MICRONICS

Micronics Classic II Full Change 900W

Serial Number

Lab ID MI90002445

Certification ID 252445

Test Result Report ID: 24PS2445A

Certificate Issue Date: May 17, 2024

115V 230V

Scheme: ETA-EMI PSU

CYBENETICS SILVER 230v

115V 230V

CYBENETICS STANDARD 230v

Scheme: LAMBDA PSU

CYBENETICS ATX 3.1 PASS

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	Micronics
Model	Classic II Full Change 900W
OEM/ODM	Sirfa (Dong Guan) Electronic
Serial Number	
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	200-240
Rated Current (Arms)	8

Rated Frequency (Hz)	50-60
Rated Power (W)	900
Operating Temperature (Continuous Full Load) (°C)	
Type	ATX12V
Cable Design	Fixed cables
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
Cooling	120mm Sleeve Bearing Fan (PY-1225M12S)
Semi-Passive Operation	✓
Cybenetics Testing Information	
Lab ID	MI90002445
Date of receipt	Apr 30, 2024
Testing Date	May 16, 2024
Report Issued Date	May 17, 2024
DUT Notes	We didn't test efficiency with a 2% load
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 (545mm)	1	1	18-22AWG	No
4+4 pin EPS12V (680mm+155mm)	1	2	18AWG	No
6+2 pin PCIe (465mm+155mm)	2	4	18AWG	No
12+4 pin PCIe (585mm) (600W)	1	1	16-24AWG	No
SATA (470mm+1560mm+160mm+160mm)	2	8	18AWG	No
4-pin Molex (445mm+155mm+150mm)	1	3	18AWG	No

Protection Features(Manufacturer)

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

Power Specifications

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	22	22	75	3	0.3
	Watts	120		900	15	3.6
Total Max. Power (W)		900				

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 230V

Accredited	
Average Efficiency (>1450 load combinations)	87.617%
Average Noise Output (>1450 Load Combinations)	43.17dBA
Average PF (>1450 Load Combinations)	0.941

Efficiency With 10W (≤500W) or 2% (>500W) Load		-
Standby Power Consumption		0.1998W
Non-Accredited		
12V Ripple (Full Load)		35.35mV
5V Ripple (Full Load)		19.91mV
3.3V Ripple (Full Load)		26.87mV
5VSB Ripple (Full Load)		22.59mV
12V Load Regulation		1.33%
5V Load Regulation		0.70%
3.3V Load Regulation		0.79%
5VSB Load Regulation		4.16%
Inrush Current		84.920A
12V Transient Response (200%)		11.09V
5V Transient Response (200%)		4.958V
3.3V Transient Response (200%)		3.180V
5VSB Transient Response (200%)		4.930V
Hold-Up Time & PWR_OK Signal		19.90ms
AC Loss to PWR_OK Hold Up Time		15.20ms
PWR_OK Inactive to DC Loss Delay		4.70ms
PSU Timings: T1 (20% / 100%)	49.0ms	82.0ms
PSU Timings: T3 (20% / 100%)	125.0ms	123.0ms
OPP (27.61°C / 0.00°C)	138.68%	-

Hold-Up Time & PWR_OK Signal

Hold-Up Time (ms)	19.9
AC Loss to PWR_OK Hold Up Time (ms)	15.2
PWR_OK Inactive to DC Loss Delay (ms)	4.7

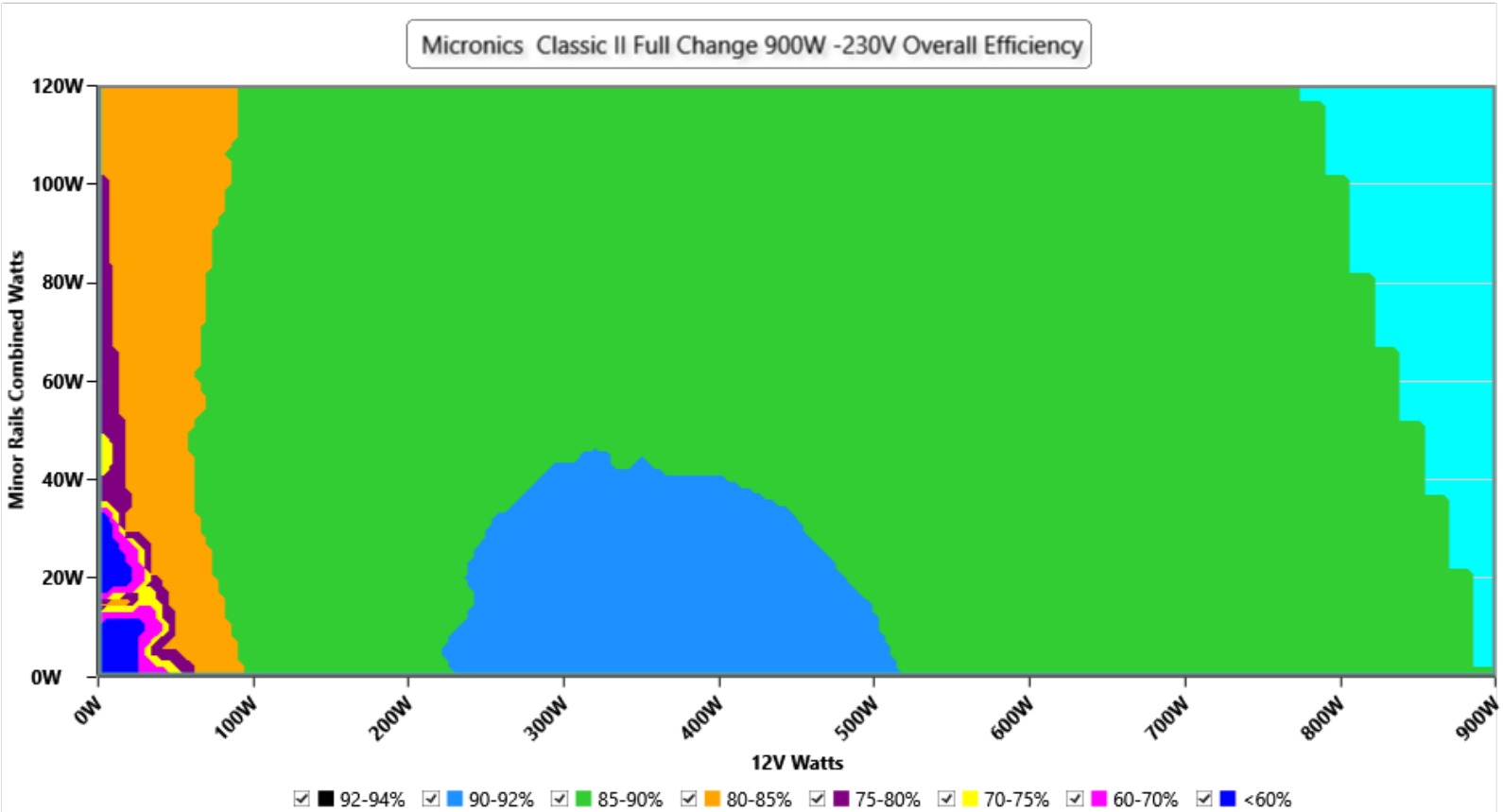
Stromverbrauch im Ruhezustand

Tables 230V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	231.00 V	230.89 V	227.70 V	231.06 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	0.27 %	2.00 %	PASS
Real Power:	0.200 W	0.186 W	N/A	0.223 W	N/A	N/A
Apparent Power:	29.509 W	29.244 W	N/A	29.771 W	N/A	N/A
Power Factor:	0.007	N/A	N/A	N/A	N/A	N/A

Efficiency Graph

230V

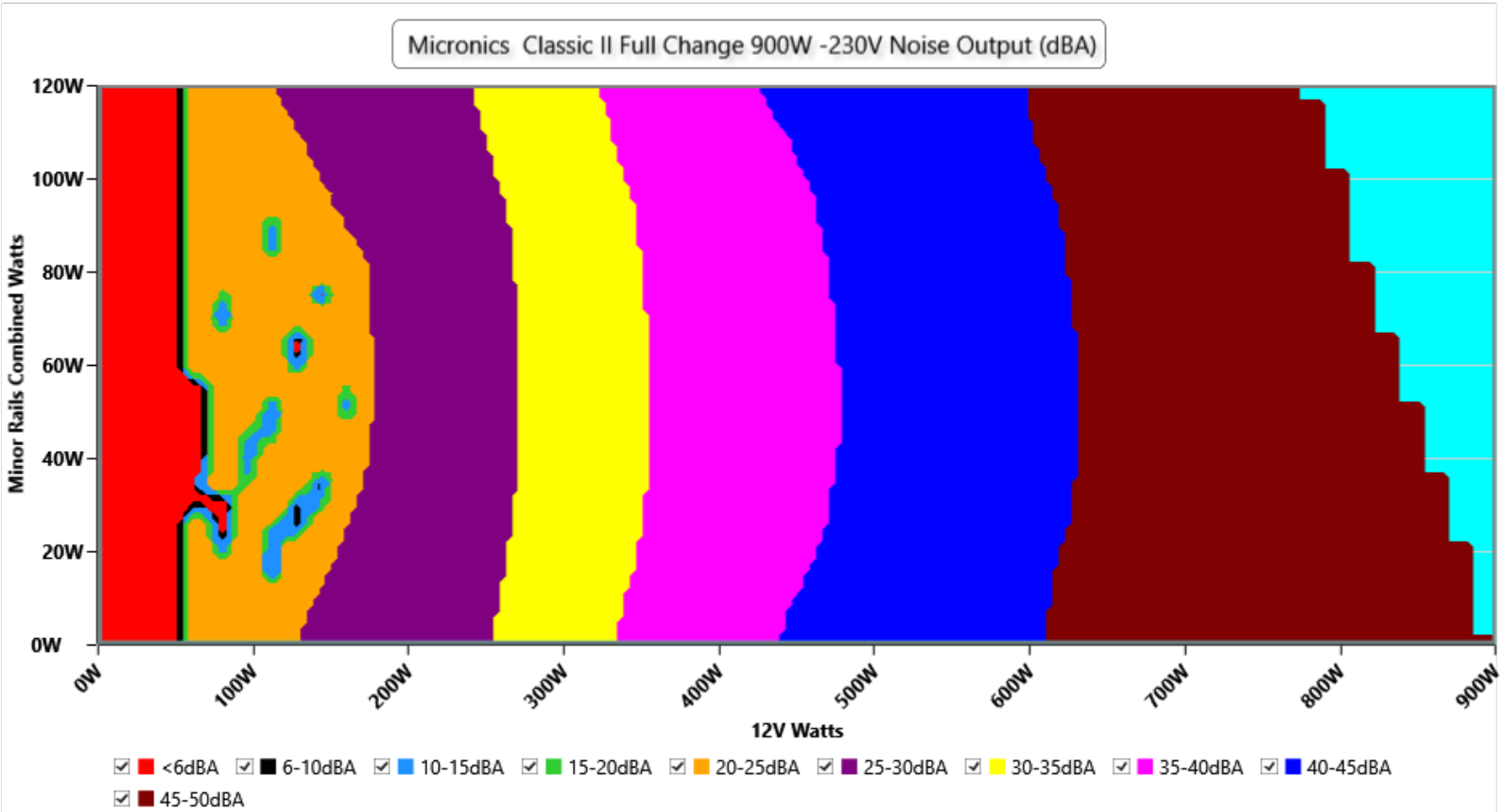


INFO

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

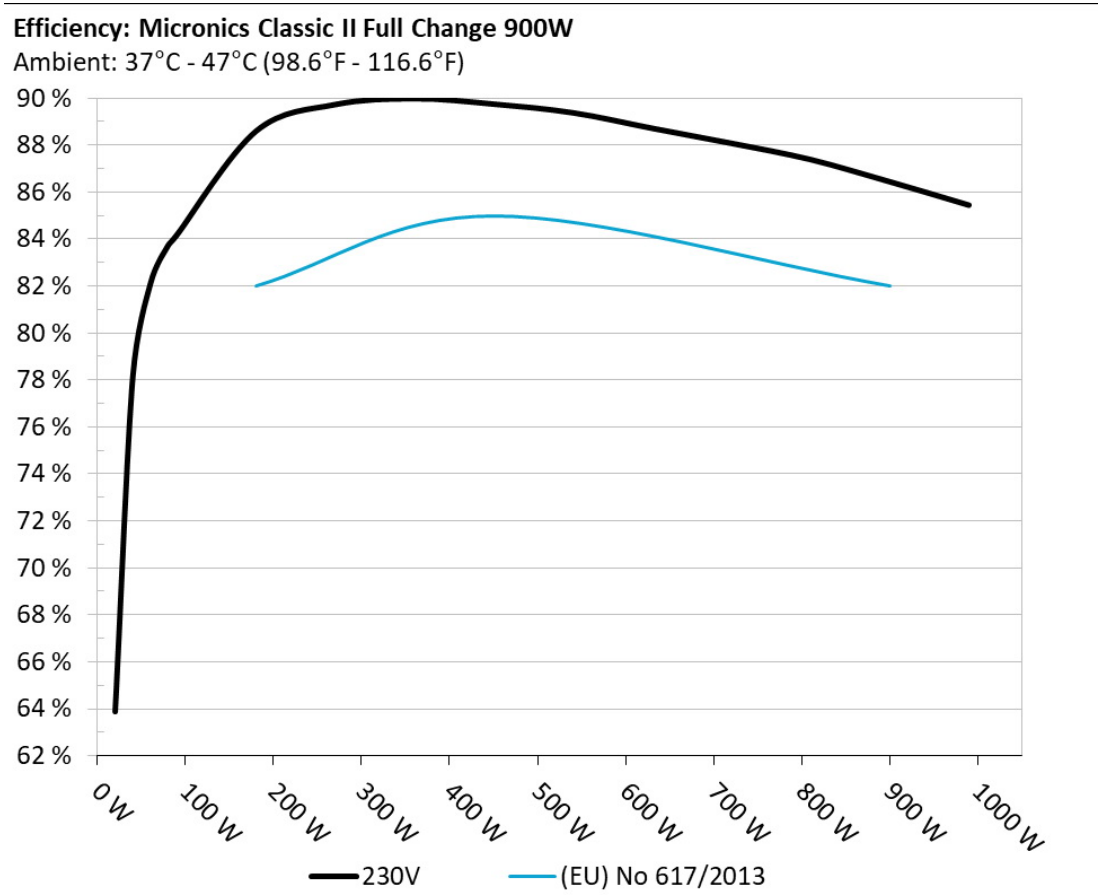


INFO

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

Indicative Performance

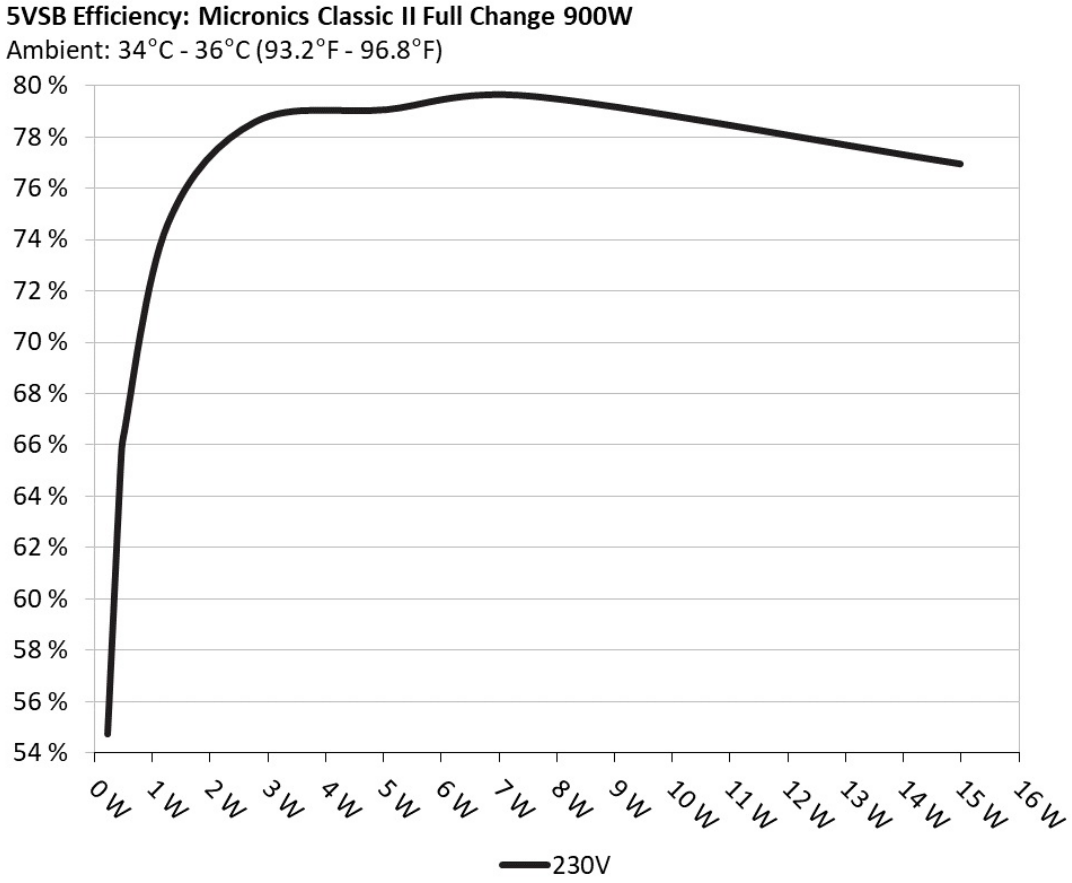
Efficiency under high ambient temperature



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



INFO

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

5VSB Efficiency (ERP LOT 3/6 & CEC) 230V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.229W	54.738%	0.014
	5.084V	0.419W		229.91V

2	0.09A	0.457W	65.251%	0.023
	5.082V	0.701W		229.9V
3	0.55A	2.787W	78.59%	0.113
	5.068V	3.546W		229.89V
4	1A	5.055W	79.062%	0.186
	5.055V	6.393W		229.89V
5	1.5A	7.56W	79.587%	0.24
	5.04V	9.499W		229.88V
6	3A	14.98W	76.949%	0.351
	4.994V	19.469W		229.88V

Protection Features

Protection Features	
OCP (Cold)	-
OCP (Hot)	-
OPP (Cold @ 28°C)	1248.1W (138.68%)
OPP (Hot)	-
OTP	-
SCP	-
PWR_OK	Accurate but lower than 16ms
NLO	✓
Fan Failure Protection	✗
SIP	Surge: MOV Inrush: NTC Thermistor

Supplementary Tests (For Reference)

Typical 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%	5.676A	1.978A	1.988A	0.991A	89.998	84.166%	904	28.7	40.05°C	0.718
	12.050V	5.054V	3.319V	5.044V	106.929				44.33°C	229.87V
20%	12.384A	2.97A	2.985A	1.193A	179.94	88.588%	1015	32.1	40.82°C	0.922
	12.035V	5.051V	3.317V	5.028V	203.125				45.34°C	229.86V
30%	19.460A	3.466A	3.484A	1.397A	269.983	89.721%	1171	36.2	41.22°C	0.963
	12.021V	5.049V	3.315V	5.011V	300.905				46.28°C	229.84V
40%	26.557A	3.964A	3.984A	1.602A	360.031	89.973%	1412	41.3	41.74°C	0.967
	12.006V	5.046V	3.313V	4.994V	400.157				47.26°C	229.83V
50%	33.287A	4.958A	4.985A	1.809A	449.624	89.741%	1591	44.2	42.24°C	0.97
	11.991V	5.042V	3.31V	4.977V	501.022				48.26°C	229.81V
60%	40.077A	5.954A	5.987A	2A	539.669	89.372%	1761	46.5	42.79°C	0.972
	11.975V	5.039V	3.307V	4.959V	603.849				49.37°C	229.79V
70%	46.888A	6.952A	6.992A	2.227A	629.859	88.708%	1920	48.6	43°C	0.974
	11.959V	5.035V	3.304V	4.94V	710.037				50.14°C	229.78V
80%	53.725A	7.949A	7.997A	2.335A	719.472	88.072%	1958	49.0	43.97°C	0.976
	11.942V	5.031V	3.301V	4.924V	816.915				51.97°C	229.76V
90%	60.984A	8.451A	8.487A	2.445A	809.694	87.378%	1956	49.0	44.1°C	0.977
	11.924V	5.028V	3.299V	4.908V	926.659				53.18°C	229.74V
100%	68.011A	8.955A	9.01A	3.078A	899.299	86.436%	1959	49.1	45.7°C	0.978
	11.904V	5.024V	3.296V	4.874V	1040.428				55.8°C	229.73V
110%	74.994A	9.96A	10.114A	3.087A	989.512	85.435%	1965	49.1	47.41°C	0.979
	11.884V	5.019V	3.293V	4.859V	1158.203				58.32°C	229.71V
CL1	0.116A	14.366A	14.484A	0A	121.291	79.183%	1608	44.4	40.25°C	0.832
	12.036V	5.025V	3.294V	5.063V	153.175				51.11°C	229.87V
CL2	0.115A	21.898A	0A	0A	111.308	77.465%	1326	39.5	40.32°C	0.819
	12.042V	5.019V	3.306V	5.068V	143.688				48.81°C	229.87V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
CL3	0.115A	0A	22.073A	0A	73.998	71.274%	1175	36.3	41.62°C	0.706
	12.044V	5.037V	3.29V	5.069V	103.823				48.35°C	229.88V
CL4	75.522A	0A	0A	0A	899.935	87.262%	1967	49.1	45.3°C	0.979
	11.917V	5.046V	3.309V	4.983V	1031.31				55.51°C	229.73V

The results above are not used in the certification process

Light 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	1.231A	0.494A	0.497A	0.197A	19.998	63.864%	0	<6.0	39.89°C	0.339
	12.062V	5.059V	3.322V	5.077V	30.161				36.76°C	229.88V
40W	2.711A	0.692A	0.696A	0.296A	39.999	78.122%	0	<6.0	40.83°C	0.488
	12.058V	5.058V	3.321V	5.072V	51.498				37.46°C	229.88V
60W	4.192A	0.89A	0.894A	0.395A	60	82.089%	813	25.3	38.79°C	0.584
	12.055V	5.057V	3.321V	5.067V	73.089				42.34°C	229.88V
80W	5.668A	1.088A	1.093A	0.494A	79.951	83.707%	853	26.8	39.03°C	0.677
	12.052V	5.057V	3.32V	5.061V	95.514				42.73°C	229.88V

The results above are not used in the certification process

Ripple Measurements 230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	18.57mV	13.49mV	11.82mV	13.71mV	Pass
20% Load	19.90mV	13.69mV	13.20mV	14.12mV	Pass
30% Load	19.18mV	13.03mV	12.43mV	12.94mV	Pass
40% Load	21.33mV	14.10mV	14.88mV	13.76mV	Pass
50% Load	22.87mV	14.97mV	15.55mV	14.07mV	Pass
60% Load	31.36mV	19.11mV	17.39mV	29.05mV	Pass
70% Load	25.38mV	14.71mV	16.98mV	16.27mV	Pass
80% Load	27.63mV	16.61mV	19.90mV	17.59mV	Pass
90% Load	28.65mV	17.58mV	22.00mV	17.70mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
100% Load	35.35mV	19.91mV	26.87mV	22.59mV	Pass
110% Load	37.99mV	20.67mV	29.26mV	22.92mV	Pass
Crossload1	21.74mV	18.20mV	16.08mV	19.45mV	Pass
Crossload2	22.87mV	25.90mV	11.00mV	18.52mV	Pass
Crossload3	19.95mV	13.18mV	16.68mV	18.26mV	Pass
Crossload4	33.04mV	18.58mV	27.20mV	20.48mV	Pass

The results above are not used in the certification process

Micronics Classic II Full Change 900W

Top side

Power specifications label

Cybenetics bietet freiwillige Zertifizierungsprogramme für Netzteile – ETA für Effizienz, LAMBDA für Lautstärke und SAFE für Sicherheit und korrekten Betrieb – sowie für Kühlprodukte mit DELTA für die Schalldämmung von Gehäusen und PHI für Luftstrom und statischen Druck von Lüftern

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