Make It Yours.

Cooler Master MWE Bronze 750 V3 230V

MPE7501ACABW3BEU1241500002

Lab ID CM75002526

Certification ID 252526

Test Result Report ID: 24PS2526A

Certificate Issue Date: Aug 7, 2024

230V

Scheme: ETA-EMI PSU



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	MWE Bronze 750 V3 230V
OEM/ODM	
Serial Number	MPE7501ACABW3BEU1241500002
Product Specifications	
Manufacturer-Provided Information	
□□□□ (Vrms)	200-240
□□□□ (Arms)	6

□□□□ (Hz)	50-60
□□□□ (W)	750
Operating Temperature (Continuous Full Load) (°C)	
□□	ATX12V
□□□□	Fixed cables
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
□□	120mm Fluid Dynamic Bearing Fan (HA1225H12F-Z)
□□□□□	✓
Cybenetics Testing Information	
Lab ID	CM75002526
Date of receipt	Jul 16, 2024
Testing Date	Aug 7, 2024
Report Issued Date	Aug 7, 2024
□□□□□	Broke during 5V SCP testing
Engineer Name	-
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

□□□□ (Non-accredited measurements)

□□□□				
□□	□□□□	□□□□□□	**Gauge**	In Cable Capacitors
ATX □□ 24 pin (510mm)	1	1	18-20AWG	□
8 pin EPS 12V □□ (560mm) / 4+4 pin EPS 12V □□ (+120mm)	1	2	18AWG	□
6+2pin PCIe□□ (540mm+100mm)	2	4	16-18AWG	□
SATA□□ (420mm+150mm+150mm)	2	6	18-20AWG	□
4-pin Molex (400mm+150mm+150mm)	1	3	18-20AWG	□
□□□□□				

AC Power Cord (1385mm) - C13 coupler	1	1	18AWG	-

Protection Features(Manufacturer)

Over Power Protection	✓
Over Current (+12V) Protection	✓
Over Temperature Protection	✓
Short Circuit Protection	✗
Surge Protection	✓
Inrush Current Protection	✓
Fan Failure Protection	✗

□□□□

□		3.3V	5V	12V	5VSB	-12V
□□□□	□□	20	20	62	3	0.3
	□	120		744	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	✓
ATX v3.1 PSU Power Excursion	✓

Performance Summary 230V

Accredited	
□□□□ (>1450 load combinations)	87.812%
Average Noise Output (>1450 Load Combinations)	38.77dBA

PF□□□ (>1450 Load Combinations)		0.958
Efficiency With 10W (≤500W) or 2% (>500W) Load		-
□□□□□□		0.1801W
Non-Accredited		
12V Ripple (Full Load)		40.28mV
5V Ripple (Full Load)		22.91mV
3.3V Ripple (Full Load)		18.16mV
5VSB Ripple (Full Load)		52.06mV
12V Load Regulation		1.98%
5V Load Regulation		3.19%
3.3V Load Regulation		4.93%
5VSB Load Regulation		4.57%
Inrush Current		126.700A
12V Transient Response (150%)		11.61V
5V Transient Response (150%)		4.945V
3.3V Transient Response (150%)		3.168V
5VSB Transient Response (150%)		4.958V
□□□□ & PG□□		21.00ms
AC Loss to PWR_OK Hold Up Time		19.60ms
PWR_OK Inactive to DC Loss Delay		1.40ms
PSU Timings: T1 (20% / 100%)	58.0ms	58.0ms
PSU Timings: T3 (20% / 100%)	125.0ms	126.0ms
OPP (30.15°C / 0.00°C)	132.18%	-

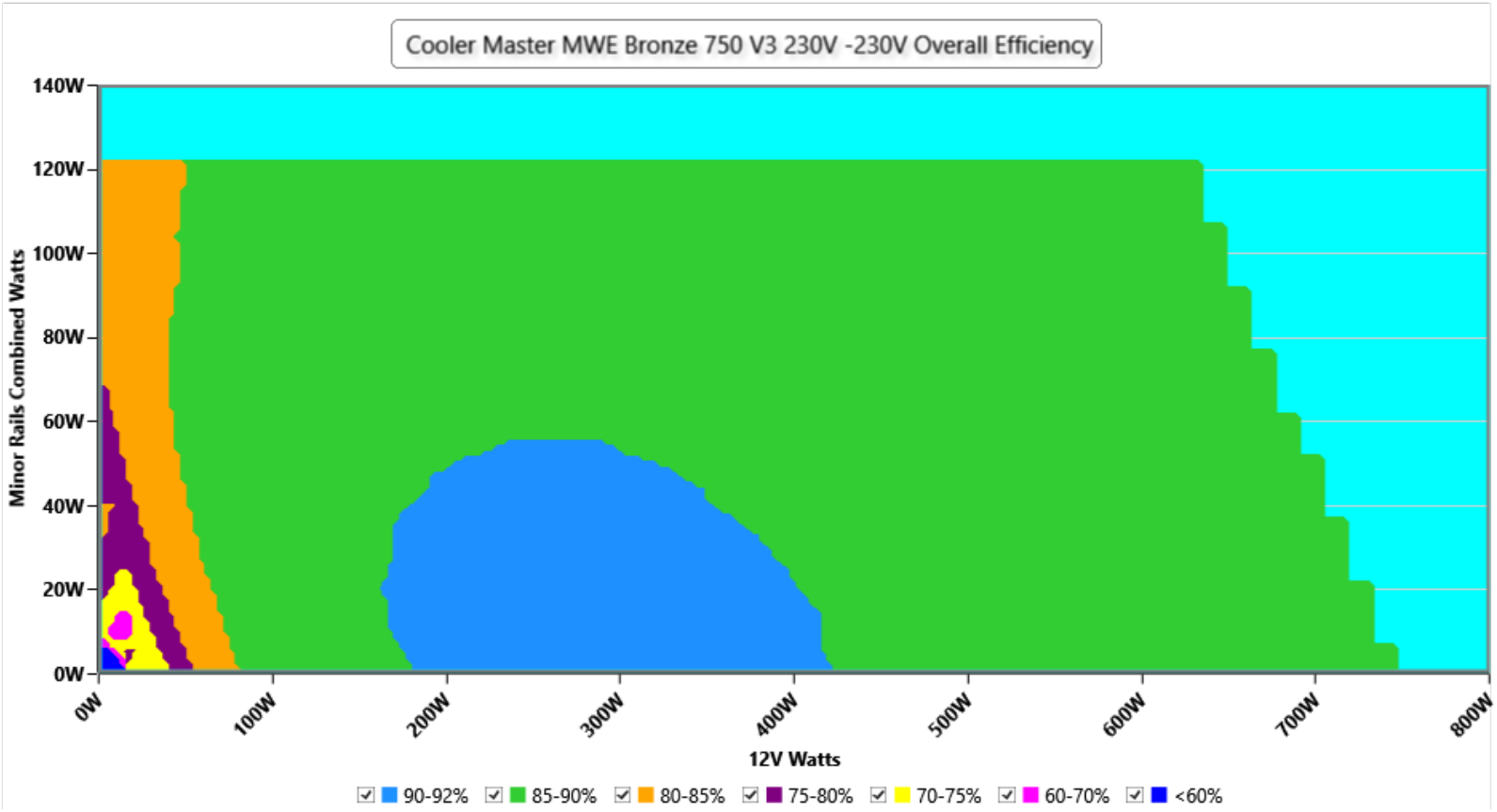
□□□□ & PG□□

Hold-Up Time (ms)	21
AC Loss to PWR_OK Hold Up Time (ms)	19.6
PWR_OK Inactive to DC Loss Delay (ms)	1.4

Tables 230V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	231.06 V	230.96 V	227.70 V	231.12 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	1.417	1.340	1.419	1.490	PASS
Mains Voltage THD:	0.17 %	0.15 %	N/A	0.26 %	2.00 %	PASS
Real Power:	0.180 W	0.147 W	N/A	0.219 W	N/A	N/A
Apparent Power:	51.182 W	50.902 W	N/A	51.507 W	N/A	N/A
Power Factor:	0.003	N/A	N/A	N/A	N/A	N/A

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

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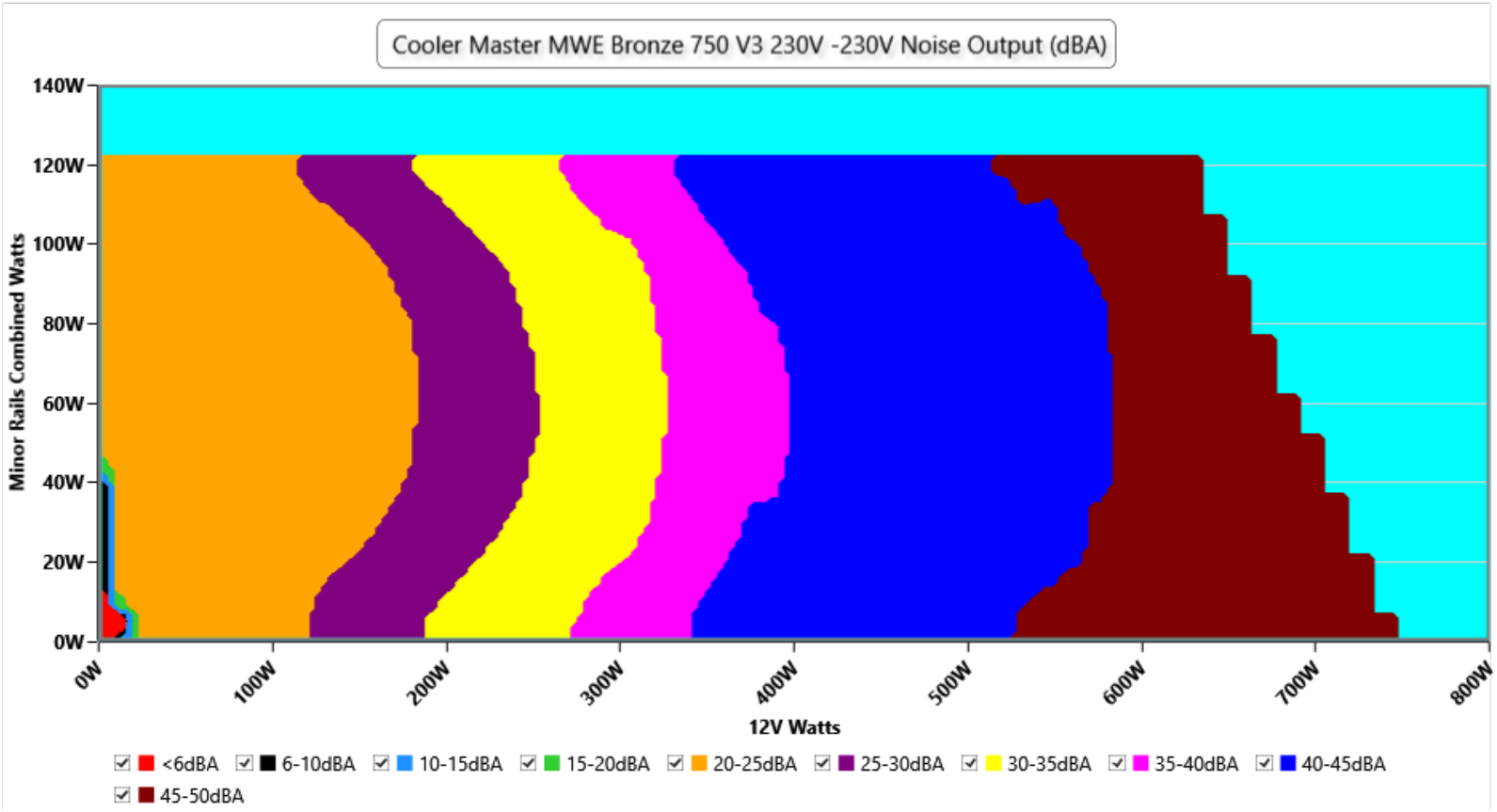
230V



□□

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

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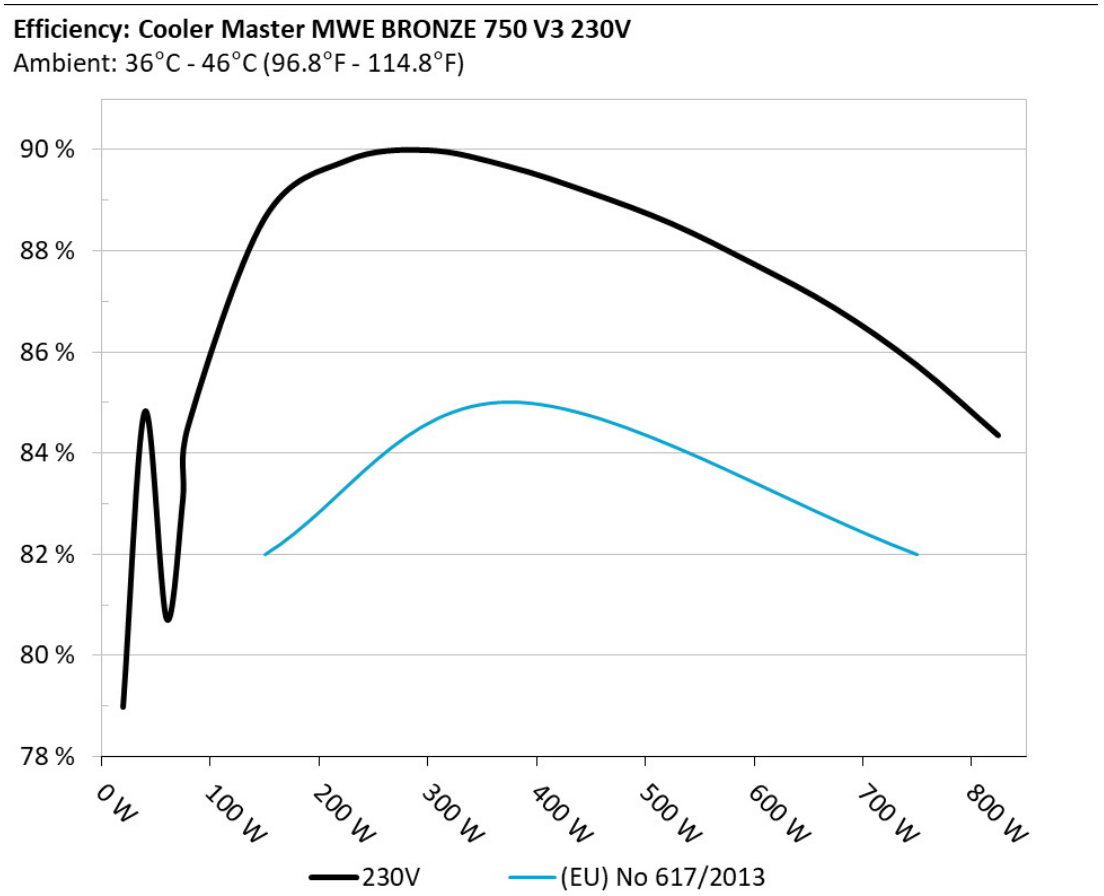

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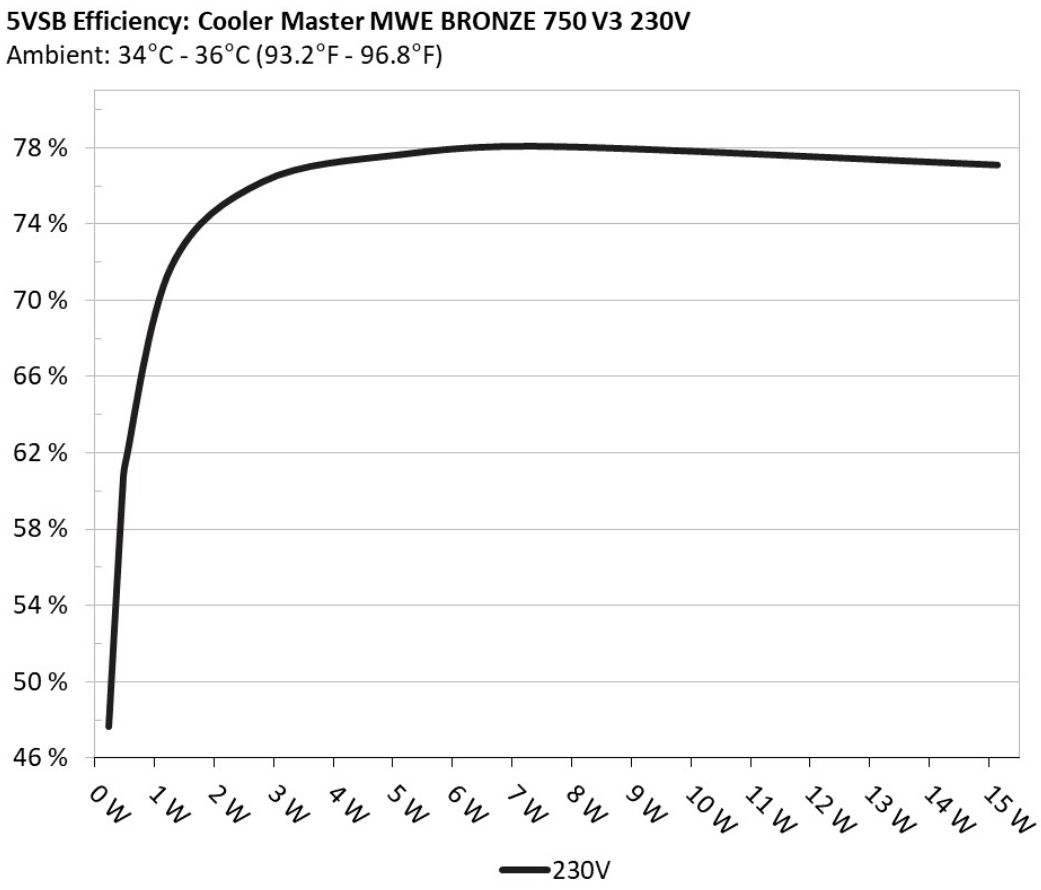
The PSU`s efficiency under high ambient temperatures with 115V and 230V input. For this graph the results of the 10-110% load regulation table are used

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**	0.231W	47.665%	0.01
	5.137V	0.485W		230.37V

2	**0.09A**	0.462W	60.045%	0.016
	5.136V	0.77W		230.37V
3	**0.55A**	2.818W	76.218%	0.074
	5.122V	3.698W		230.37V
4	**1A**	5.11W	77.627%	0.126
	5.108V	6.585W		230.36V
5	**1.5A**	7.641W	78.059%	0.177
	5.093V	9.79W		230.36V
6	**3.001A**	15.142W	77.091%	0.289
	5.047V	19.641W		230.36V

Protection Features

OCP (Cold @ -°C)	-
OCP (Hot) @ -°C)	-
OPP (Cold @ 30.1°C)	991.35W (132.18%)
OPP (Hot @ -°C)	-
OTP	
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)

10-110%□□□□ 230V

□□	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
10%	**4.367A**	**1.95A**	**1.973A**	**0.982A**	75.006	83.099%	1525	34.1	40.21°C	0.801
	12.229V	5.129V	3.346V	5.09V	90.261				41.97°C	230.4V
20%	**9.764A**	**2.935A**	**2.973A**	**1.184A**	149.976	88.636%	1647	36	40.66°C	0.92
	12.194V	5.112V	3.33V	5.071V	169.203				42.4°C	230.4V
30%	**15.526A**	**3.433A**	**3.483A**	**1.386A**	224.995	89.778%	1895	40.9	41.3°C	0.956
	12.169V	5.099V	3.317V	5.053V	250.618				43.18°C	230.4V
40%	**21.312A**	**3.934A**	**3.997A**	**1.59A**	300.1	89.989%	2120	42.8	41.88°C	0.971
	12.147V	5.086V	3.303V	5.034V	333.486				43.86°C	230.4V
50%	**26.743A**	**4.934A**	**5.022A**	**1.796A**	374.799	89.667%	2343	45.3	42.14°C	0.979
	12.126V	5.069V	3.286V	5.013V	417.991				44.32°C	230.39V
60%	**32.207A**	**5.94A**	**6.056A**	**2.001A**	449.663	89.15%	2347	45.4	42.68°C	0.984
	12.105V	5.053V	3.27V	4.993V	504.389				44.98°C	230.38V
70%	**37.691A**	**6.953A**	**7.102A**	**2.213A**	524.567	88.538%	2349	45.4	43.18°C	0.987
	12.083V	5.036V	3.253V	4.972V	592.477				46.26°C	230.36V
80%	**43.264A**	**7.972A**	**8.158A**	**2.322A**	599.767	87.744%	2353	45.5	43.63°C	0.988
	12.062V	5.018V	3.236V	4.954V	683.542				47.23°C	230.35V
90%	**49.189A**	**8.495A**	**8.692A**	**2.432A**	674.779	86.866%	2354	45.5	44.51°C	0.99
	12.041V	5.004V	3.221V	4.936V	776.801				48.5°C	230.33V
100%	**54.935A**	**9.023A**	**9.265A**	**3.062A**	750	85.743%	2357	45.5	45.07°C	0.991
	12.020V	4.988V	3.205V	4.9V	874.704				50.22°C	230.32V
110%	**60.577A**	**10.063A**	**10.449A**	**3.073A**	825.031	84.354%	2363	45.6	46.31°C	0.992
	11.997V	4.969V	3.186V	4.882V	978.066				52.52°C	230.31V
CL1	**0.115A**	**14.337A**	**14.579A**	**0.001A**	121.309	80.304%	2288	44.8	40.65°C	0.906
	12.208V	5.036V	3.272V	5.083V	151.064				44.01°C	230.4V
CL2	**0.114A**	**19.88A**	**0A**	**0.001A**	101.404	79.349%	2094	42.6	40.05°C	0.878
	12.222V	5.03V	3.335V	5.104V	127.798				42.49°C	230.4V

CL3	**0.114A**	**0A**	**20.186A**	**0.001A**	67.401	72.108%	2024	41.9	40.99°C	0.811
	12.215V	5.116V	3.269V	5.098V	93.473				43.06°C	230.41V
CL4	**62.374A**	**0A**	**0A**	**0.001A**	749.853	86.929%	2363	45.6	45.47°C	0.991
	12.021V	5.058V	3.262V	5.018V	862.621				49.35°C	230.33V

The results above are not used in the certification process

20-80□□□□ 230V

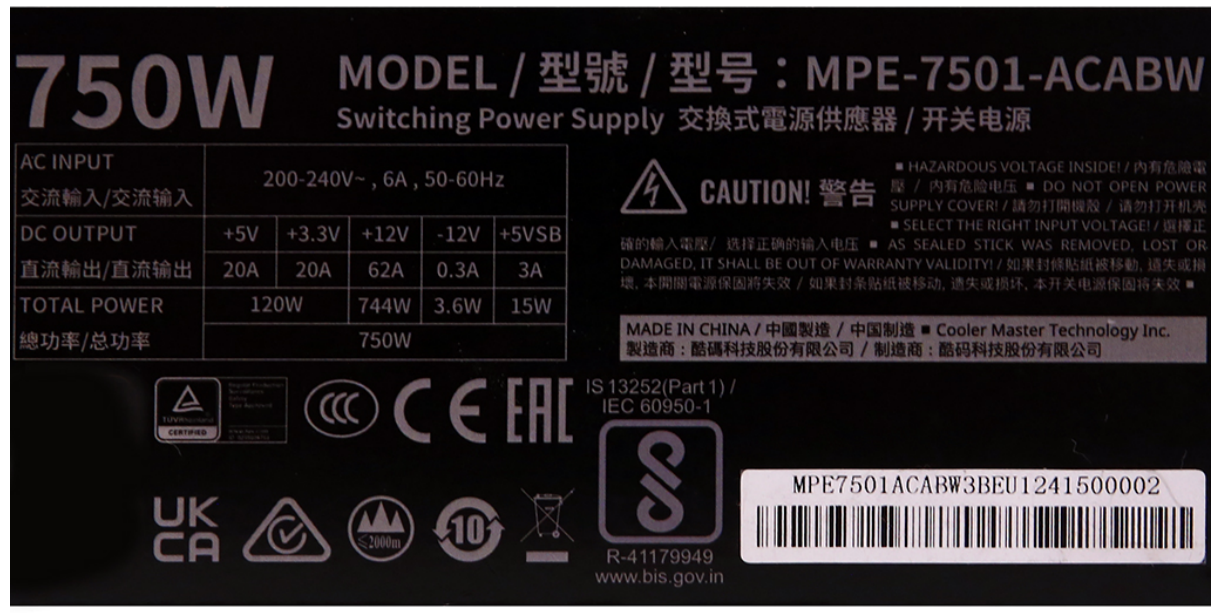
□□	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□ (RPM)	□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
20W	**1.216A**	**0.486A**	**0.491A**	**0.195A**	20.012	78.99%	0	<6.0	41.64°C	0.382
	12.226V	5.147V	3.363V	5.124V	25.336				36.12°C	230.42V
40W	**2.668A**	**0.681A**	**0.688A**	**0.293A**	40.007	84.823%	0	<6.0	42.74°C	0.59
	12.258V	5.143V	3.359V	5.118V	47.169				37.11°C	230.41V
60W	**4.130A**	**0.876A**	**0.885A**	**0.391A**	60.003	80.734%	1437	32.4	38.87°C	0.746
	12.234V	5.139V	3.355V	5.112V	74.324				40.1°C	230.41V
80W	**5.588A**	**1.072A**	**1.083A**	**0.49A**	79.97	84.547%	1402	31.4	39.28°C	0.813
	12.228V	5.135V	3.351V	5.106V	94.587				40.76°C	230.4V

The results above are not used in the certification process

□□□□ 230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	7.68mV	13.98mV	8.24mV	34.95mV	Pass
20% Load	23.64mV	13.42mV	8.24mV	33.98mV	Pass
30% Load	22.32mV	13.62mV	8.69mV	34.34mV	Pass
40% Load	22.17mV	14.18mV	9.00mV	34.59mV	Pass
50% Load	23.14mV	15.15mV	10.32mV	37.39mV	Pass
60% Load	22.93mV	16.53mV	12.67mV	39.48mV	Pass
70% Load	23.24mV	17.19mV	11.70mV	40.50mV	Pass
80% Load	24.46mV	18.26mV	15.62mV	41.06mV	Pass
90% Load	24.97mV	19.33mV	15.67mV	43.20mV	Pass
100% Load	40.28mV	22.91mV	18.16mV	52.06mV	Fail





Test	12V	5V	3.3V	5VSB	Pass/Fail
110% Load	44.26mV	24.02mV	19.52mV	53.96mV	Fail
Crossload1	38.77mV	26.95mV	23.67mV	40.61mV	Pass
Crossload2	13.49mV	37.54mV	13.02mV	36.58mV	Pass
Crossload3	11.25mV	14.54mV	24.77mV	33.73mV	Pass
Crossload4	39.40mV	16.13mV	9.24mV	43.06mV	Pass

The results above are not used in the certification process

Cooler Master MWE Bronze 750 V3 230V

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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