
3.3V Load Regulation	3.44%
5VSB Load Regulation	3.99%
Inrush Current	65.900A

230V

Accredited	
Average Efficiency (>1450 load combinations)	89.325%
Average Noise Output (>1450 Load Combinations)	25.86dBA
Average PF (>1450 Load Combinations)	0.899
Efficiency With 10W ($\leq$ 500W) or 2% (>500W) Load	73.187%
Standby Power Consumption	0.2015W
Non-Accredited	
12V Ripple (Full Load)	71.21mV
5V Ripple (Full Load)	21.57mV
3.3V Ripple (Full Load)	18.04mV
5VSB Ripple (Full Load)	43.03mV
12V Load Regulation	1.45%
5V Load Regulation	3.01%
3.3V Load Regulation	3.47%
5VSB Load Regulation	4.01%
Inrush Current	132.900A

12V Transient Response (150%)	11.75V	
5V Transient Response (150%)	4.967V	
3.3V Transient Response (150%)	3.222V	
5VSB Transient Response (150%)	4.998V	
Hold-Up Time & PWR_OK Signal	16.40ms	
AC Loss to PWR_OK Hold Up Time	14.40ms	
PWR_OK Inactive to DC Loss Delay	2.00ms	
PSU Timings: T1 (20% / 100%)	45.0ms	45.0ms
PSU Timings: T3 (20% / 100%)	126.0ms	127.0ms
12V OCP (26.4°C / 43.0°C)	69.00A (150.66%), 11.925V	68.80A (150.22%), 11.948V
5V OCP (26.4°C / 43.0°C)	25.9A (129.50%), 4.967V	25.2A (126.00%), 4.969V
3.3V OCP (26.4°C / 43.0°C)	30A (150.00%), 3.289V	30A (150.00%), 3.287V
5VSB OCP (26.4°C / 43.0°C)	4.2A (140.00%), 5.019V	4.2A (140.00%), 5.002V
OPP (26.28°C / 43.42°C)	150.00%	150.00%

Hold-Up Time & PWR_OK Signal

Hold-Up Time (ms)	16.4
AC Loss to PWR_OK Hold Up Time (ms)	14.4
PWR_OK Inactive to DC Loss Delay (ms)	2

Vampire Power

Tables

115V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	115.07 V	115.04 V	113.85 V	115.11 V	116.15 V	PASS
Mains Frequency:	60.00 Hz	59.95 Hz	59.40 Hz	60.01 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.416	1.415	1.340	1.418	1.490	PASS

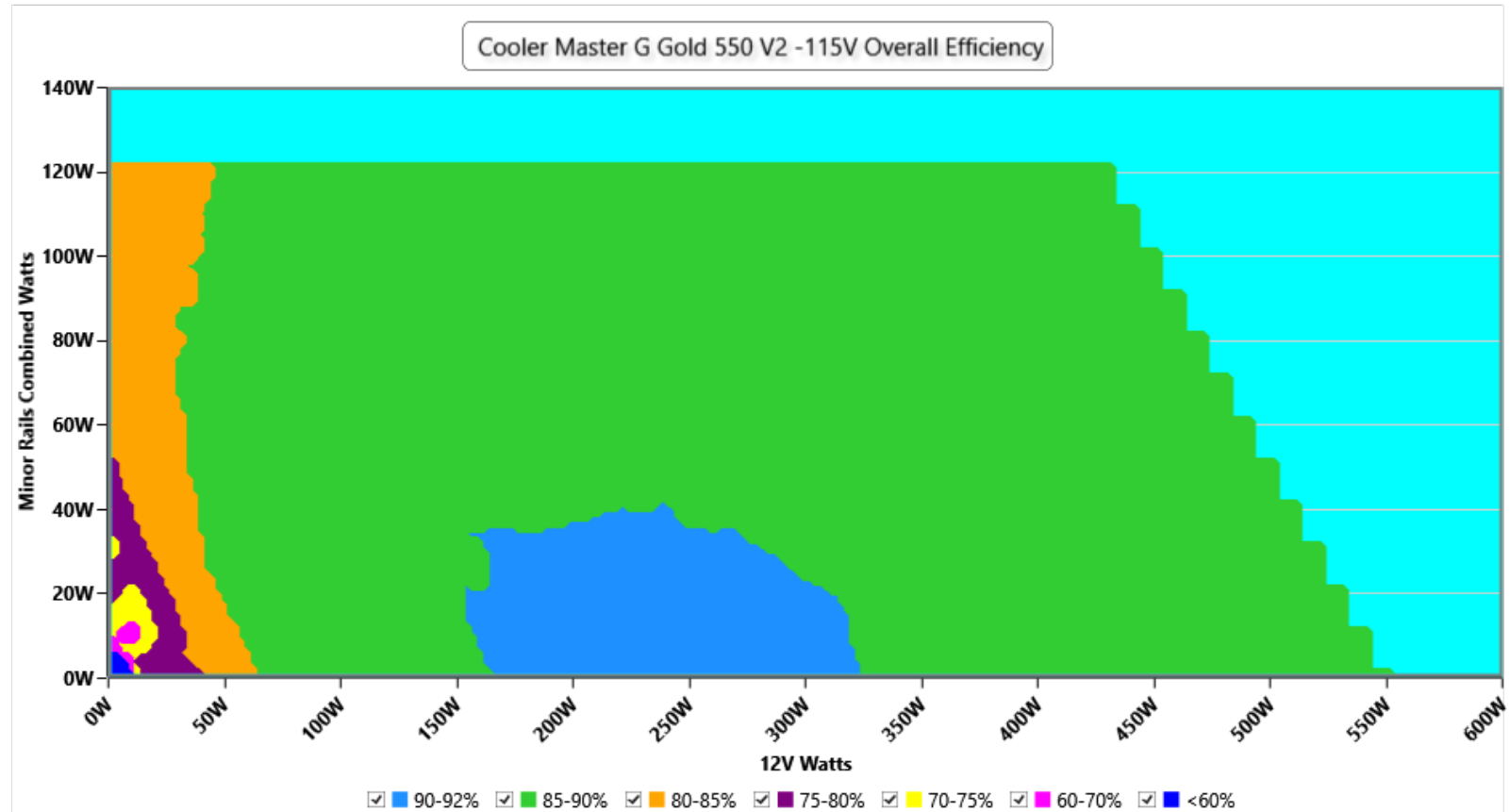
Mains Voltage THD:	0.13 %	0.09 %	N/A	0.18 %	2.00 %	PASS
Real Power:	0.074 W	0.017 W	N/A	0.103 W	N/A	N/A
Apparent Power:	15.970 W	15.896 W	N/A	16.056 W	N/A	N/A
Power Factor:	0.004	N/A	N/A	N/A	N/A	N/A

230V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	231.03 V	230.93 V	227.70 V	231.10 V	232.30 V	PASS
Mains Frequency:	50.00 Hz	49.99 Hz	49.50 Hz	50.01 Hz	50.50 Hz	PASS
Mains Voltage CF:	1.417	1.416	1.340	1.419	1.490	PASS
Mains Voltage THD:	0.17 %	0.14 %	N/A	0.26 %	2.00 %	PASS
Real Power:	0.201 W	0.162 W	N/A	0.284 W	N/A	N/A
Apparent Power:	52.685 W	52.427 W	N/A	52.949 W	N/A	N/A
Power Factor:	0.004	N/A	N/A	N/A	N/A	N/A

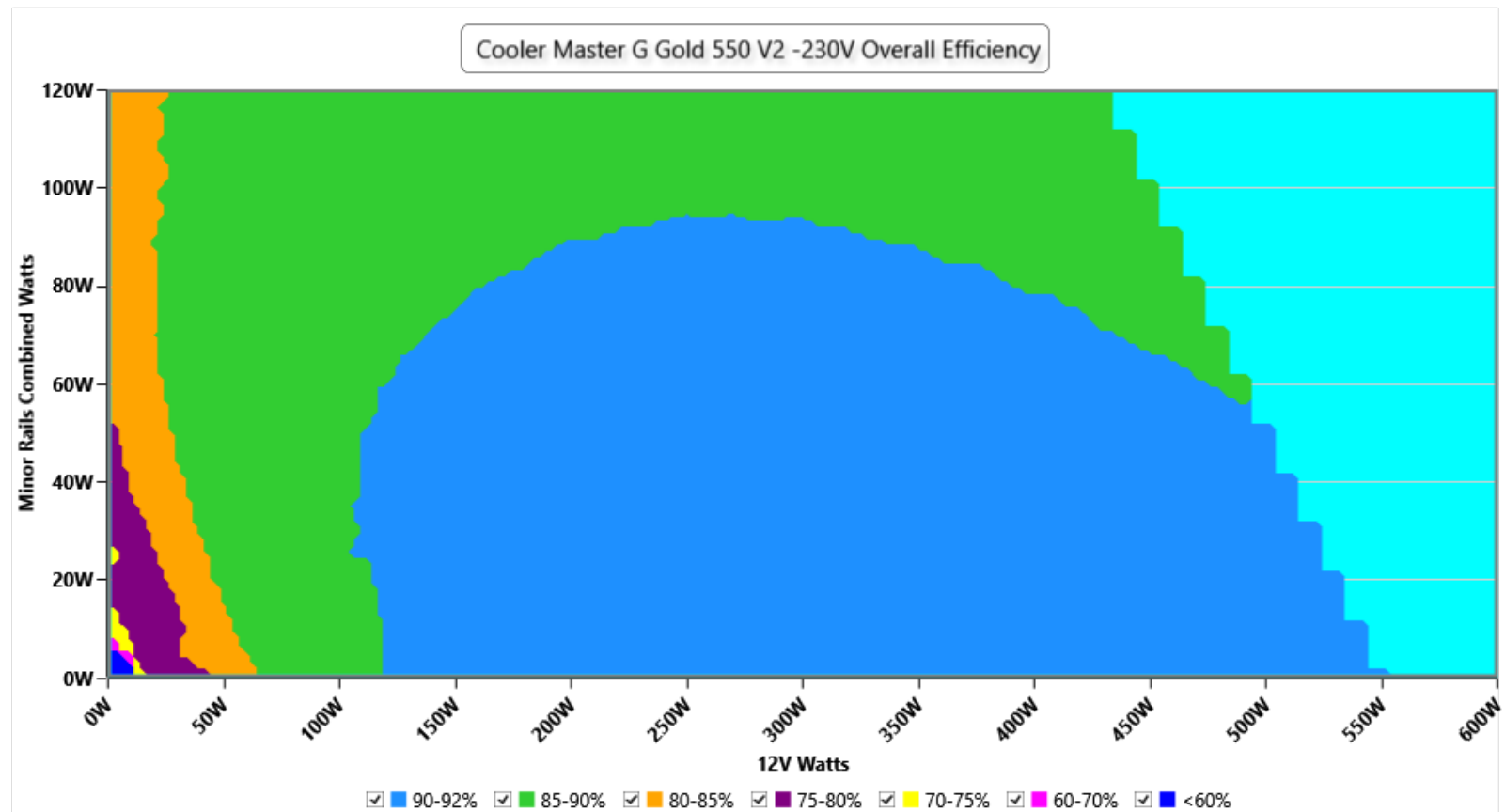
Efficiency Graph

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

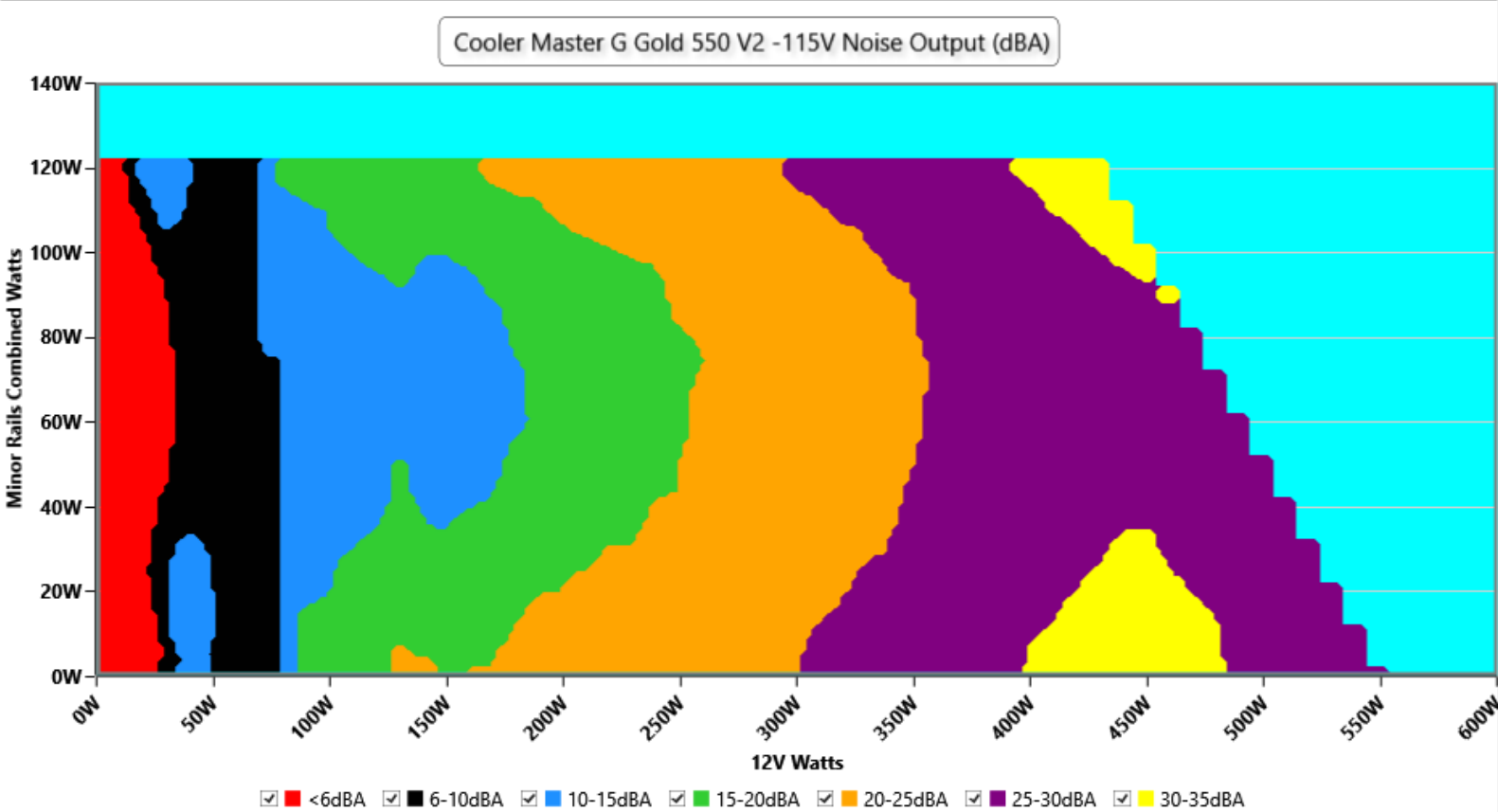


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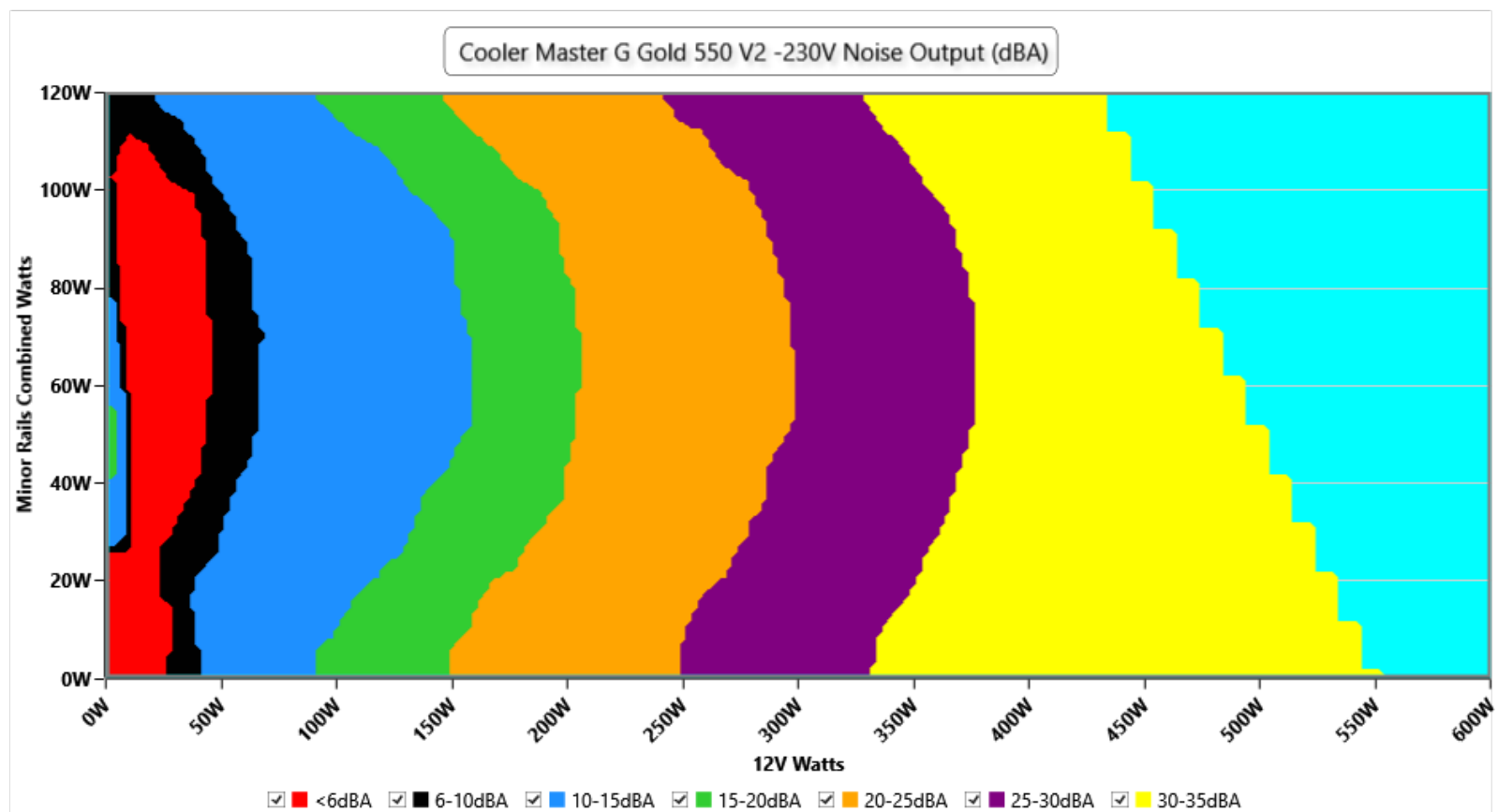
Noise Graph

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



INFO

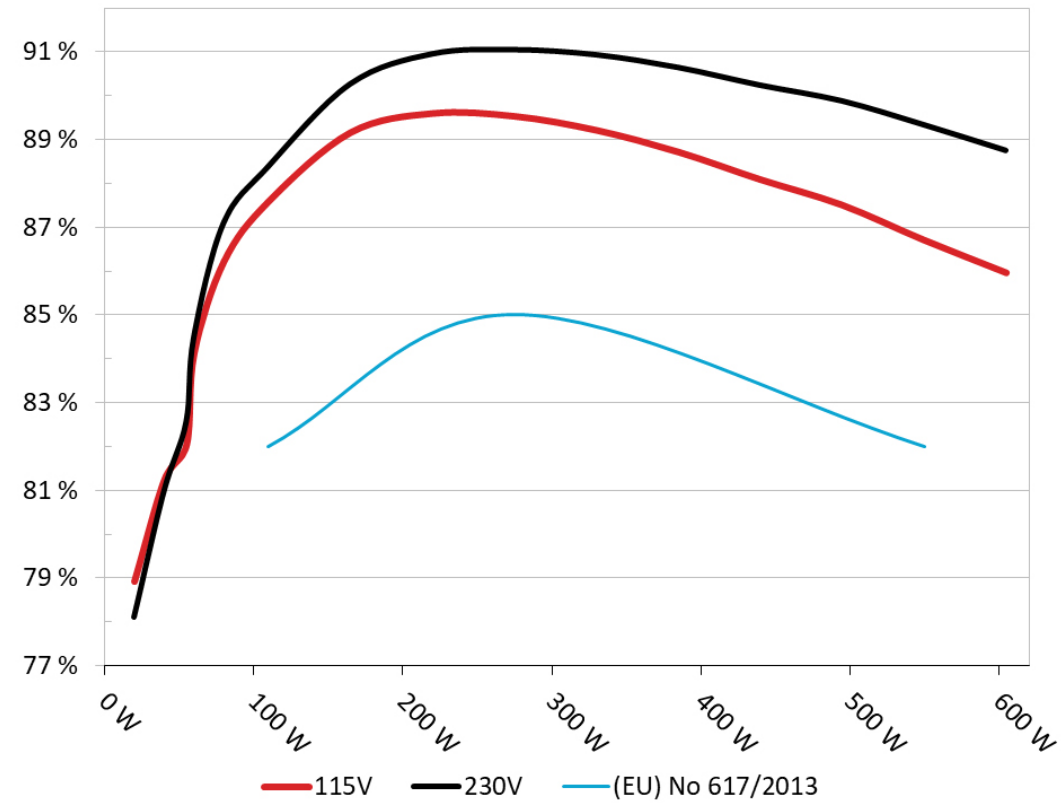
The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

Indicative Performance

Efficiency under high ambient temperature

Efficiency: Cooler Master G Gold 550 V2

Ambient: 36°C - 47°C (96.8°F - 116.6°F)



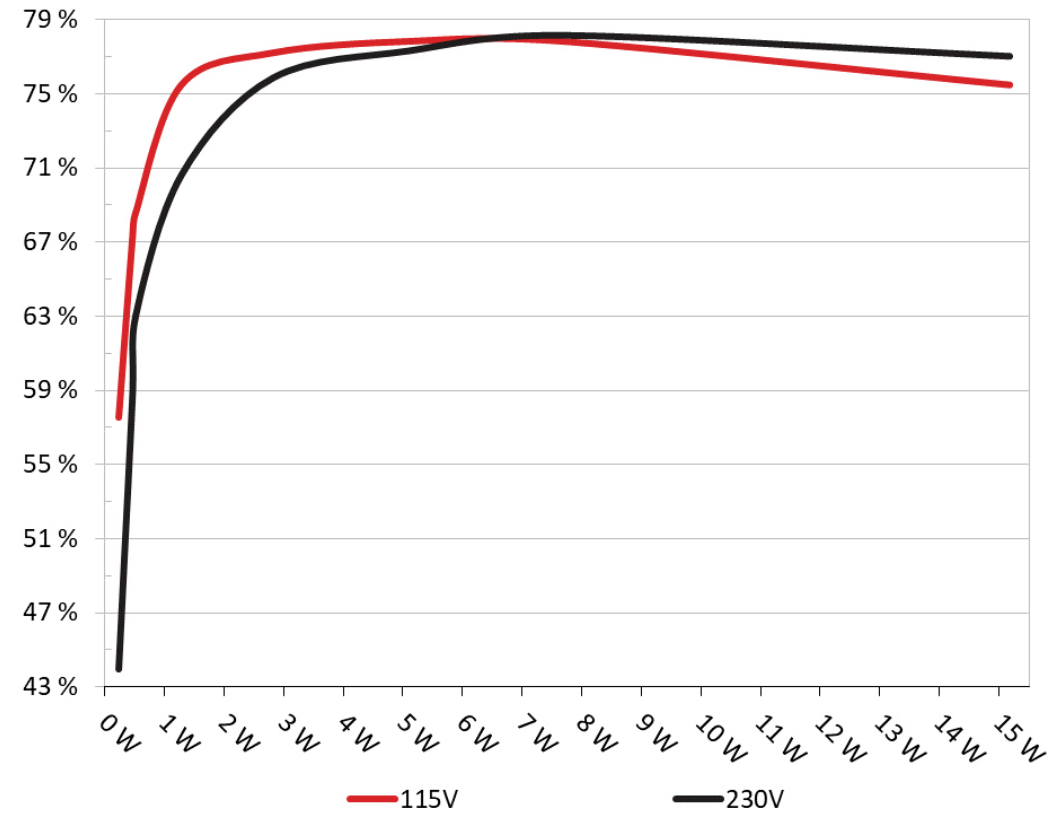
INFO

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 G Gold 550 V2

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	0.232W	57.559%	0.025
	5.147V	0.404W		114.86V
2	0.09A	0.463W	67.282%	0.043
	5.146V	0.688W		114.86V
3	0.55A	2.823W	77.222%	0.202
	5.132V	3.656W		114.86V
4	1A	5.119W	77.843%	0.306
	5.119V	6.576W		114.86V
5	1.5A	7.656W	77.841%	0.371
	5.103V	9.835W		114.86V
6	3A	15.173W	75.488%	0.461
	5.057V	20.1W		114.86V

230V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.232W	43.948%	0.01
	5.145V	0.527W		229.94V
2	0.09A	0.463W	58.714%	0.015
	5.144V	0.781W		229.95V
3	0.55A	2.822W	75.848%	0.068
	5.13V	3.713W		229.95V
4	1A	5.118W	77.314%	0.117
	5.118V	6.625W		229.95V
5	1.5A	7.655W	78.142%	0.165
	5.103V	9.793W		229.94V
6	3A	15.175W	77.013%	0.276
	5.058V	19.703W		229.94V

Protection Features

OCP (Cold @ 26.4°C)	12V: 69.00A (150.66%), 11.925V 5V: 25.9A (129.50%), 4.967V 3.3V: 30A (150.00%), 3.289V 5VSB: 4.2A (140.00%), 5.019V
OCP (Hot) @ 43.0°C	12V: 68.80A (150.22%), 11.948V 5V: 25.2A (126.00%), 4.969V 3.3V: 30A (150.00%), 3.287V 5VSB: 4.2A (140.00%), 5.002V
OPP (Cold @ 26.3°C)	824.99W (150.00%)
OPP (Hot @ 43.4°C)	825.00W (150.00%)
OTP	✓ (110°C @ Secondary Side)
SCP	12V to Earth: ✓ 5V to Earth: ✓ 3.3V to Earth: ✓ 5VSB to Earth: ✓ -12V to Earth: ✓
PWR_OK	Proper Operation
NLO	✓
Fan Failure Protection	✗
SIP	Surge: MOV Inrush: NTC & Bypass Relay

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
10%	2.744A	1.954A	1.965A	0.98A	54.998	82.046%	995	20.1	40.38°C	0.929
	12.170V	5.118V	3.358V	5.104V	67.048				41.88°C	114.84V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
20%	6.507A	2.94A	2.958A	1.18A	109.929	87.582%	1206	26	40.63°C	0.971
	12.146V	5.103V	3.347V	5.087V	125.518				42.69°C	114.83V
30%	10.625A	3.438A	3.461A	1.381A	164.92	89.152%	1287	28.3	41.15°C	0.982
	12.128V	5.091V	3.337V	5.071V	184.99				43.73°C	114.81V
40%	14.763A	3.938A	3.967A	1.583A	219.997	89.589%	1374	30.1	41.69°C	0.984
	12.110V	5.079V	3.327V	5.054V	245.563				44.24°C	114.79V
50%	18.565A	4.938A	4.977A	1.787A	274.984	89.522%	1495	32.4	42.31°C	0.986
	12.092V	5.064V	3.316V	5.037V	307.171				45.17°C	114.77V
60%	22.378A	5.944A	5.993A	1.993A	329.971	89.203%	1591	34.3	42.67°C	0.982
	12.073V	5.048V	3.304V	5.019V	369.907				45.96°C	114.75V
70%	26.200A	6.958A	7.018A	2.2A	384.963	88.708%	1593	34.3	43.21°C	0.981
	12.055V	5.031V	3.292V	5.001V	433.965				46.85°C	114.72V
80%	30.030A	7.976A	8.048A	2.307A	439.393	88.084%	1588	34.2	43.84°C	0.982
	12.038V	5.014V	3.28V	4.985V	498.831				48.97°C	114.71V
90%	34.266A	8.497A	8.565A	2.415A	494.406	87.502%	1580	34	44.21°C	0.984
	12.021V	5.001V	3.269V	4.97V	565.03				49.69°C	114.69V
100%	38.319A	9.022A	9.118A	3.037A	549.621	86.7%	1592	34.3	45.54°C	0.986
	12.003V	4.987V	3.257V	4.939V	633.933				52.13°C	114.67V
110%	42.249A	10.061A	10.263A	3.046A	604.625	85.957%	1591	34.3	46.85°C	0.987
	11.985V	4.969V	3.244V	4.924V	703.398				54.29°C	114.65V
CL1	0.114A	14.406A	14.391A	0.001A	121.287	81.248%	1583	34.1	41.6°C	0.974
	12.146V	5.012V	3.314V	5.089V	149.281				45.89°C	114.82V
CL2	0.114A	19.968A	0A	0.001A	101.365	80.096%	1529	33	40.63°C	0.972
	12.160V	5.007V	3.335V	5.109V	126.555				43.49°C	114.82V
CL3	0.114A	0A	19.8A	0.001A	67.383	74.558%	1543	33.3	41.46°C	0.957
	12.158V	5.097V	3.333V	5.107V	90.382				43.53°C	114.84V
CL4	45.778A	0A	0A	0.001A	549.459	87.975%	1595	34.3	45.53°C	0.985
	12.002V	5.062V	3.289V	5.054V	624.56				50.16°C	114.67V

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
10%	2.744A	1.954A	1.965A	0.98A	54.996	82.574%	1000	20.2	40.27°C	0.637
	12.169V	5.118V	3.359V	5.104V	66.602				42.19°C	229.94V
20%	6.507A	2.94A	2.957A	1.179A	109.922	88.397%	1090	22.9	40.73°C	0.797
	12.144V	5.103V	3.347V	5.087V	124.356				41.97°C	229.93V
30%	10.627A	3.437A	3.461A	1.38A	164.911	90.281%	1169	25.1	41.02°C	0.868
	12.125V	5.091V	3.337V	5.071V	182.668				42.63°C	229.92V
40%	14.767A	3.938A	3.967A	1.583A	219.988	90.97%	1289	28.3	41.8°C	0.902
	12.107V	5.079V	3.327V	5.055V	241.827				43.47°C	229.91V
50%	18.567A	4.938A	4.977A	1.787A	274.98	91.064%	1403	30.9	42.33°C	0.923
	12.090V	5.064V	3.315V	5.037V	301.961				43.84°C	229.9V
60%	22.380A	5.944A	5.994A	1.992A	329.968	90.949%	1540	33.2	42.76°C	0.935
	12.071V	5.048V	3.304V	5.02V	362.805				45.21°C	229.89V
70%	26.203A	6.959A	7.019A	2.2A	384.967	90.658%	1594	34.3	43.41°C	0.943
	12.054V	5.031V	3.291V	5.001V	424.637				45.74°C	229.88V
80%	30.039A	7.978A	8.051A	2.307A	439.395	90.257%	1592	34.3	43.77°C	0.95
	12.034V	5.013V	3.279V	4.985V	486.827				46.32°C	229.87V
90%	34.276A	8.499A	8.567A	2.414A	494.403	89.898%	1588	34.2	44.66°C	0.954
	12.017V	5V	3.268V	4.97V	549.964				47.83°C	229.87V
100%	38.330A	9.024A	9.12A	3.037A	549.623	89.351%	1592	34.3	45.11°C	0.958
	11.999V	4.986V	3.256V	4.939V	615.134				49.26°C	229.86V
110%	42.260A	10.063A	10.266A	3.047A	604.624	88.766%	1596	34.3	46.25°C	0.962
	11.981V	4.968V	3.243V	4.924V	681.118				51.33°C	229.85V
CL1	0.114A	14.407A	14.392A	0.001A	121.287	82.216%	1588	34.2	41.78°C	0.83
	12.145V	5.011V	3.314V	5.089V	147.516				45.71°C	229.94V
CL2	0.114A	19.97A	0A	0.001A	101.365	80.82%	1502	32.5	40.33°C	0.798
	12.158V	5.006V	3.335V	5.11V	125.418				42.77°C	229.94V
CL3	0.113A	0A	19.802A	0.001A	67.381	75.135%	1473	32.1	40.78°C	0.72
	12.157V	5.097V	3.333V	5.107V	89.678				42.24°C	229.94V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
CL4	45.795A	0A	0A	0.001A	549.46	90.586%	1599	34.3	46.35°C	0.957
	11.998V	5.061V	3.288V	5.055V	606.57				48.11°C	229.86V

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])	Temps (In/Out)	PF/AC Volts
20W	1.232A	0.487A	0.49A	0.195A	19.997	78.919%	0	<6.0	41.5°C	0.74
	12.052V	5.136V	3.369V	5.136V	25.345				36.87°C	114.85V
40W	2.690A	0.682A	0.686A	0.292A	39.997	81.233%	705	8.1	37.62°C	0.895
	12.151V	5.131V	3.365V	5.13V	49.244				39.4°C	114.84V
60W	4.150A	0.878A	0.883A	0.39A	59.996	84.123%	979	19.5	38.2°C	0.933
	12.174V	5.127V	3.362V	5.123V	71.32				40.69°C	114.83V
80W	5.619A	1.074A	1.081A	0.489A	79.936	86.208%	1026	21	39.13°C	0.958
	12.158V	5.122V	3.358V	5.116V	92.727				41.07°C	114.83V

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
20W	1.232A	0.487A	0.49A	0.195A	19.993	78.117%	0	<6.0	42.28°C	0.357
	12.052V	5.136V	3.369V	5.137V	25.596				36.4°C	229.94V
40W	2.690A	0.682A	0.686A	0.292A	39.993	80.986%	711	8.4	37.84°C	0.548
	12.151V	5.131V	3.365V	5.13V	49.394				39.97°C	229.94V
60W	4.150A	0.878A	0.883A	0.39A	59.993	84.488%	914	17.3	38.81°C	0.656
	12.174V	5.127V	3.362V	5.124V	71.008				40.57°C	229.93V
80W	5.617A	1.074A	1.081A	0.489A	79.93	87.099%	930	17.6	39.16°C	0.728
	12.158V	5.122V	3.358V	5.117V	91.769				40.73°C	229.93V

The results above are not used in the certification process

Ripple Measurements

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	135.51mV	15.61mV	11.17mV	29.37mV	Fail
20% Load	56.73mV	12.00mV	9.67mV	29.58mV	Pass
30% Load	55.13mV	12.37mV	10.08mV	29.83mV	Pass
40% Load	54.77mV	12.98mV	10.96mV	30.30mV	Pass
50% Load	55.24mV	13.50mV	11.69mV	32.67mV	Pass
60% Load	55.85mV	14.32mV	11.63mV	33.24mV	Pass
70% Load	55.75mV	15.04mV	12.77mV	33.96mV	Pass
80% Load	55.80mV	18.86mV	14.48mV	34.32mV	Pass
90% Load	55.02mV	19.22mV	14.32mV	37.11mV	Pass
100% Load	73.10mV	22.02mV	18.33mV	44.44mV	Pass
110% Load	73.89mV	23.07mV	19.60mV	45.85mV	Pass
Crossload1	68.33mV	29.13mV	21.14mV	34.05mV	Pass
Crossload2	54.00mV	42.50mV	15.67mV	31.07mV	Pass
Crossload3	39.99mV	13.81mV	19.86mV	29.88mV	Pass
Crossload4	68.94mV	14.02mV	10.43mV	33.68mV	Pass

The results above are not used in the certification process

230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	140.92mV	16.43mV	14.69mV	30.45mV	Fail
20% Load	66.78mV	12.52mV	9.67mV	30.30mV	Pass
30% Load	61.78mV	12.62mV	10.65mV	30.66mV	Pass
40% Load	60.18mV	18.24mV	15.31mV	31.02mV	Pass
50% Load	60.80mV	13.91mV	11.84mV	31.33mV	Pass
60% Load	60.18mV	15.09mV	12.41mV	33.65mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
70% Load	60.03mV	15.45mV	12.82mV	33.29mV	Pass
80% Load	60.39mV	18.24mV	14.74mV	34.58mV	Pass
90% Load	59.67mV	20.35mV	15.51mV	35.41mV	Pass
100% Load	71.21mV	21.57mV	18.04mV	43.03mV	Pass
110% Load	73.60mV	23.05mV	19.34mV	44.11mV	Pass
Crossload1	71.35mV	28.93mV	22.11mV	35.17mV	Pass
Crossload2	61.21mV	43.94mV	16.44mV	32.11mV	Pass
Crossload3	49.31mV	13.86mV	19.81mV	30.92mV	Pass
Crossload4	67.71mV	14.23mV	11.79mV	31.20mV	Pass

The results above are not used in the certification process

Cooler Master G GOLD 550 V2 (MWE GOLD 550 V3 Non-Modular)

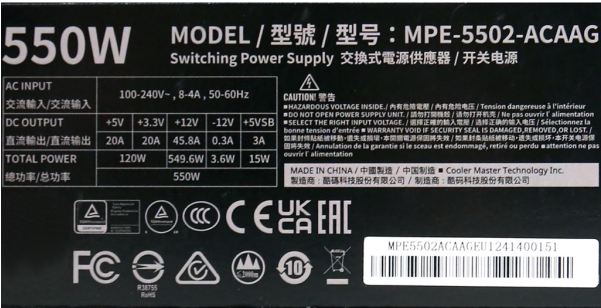


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All data and graphs included in this test report can be used by any individual on the following conditions:

- › 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



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

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