

## Anex

Maxpower MP-0750W-B

Lab ID#: MP75002315  
 Receipt Date: Dec 12, 2023  
 Test Date: Dec 29, 2023

Report: 23PS2315A  
 Report Date: Jan 3, 2024

DUT INFORMATION	
Brand	Maxpower
Manufacturer (OEM)	Maxpower
Series	Cyclops M1
Model Number	M1-750B
Serial Number	
DUT Notes	

DUT SPECIFICATIONS	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	8-11
Rated Frequency (Hz)	47-63
Rated Power (W)	750
Type	ATX12V
Cooling	120mm Rifle Bearing Fan (BDH12025S)
Semi-Passive Operation	X
Cable Design	Fixed cables

TEST EQUIPMENT	
Electronic Loads	Chroma 63601-5 x2 Chroma 63600-2 63640-80-80 x10 63610-80-20
AC Sources	Chroma 6530, APM SP300VAC4000W-P
Power Analyzers	RS HMC8015, N4L PPA1530, N4L PPA5530
Oscilloscopes	Picoscope 4444, Rigol DS7014, 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, Keithley 2015 - THD
UPS	FSP Champ Tower 3kVA, CyberPower OLS3000E 3kVA
Isolation Transformer	4kVA

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### RESULTS

Temperature Range (°C /°F)	30-32 / 86-89.6
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓

### 115V

Average Efficiency	86.037%
Efficiency With 10W (≤500W) or 2% (>500W)	62.948
Average Efficiency 5VSB	77.007%
Standby Power Consumption (W)	0.1026000
Average PF	0.973
Avg Noise Output	39.17 dB(A)
Efficiency Rating (ETA)	SILVER
Noise Rating (LAMBDA)	Standard+

### 230V

Average Efficiency	88.089%
Average Efficiency 5VSB	73.253%
Standby Power Consumption (W)	0.2247000
Average PF	0.912
Avg Noise Output	38.97 dB(A)
Efficiency Rating (ETA)	BRONZE
Noise Rating (LAMBDA)	Standard+

### POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	8	9	55.3	2	0.5
	Watts	71		663	10	6
Total Max. Power (W)		750				

### HOLD-UP TIME & POWER OK SIGNAL (230V)

Hold-Up Time (ms)	11.6
AC Loss to PWR_OK Hold Up Time (ms)	8.3
PWR_OK Inactive to DC Loss Delay (ms)	3.3

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### CABLES AND CONNECTORS

#### Captive Cables

Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 24 pin (550mm)	1	1	18AWG	No
4+4 pin EPS12V (690mm)	2	2	18AWG	No
6+2 pin PCIe (560mm)	1	1	18AWG	No
6+2 pin PCIe (560mm+150mm)	1	2	18AWG	No
SATA (490mm+150mm+150mm)	2	6	18AWG	No
4-pin Molex (490mm+150mm+150mm)	1	3	18AWG	No

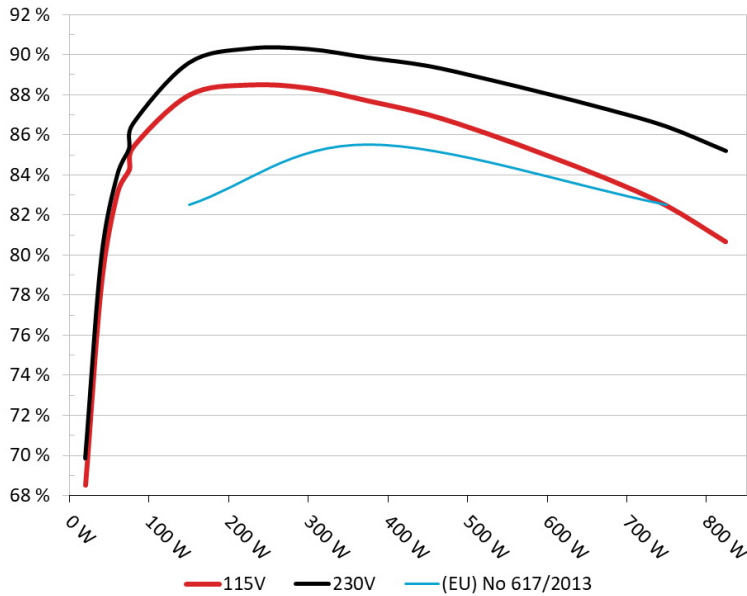
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#### EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Gamdias Cyclops M1 750B  
Ambient: 37°C - 47°C (98.6°F - 116.6°F)

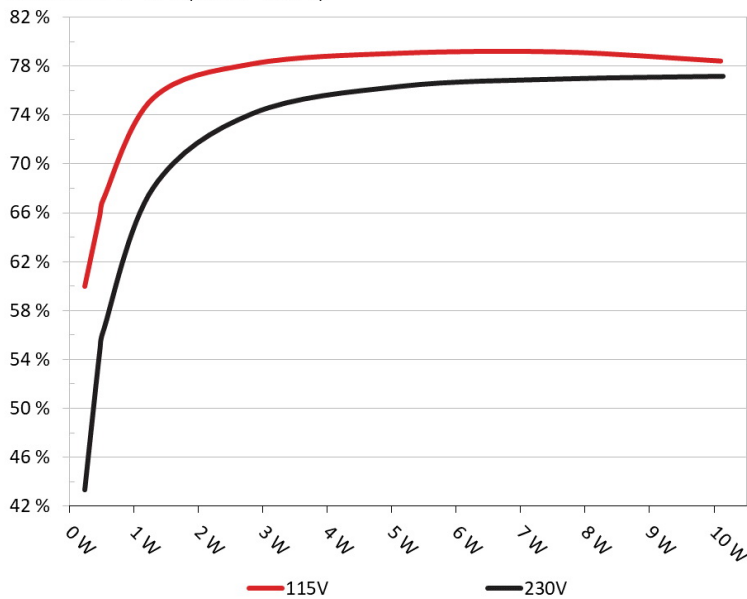


#### INFO

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: Gamdias Cyclops M1 750B  
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

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#### 5VSB EFFICIENCY -115V (ERP LOT 3/6 & CEC)

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.235W	59.477%	0.051
	5.21V	0.375W		114.87V
2	0.09A	0.469W	65.324%	0.095
	5.207V	0.718W		114.88V
3	0.55A	2.843W	77.717%	0.314
	5.17V	3.658W		114.87V
4	1A	5.134W	78.585%	0.383
	5.133V	6.533W		114.87V
5	1.5A	7.639W	78.684%	0.421
	5.093V	9.708W		114.87V
6	2A	10.101W	77.943%	0.444
	5.05V	12.959W		114.87V

#### 5VSB EFFICIENCY -230V (ERP LOT 3/6 & CEC)

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.234W	42.806%	0.022
	5.197V	0.547W		229.94V
2	0.09A	0.467W	54.223%	0.034
	5.194V	0.862W		229.94V
3	0.55A	2.84W	73.62%	0.141
	5.163V	3.858W		229.94V
4	1A	5.134W	75.836%	0.218
	5.134V	6.77W		229.94V
5	1.5A	7.651W	76.44%	0.273
	5.101V	10.011W		229.94V
6	2A	10.135W	76.659%	0.312
	5.067V	13.221W		229.94V

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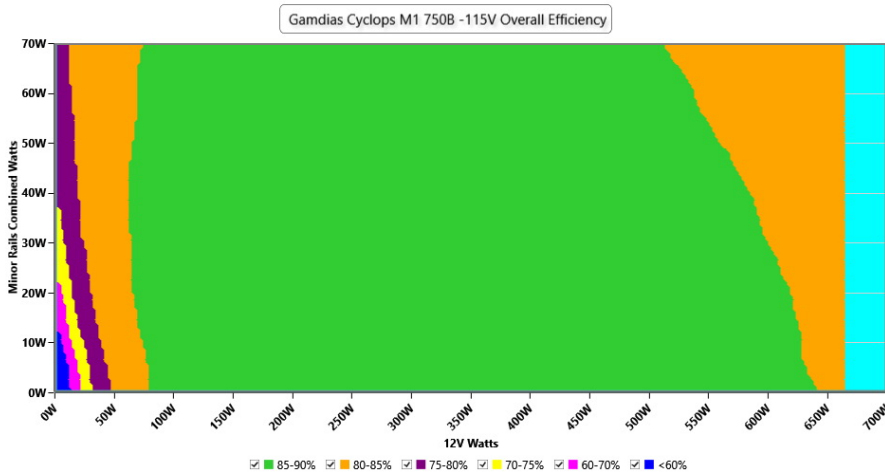
# 115V

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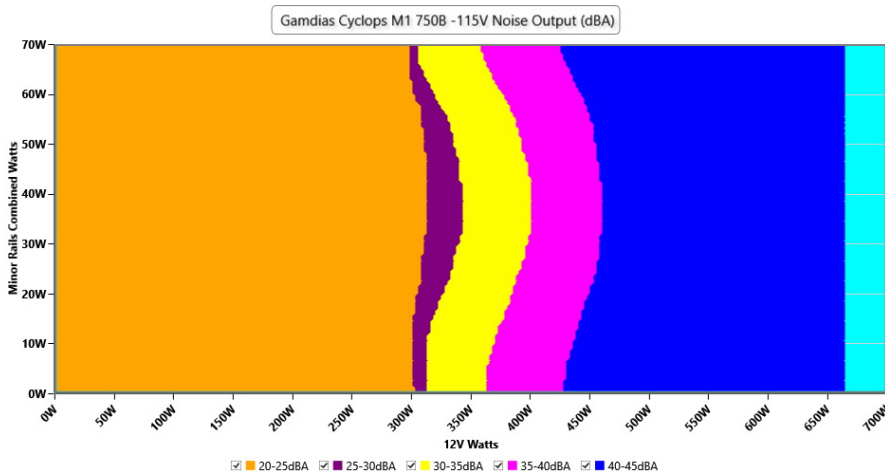
#### EFFICIENCY GRAPH 115V



#### 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

#### 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

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### VAMPIRE POWER -115V

#### Detailed Results

	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	114.88 V	114.82 V	113.85 V	114.93 V	116.15 V	PASS
Mains Frequency:	60.00 Hz	59.99 Hz	59.40 Hz	60.02 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.419	1.417	1.340	1.422	1.490	PASS
Mains Voltage THD:	0.15 %	0.09 %	N/A	0.26 %	2.00 %	PASS
Real Power:	0.103 W	0.080 W	N/A	0.127 W	N/A	N/A
Apparent Power:	7.329 W	7.303 W	N/A	7.360 W	N/A	N/A
Power Factor:	0.013	N/A	N/A	N/A	N/A	N/A

#### INFO

*This graph is generated by the PPA Standby Power Analysis software which takes full control of the power analyzer during the whole procedure. This application features all of the EN50564 & IEC62301 test limits for standby power software testing*

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#### 10-110% 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%	4.305A	1.942A	1.953A	0.979A	75.004	83.763%	1075	25.4	40.37°C	0.896
	12.404V	5.151V	3.379V	5.11V	89.543				44.65°C	114.85V
20%	9.622A	2.932A	2.953A	1.182A	149.942	87.469%	1083	25.8	40.8°C	0.957
	12.371V	5.116V	3.352V	5.077V	171.424				45.37°C	114.82V
30%	15.309A	3.437A	3.466A	1.387A	224.945	87.977%	1594	36.4	41.16°C	0.978
	12.338V	5.092V	3.332V	5.046V	255.688				46.23°C	114.8V
40%	21.033A	3.947A	3.987A	1.596A	300.034	87.821%	2045	42.8	41.71°C	0.985
	12.306V	5.068V	3.311V	5.014V	341.641				47.24°C	114.78V
50%	26.399A	4.97A	5.026A	1.807A	374.493	87.19%	2208	44.4	42.02°C	0.988
	12.272V	5.031V	3.283V	4.98V	429.517				48.07°C	114.74V
60%	31.837A	6.011A	6.084A	2A	449.297	86.513%	2215	44.5	42.99°C	0.989
	12.237V	4.992V	3.255V	4.947V	519.34				49.51°C	114.72V
70%	37.316A	7.072A	7.165A	2.242A	524.329	85.562%	2217	44.6	43.24°C	0.989
	12.199V	4.951V	3.225V	4.907V	612.814				50.31°C	114.69V
80%	42.922A	8.002A	8.265A	2.359A	598.83	84.481%	2216	44.6	43.91°C	0.988
	12.153V	4.911V	3.194V	4.876V	708.837				52.01°C	114.66V
90%	48.926A	8.72A	8.834A	2.478A	674.554	83.312%	2216	44.6	44.68°C	0.986
	12.101V	4.874V	3.169V	4.844V	809.67				53.71°C	114.62V
100%	55.268A	9.298A	9.442A	2A	749.288	81.978%	2207	44.4	45.8°C	0.984
	12.030V	4.84V	3.145V	4.856V	914.014				55.85°C	114.58V
110%	61.251A	10.438A	10.657A	2A	824.24	80.164%	2200	44.3	46.75°C	0.982
	11.939V	4.79V	3.124V	4.827V	1028.225				57.67°C	114.56V
CL1	0.113A	8.547A	8.528A	0A	72.294	75.958%	1758	38.9	40.51°C	0.873
	12.402V	4.996V	3.307V	5.158V	95.179				45.98°C	114.85V
CL2	0.111A	8.966A	0A	0A	46.384	75.688%	1053	25.0	40.92°C	0.817
	12.421V	5.019V	3.396V	5.18V	61.286				47.98°C	114.86V
CL3	0.111A	0A	7.916A	0A	27.778	69.766%	1063	25.2	40.38°C	0.733
	12.421V	5.18V	3.335V	5.18V	39.815				49.46°C	114.86V
CL4	62.123A	0A	0A	0.001A	749.507	83.763%	2207	44.4	45.66°C	0.989
	12.065V	5.061V	3.276V	5.042V	894.818				56.61°C	114.6V

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### 20-80W 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	1.196A	0.481A	0.484A	0.193A	19.999	68.023%	1063	25.2	36.82°C	0.695
	12.422V	5.197V	3.409V	5.181V	29.4				39.89°C	114.88V
40W	2.632A	0.675A	0.679A	0.29A	40	78.058%	1067	25.3	37°C	0.803
	12.416V	5.188V	3.403V	5.169V	51.244				40.27°C	114.87V
60W	4.072A	0.869A	0.874A	0.388A	60	82.578%	1068	25.3	38.1°C	0.876
	12.409V	5.179V	3.397V	5.158V	72.658				41.89°C	114.86V
80W	5.509A	1.064A	1.071A	0.486A	79.946	84.886%	1072	25.4	39.13°C	0.905
	12.402V	5.17V	3.39V	5.147V	94.18				43.11°C	114.85V

### RIPPLE MEASUREMENTS 115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	13.92mV	14.89mV	16.29mV	12.44mV	Pass
20% Load	15.73mV	15.87mV	15.93mV	12.39mV	Pass
30% Load	18.20mV	18.85mV	17.17mV	13.88mV	Pass
40% Load	19.75mV	21.64mV	18.05mV	15.12mV	Pass
50% Load	23.10mV	25.40mV	20.27mV	17.29mV	Pass
60% Load	27.58mV	29.47mV	21.51mV	19.82mV	Pass
70% Load	30.37mV	33.33mV	24.93mV	24.62mV	Pass
80% Load	32.58mV	35.86mV	27.87mV	26.74mV	Pass
90% Load	41.04mV	37.97mV	29.53mV	29.16mV	Pass
100% Load	75.34mV	49.87mV	40.25mV	41.99mV	Pass
110% Load	94.62mV	45.61mV	37.04mV	39.75mV	Pass
Crossload1	21.11mV	21.25mV	22.65mV	17.67mV	Pass
Crossload2	14.74mV	20.15mV	18.15mV	14.35mV	Pass
Crossload3	14.80mV	15.51mV	19.03mV	13.68mV	Pass
Crossload4	63.49mV	36.40mV	24.39mV	22.65mV	Pass

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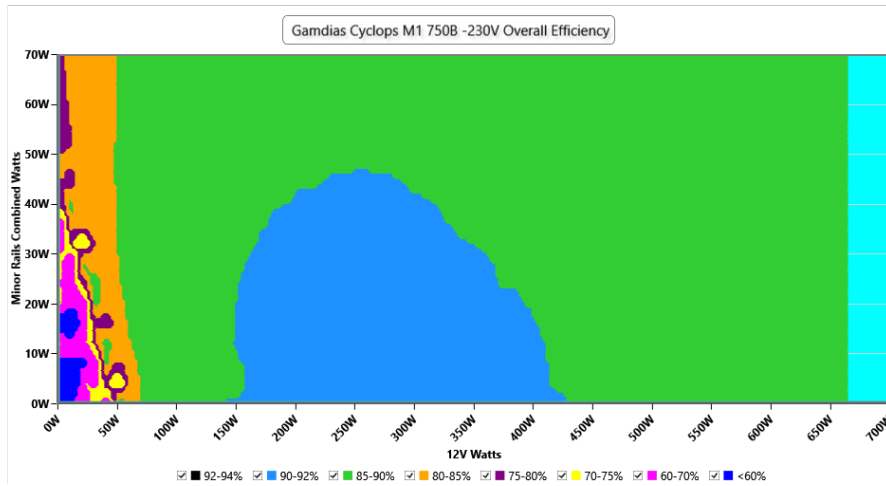
# 230V

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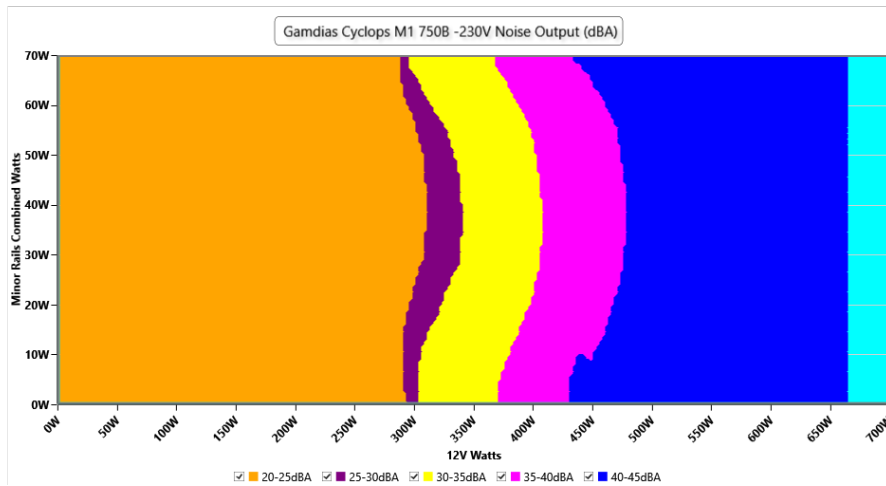
#### EFFICIENCY GRAPH 230V



#### 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

#### NOISE GRAPH 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

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### VAMPIRE POWER -230V

#### Detailed Results

	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	229.96 V	229.89 V	227.70 V	230.01 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:	0.13 %	0.09 %	N/A	0.19 %	2.00 %	PASS
Real Power:	0.225 W	0.162 W	N/A	0.294 W	N/A	N/A
Apparent Power:	24.691 W	24.648 W	N/A	24.753 W	N/A	N/A
Power Factor:	0.010	N/A	N/A	N/A	N/A	N/A

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#### 10-110% LOAD TESTS 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%	4.305A	1.941A	1.948A	0.978A	75	84.811%	1074	25.4	40.28°C	0.641
	12.405V	5.152V	3.388V	5.113V	88.433				44.54°C	229.94V
20%	9.619A	2.93A	2.941A	1.18A	149.93	89.085%	1077	25.5	40.71°C	0.827
	12.375V	5.12V	3.366V	5.083V	168.3				45.21°C	229.92V
30%	15.301A	3.434A	3.45A	1.385A	224.93	89.802%	1556	36.1	41.16°C	0.924
	12.344V	5.097V	3.348V	5.053V	250.475				46.26°C	229.91V
40%	21.021A	3.942A	3.964A	1.593A	300.018	89.779%	2003	42.7	41.67°C	0.95
	12.312V	5.074V	3.33V	5.023V	334.176				47.23°C	229.9V
50%	26.380A	4.961A	4.989A	1.804A	374.445	89.35%	2207	44.4	42.17°C	0.961
	12.280V	5.04V	3.307V	4.991V	419.077				48.2°C	229.89V
60%	31.806A	5.997A	6.031A	2A	449.279	88.942%	2217	44.6	42.81°C	0.968
	12.248V	5.003V	3.283V	4.958V	505.139				49.32°C	229.87V
70%	37.267A	7.051A	7.09A	2.235A	524.298	88.277%	2218	44.6	43.2°C	0.971
	12.214V	4.965V	3.258V	4.922V	593.925				50.22°C	229.86V
80%	42.829A	8.002A	8.16A	2.349A	598.911	87.555%	2220	44.7	43.85°C	0.974
	12.178V	4.928V	3.235V	4.895V	684.038				51.91°C	229.84V
90%	48.781A	8.678A	8.709A	2.464A	674.45	86.779%	2218	44.6	44.73°C	0.975
	12.135V	4.897V	3.215V	4.869V	777.203				53.82°C	229.83V
100%	55.014A	9.247A	9.298A	2A	749.233	85.919%	2216	44.6	45.41°C	0.976
	12.083V	4.866V	3.194V	4.882V	872.027				55.46°C	229.82V
110%	60.791A	10.374A	10.521A	2A	824.216	84.695%	2215	44.5	46.93°C	0.975
	12.028V	4.819V	3.165V	4.858V	973.159				57.86°C	229.81V
CL1	0.111A	8.522A	8.476A	0A	72.279	77.088%	1591	36.4	40.23°C	0.634
	12.408V	5.01V	3.327V	5.162V	93.765				45.69°C	229.94V
CL2	0.111A	8.944A	0A	0A	46.378	77.093%	1045	24.9	40.18°C	0.494
	12.422V	5.031V	3.398V	5.182V	60.345				47.28°C	229.95V
CL3	0.111A	0A	7.876A	0A	27.775	62.24%	1059	25.0	41.05°C	0.381
	12.422V	5.183V	3.351V	5.182V	38.843				50.07°C	229.95V
CL4	61.939A	0A	0A	0.001A	749.487	87.367%	2213	44.5	46.21°C	0.978
	12.100V	5.071V	3.284V	5.055V	857.866				57.19°C	229.82V

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### 20-80W LOAD TESTS 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	1.195A	0.481A	0.484A	0.193A	19.998	69.353%	1063	25.2	36.57°C	0.336
	12.425V	5.194V	3.412V	5.182V	28.835				39.63°C	229.94V
40W	2.632A	0.675A	0.678A	0.29A	39.997	79.299%	1064	25.3	37.12°C	0.485
	12.417V	5.187V	3.407V	5.171V	50.438				40.41°C	229.94V
60W	4.072A	0.869A	0.873A	0.388A	59.996	83.458%	1065	25.3	38.23°C	0.574
	12.410V	5.179V	3.401V	5.16V	71.912				41.79°C	229.94V
80W	5.507A	1.064A	1.069A	0.485A	79.937	86.052%	1070	25.4	39.04°C	0.662
	12.402V	5.171V	3.396V	5.149V	92.894				42.79°C	229.93V

### RIPPLE MEASUREMENTS 230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	14.95mV	15.66mV	15.25mV	11.61mV	Pass
20% Load	15.41mV	16.90mV	16.34mV	12.65mV	Pass
30% Load	16.60mV	18.96mV	17.22mV	14.25mV	Pass
40% Load	17.69mV	21.95mV	18.00mV	16.00mV	Pass
50% Load	20.93mV	24.37mV	19.34mV	17.24mV	Pass
60% Load	24.49mV	28.90mV	21.25mV	19.82mV	Pass
70% Load	32.48mV	32.09mV	23.32mV	23.85mV	Pass
80% Load	32.53mV	36.53mV	26.74mV	28.39mV	Pass
90% Load	39.18mV	39.56mV	30.46mV	31.64mV	Pass
100% Load	58.10mV	43.69mV	31.86mV	32.59mV	Pass
110% Load	70.77mV	46.17mV	34.26mV	35.46mV	Pass
Crossload1	19.11mV	20.97mV	22.73mV	18.22mV	Pass
Crossload2	14.23mV	18.19mV	18.25mV	14.40mV	Pass
Crossload3	15.16mV	15.04mV	18.25mV	13.63mV	Pass
Crossload4	47.40mV	33.93mV	20.95mV	22.33mV	Pass

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

**Anex**

Maxpower MP-0750W-B

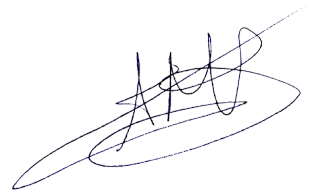


Top side



Power specifications label

**CERTIFICATIONS 115V**

**Aristeidis Bitziopoulos**  
Lab Director

**CERTIFICATIONS 230V**



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