

Anex

Corsair RM1000e

Lab ID#: CR10001931
Receipt Date: Oct 26, 2021
Test Date: Nov 4, 2021

Report: 21PS1931A

Report Date: Nov 9, 2021

DUT INFORMATION

Brand	Corsair
Manufacturer (OEM)	HEC
Series	RMe
Model Number	
Serial Number	CO4566303
DUT Notes	

DUT SPECIFICATIONS

Rated Voltage (Vrms)	100-240
Rated Current (Arms)	12-6
Rated Frequency (Hz)	47-63
Rated Power (W)	1000
Type	ATX12V
Cooling	120mm Rifle Bearing Fan (HA1225H12F-Z)
Semi-Passive Operation	✓
Cable Design	Fully Modular

TEST EQUIPMENT

Electronic Loads	Chroma 63601-5 x4 Chroma 63600-2 x2 63640-80-80 x20 63610-80-20 x2
AC Sources	Chroma 6530, Keysight AC6804B
Power Analyzers	N4L PPA1530 x2
Sound Analyzer	Bruel & Kjaer 2270 G4
Microphone	Bruel & Kjaer Type 4955-A
Data Loggers	Picoscope TC-08 x2, Labjack U3-HV x2
Tachometer	UNI-T UT372 x2
Digital Multimeter	Keysight U1273AX, Fluke 289, Keithley 2015 - THD
UPS	CyberPower OLS3000E 3kVA x2
Transformer	3kVA x2

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

PAGE 1/17

Anex

Corsair RM1000e

RESULTS

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

115V

Average Efficiency	89.674%
Efficiency With 10W (≤500W) or 2% (>500W)	77.686
Average Efficiency 5VSB	77.983%
Standby Power Consumption (W)	0.0554209
Average PF	0.986
Avg Noise Output	25.89 dB(A)
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	A-

230V

Average Efficiency	91.574%
Average Efficiency 5VSB	77.860%
Standby Power Consumption (W)	0.0912982
Average PF	0.953
Avg Noise Output	25.87 dB(A)
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	A-

POWER SPECIFICATIONS

Rail		3.3V	5V	12V(1)	12V(2)	5VSB	-12V
Max. Power	Amps	20	20	83.3	0	3	0.3
	Watts	150		999.6		15	3.6
Total Max. Power (W)		1000					

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

Hold-Up Time (ms)	16.9
AC Loss to PWR_OK Hold Up Time (ms)	14.4
PWR_OK Inactive to DC Loss Delay (ms)	2.5

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

PAGE 2/17

Anex

Corsair RM1000e

CABLES AND CONNECTORS

Modular Cables

Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 20+4 pin (600mm)	1	1	16-20AWG	No
4+4 pin EPS12V (650mm)	2	2	18AWG	No
6+2 pin PCIe (600mm+150mm)	2	4	16-18AWG	No
6+2 pin PCIe (600mm)	2	2	16AWG	No
SATA (500mm+100mm+100mm)	1	3	18AWG	No
SATA (450mm+115mm+115mm+115mm)	1	4	18AWG	No
4 pin Molex (450mm+100mm+100mm+100mm)	1	4	18AWG	No

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

PAGE 3/17

Anex

Corsair RM1000e

General Data	-
Manufacturer (OEM)	HEC
PCB Type	Double Sided
Primary Side	-
Transient Filter	4x Y caps, 3x X caps, 2x CM chokes, 1x MOV, 1x Power Integrations CAP200DG (Discharge IC)
Inrush Protection	NTC Thermistor SCK-056 (5 Ohm) & Relay
Bridge Rectifier(s)	2x GBU15L06 (800V, 10A @ 100°C)
APFC MOSFETs	2x Infineon IPW60R080P7 (600V, 23A @ 100°C, Rds(on): 0.08Ohm)
APFC Boost Diode	1x CREE C6D10065A (650V, 10A @ 155°C)
Bulk Cap(s)	1x Teapo (400V, 680uF, 2,000h @ 105°C, LS)
Main Switchers	2x Infineon IPA60R099P7 (600V, 20A @ 100°C, Rds(on): 0.099Ohm)
APFC Controller	Champion CM6500UN & CM03AX
Resonant Controller	Champion CM6901T6X
Topology	Primary side: APFC, Half-Bridge & LLC converter Secondary side: Synchronous Rectification & DC-DC converters
Secondary Side	-
+12V MOSFETs	no info
5V & 3.3V	DC-DC Converters: 8x Potens Semiconductor PDD3906 (30V, 51A @ 100°C, Rds(on): 6mOhm) PWM Controller(s): 2x APEC APW7073
Filtering Capacitors	Electrolytic: 8x Teapo (1-3,000 @ 105°C, SC), 1x Nippon Chemi-Con (1-5,000h @ 105°C, KZE), 1x Nippon Chemi-Con (4-10,000h @ 105°C, KY) Polymer: 4x Elite, 6x Teapo, 14x no info
Supervisor IC	Weltrend WT7527RT (OCP, OVP, UVP, SCP, PG)
Fan Model	Hong Hua HA1225H12F-Z (120mm, 12V, 0.58A, Rifle Bearing Fan)
5VSB Circuit	-
Rectifier	1x PS1060L SBR (60V, 10A)
Standby PWM Controller	Power Integrations TNY290PG

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

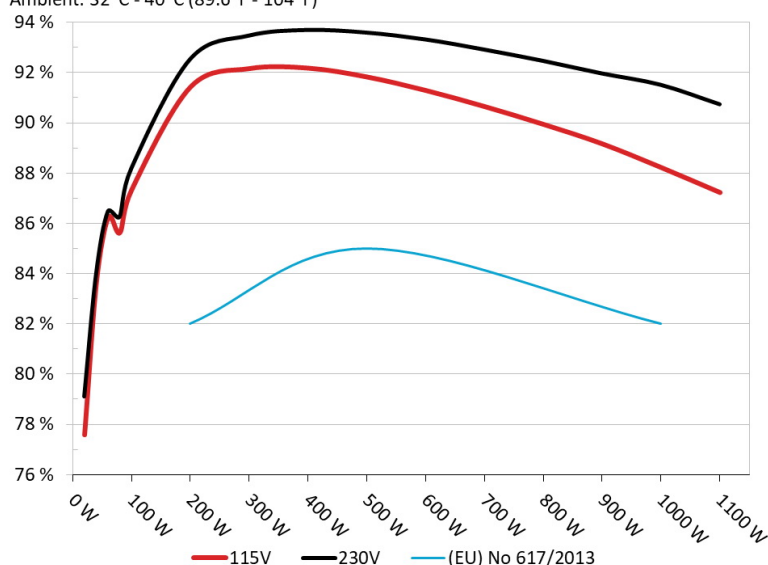
- > It should be mentioned that the test results are provided by Cybenetics
- > The link to the original test results document should be provided in any case

PAGE 4/17

EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Corsair Mei RM-e 1000W

Ambient: 32°C - 40°C (89.6°F - 104°F)



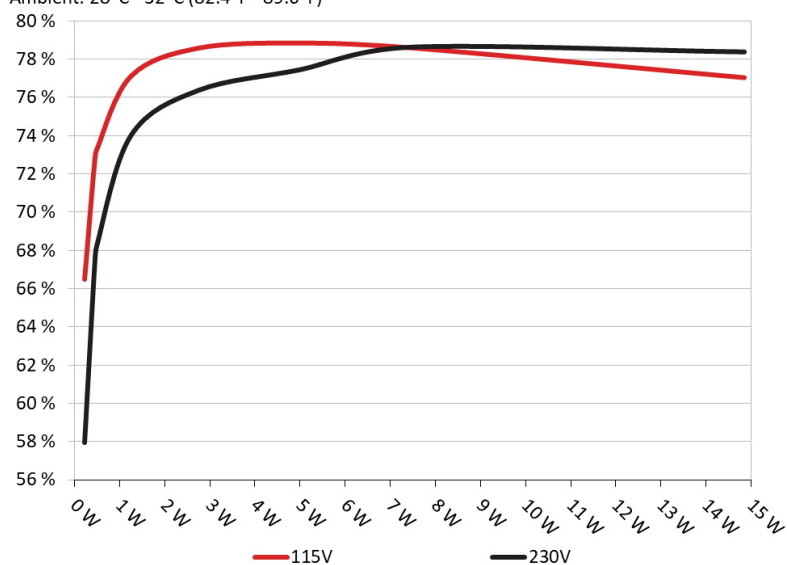
INFO

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: Corsair Mei RM-e 1000W

Ambient: 28°C - 32°C (82.4°F - 89.6°F)



INFO

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

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

Corsair RM1000e

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.225W	66.489%	0.035
	5.013V	0.338W		115.17V
2	0.09A	0.451W	72.75%	0.062
	5.013V	0.62W		115.17V
3	0.55A	2.751W	78.564%	0.267
	5.002V	3.501W		115.17V
4	1A	4.992W	78.827%	0.36
	4.992V	6.333W		115.17V
5	1.5A	7.473W	78.575%	0.412
	4.982V	9.511W		115.17V
6	2.999A	14.847W	77.02%	0.475
	4.95V	19.276W		115.17V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.225W	57.968%	0.012
	5.014V	0.388W		230.32V
2	0.09A	0.451W	67.356%	0.021
	5.012V	0.67W		230.32V
3	0.55A	2.75W	76.354%	0.106
	5.002V	3.602W		230.31V
4	1A	4.992W	77.426%	0.174
	4.992V	6.447W		230.32V
5	1.5A	7.473W	78.608%	0.23
	4.982V	9.506W		230.32V
6	2.999A	14.849W	78.358%	0.331
	4.951V	18.95W		230.32V

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

PAGE 6/17

Anex

Corsair RM1000e

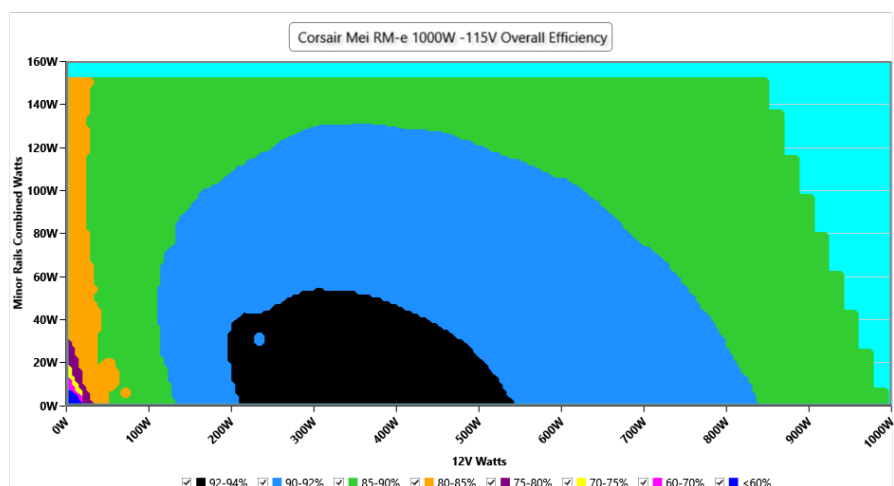
115V

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

PAGE 7/17

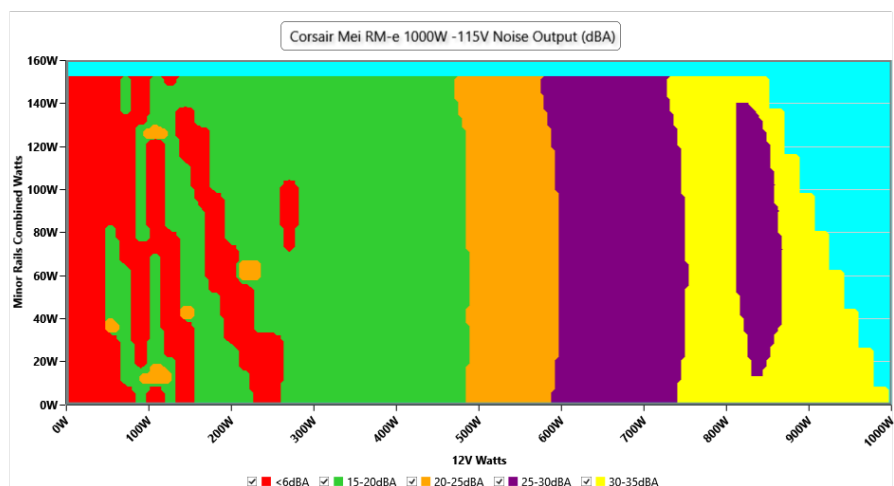
EFFICIENCY GRAPH 115V



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

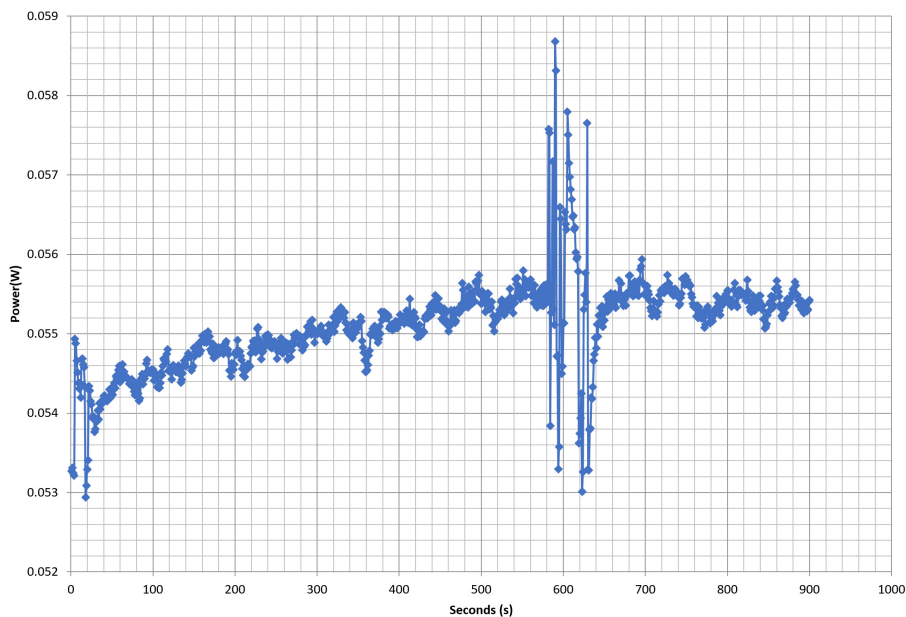
The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

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

VAMPIRE POWER -115V

Power - CO4566303 - 01/11/2021 - 21:04



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

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

PAGE 9/17

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%	6.444A	1.998A	1.996A	1A	99.974	87.331%	872	20.6	34.1°C	0.972
	12.162V	5.004V	3.305V	4.997V	114.477				38.87°C	115.15V
20%	13.917A	2.999A	2.998A	1.202A	199.91	91.421%	872	20.6	34.69°C	0.983
	12.145V	5.002V	3.302V	4.99V	218.67				39.83°C	115.14V
30%	21.747A	3.501A	3.499A	1.405A	299.945	92.154%	872	20.6	35.17°C	0.985
	12.135V	4.999V	3.3V	4.983V	325.481				40.8°C	115.14V
40%	29.528A	4.003A	4.002A	1.608A	399.347	92.174%	875	20.7	35.63°C	0.986
	12.129V	4.997V	3.298V	4.976V	433.252				41.67°C	115.13V
50%	36.999A	5.006A	5.008A	1.811A	499.084	91.825%	897	20.9	36.08°C	0.987
	12.124V	4.994V	3.294V	4.969V	543.515				42.42°C	115.13V
60%	44.530A	6.01A	6.016A	2A	599.577	91.286%	1040	25.9	36.35°C	0.989
	12.123V	4.992V	3.291V	4.963V	656.808				43.21°C	115.13V
70%	52.022A	7.016A	7.025A	2.219A	699.379	90.646%	1124	27.4	37.23°C	0.99
	12.116V	4.989V	3.288V	4.955V	771.553				44.26°C	115.12V
80%	59.578A	8.002A	8.033A	2.322A	799.321	89.94%	1246	30.8	37.94°C	0.992
	12.110V	4.987V	3.285V	4.95V	888.728				45.83°C	115.13V
90%	67.477A	8.525A	8.528A	2.426A	899.206	89.165%	1329	32.8	38.62°C	0.993
	12.104V	4.984V	3.282V	4.945V	1008.478				46.84°C	115.13V
100%	75.184A	9.032A	9.054A	3.043A	999.234	88.226%	1699	39.2	39.45°C	0.993
	12.098V	4.982V	3.279V	4.928V	1132.581				48.48°C	115.12V
110%	82.842A	10.041A	10.162A	3.045A	1099.858	87.225%	2004	44.1	39.97°C	0.994
	12.090V	4.979V	3.276V	4.925V	1260.943				49.86°C	115.12V
CL1	0.114A	18.061A	18.112A	0A	151.279	83.488%	1017	24.7	36.26°C	0.979
	12.160V	5V	3.29V	5.014V	181.198				42.68°C	115.18V
CL2	0.113A	19.973A	0A	0A	101.382	82.471%	913	21.9	36.6°C	0.973
	12.178V	5.007V	3.297V	5.019V	122.931				43.79°C	115.18V
CL3	0.113A	0A	19.994A	0A	67.365	77.321%	876	20.7	37.35°C	0.963
	12.169V	5.005V	3.3V	5.015V	87.124				45.41°C	115.18V
CL4	82.637A	0A	0A	0A	999.791	89.109%	1326	32.6	38.57°C	0.993
	12.098V	4.989V	3.288V	5.001V	1121.989				47.56°C	115.12V

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

Corsair RM1000e

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	1.220A	0.499A	0.499A	0.199A	19.991	77.586%	0	<6.0	35.33°C	0.847
	12.166V	5.007V	3.308V	5.014V	25.767				32.14°C	115.17V
40W	2.686A	0.699A	0.698A	0.299A	39.988	83.647%	0	<6.0	36.27°C	0.931
	12.166V	5.008V	3.307V	5.012V	47.806				32.59°C	115.17V
60W	4.153A	0.899A	0.898A	0.399A	59.986	86.219%	869	20.3	32.82°C	0.955
	12.164V	5.007V	3.307V	5.01V	69.575				36.84°C	115.16V
80W	5.614A	1.099A	1.098A	0.499A	79.927	85.626%	872	20.6	33.38°C	0.965
	12.165V	5.006V	3.306V	5.008V	93.344				37.85°C	115.15V

RIPPLE MEASUREMENTS 115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	25.82mV	15.09mV	7.08mV	11.23mV	Pass
20% Load	17.34mV	15.35mV	7.63mV	11.33mV	Pass
30% Load	15.19mV	16.41mV	8.65mV	11.79mV	Pass
40% Load	15.65mV	17.33mV	8.74mV	11.54mV	Pass
50% Load	17.42mV	18.80mV	9.96mV	12.50mV	Pass
60% Load	18.58mV	19.16mV	10.97mV	12.90mV	Pass
70% Load	18.12mV	20.22mV	11.93mV	12.96mV	Pass
80% Load	18.28mV	22.21mV	13.90mV	14.27mV	Pass
90% Load	18.83mV	22.00mV	13.50mV	13.91mV	Pass
100% Load	29.08mV	26.52mV	17.63mV	16.77mV	Pass
110% Load	29.36mV	28.42mV	17.58mV	17.19mV	Pass
Crossload1	24.24mV	26.74mV	22.72mV	11.00mV	Pass
Crossload2	23.65mV	30.59mV	9.56mV	10.68mV	Pass
Crossload3	62.27mV	16.01mV	16.73mV	16.09mV	Pass
Crossload4	27.97mV	21.28mV	10.50mV	14.55mV	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

PAGE 11/17

Anex

Corsair RM1000e

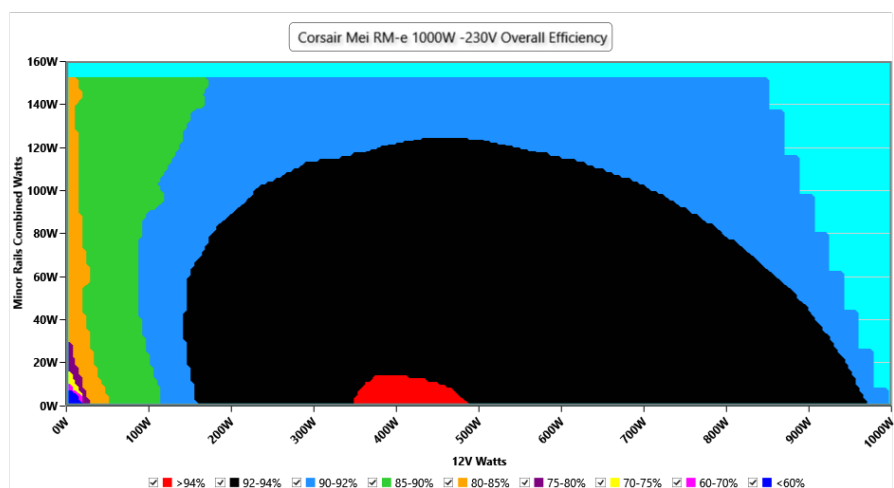
230V

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

PAGE 12/17

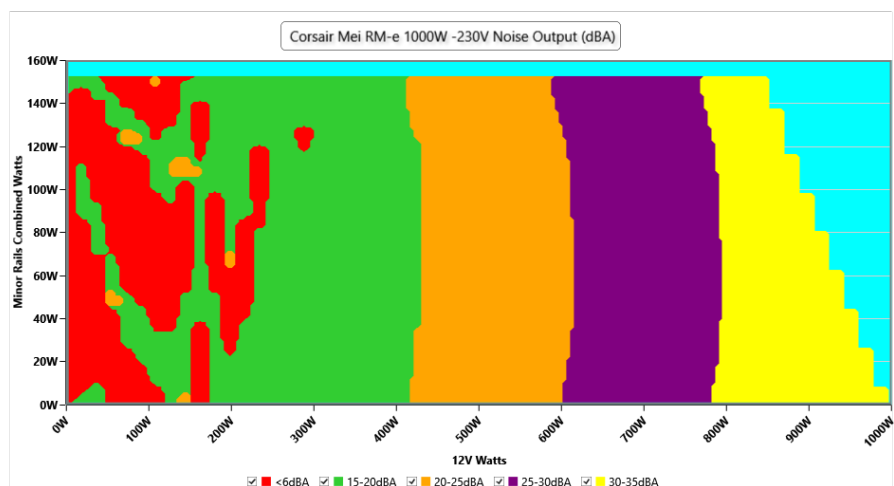
EFFICIENCY GRAPH 230V



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

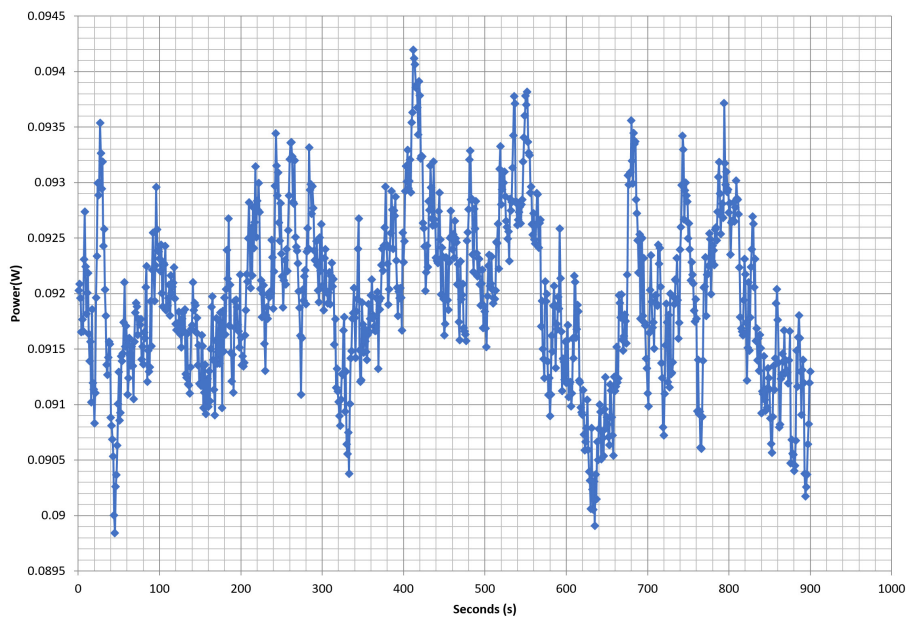
The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

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

VAMPIRE POWER -230V

Power - CO4566303 - 01/11/2021 - 21:04



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

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

PAGE 14/17

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%	6.445A	1.999A	1.997A	1.001A	99.989	88.189%	0	<6.0	34.35°C	0.842
	12.162V	5.003V	3.305V	4.997V	113.38				39.51°C	230.34V
20%	13.917A	3A	2.998A	1.202A	199.922	92.532%	869	20.3	34.7°C	0.927
	12.145V	5.001V	3.302V	4.989V	216.057				40.12°C	230.34V
30%	21.748A	3.501A	3.5A	1.405A	299.951	93.469%	835	19.1	35.13°C	0.952
	12.135V	4.998V	3.3V	4.982V	320.91				41.13°C	230.33V
40%	29.536A	4.003A	4.003A	1.608A	399.405	93.691%	873	20.6	35.33°C	0.962
	12.128V	4.996V	3.297V	4.976V	426.302				42.04°C	230.33V
50%	37.005A	5.007A	5.008A	1.811A	499.129	93.587%	898	20.9	36.19°C	0.969
	12.123V	4.993V	3.294V	4.969V	533.334				43.19°C	230.32V
60%	44.548A	6.011A	6.016A	2A	599.578	93.315%	986	24.3	36.79°C	0.972
	12.119V	4.991V	3.291V	4.962V	642.53				44.32°C	230.32V
70%	52.034A	7.017A	7.025A	2.219A	699.395	92.913%	1089	26.9	37.53°C	0.975
	12.113V	4.988V	3.288V	4.955V	752.74				45.37°C	230.32V
80%	59.587A	8.002A	8.033A	2.322A	799.314	92.464%	1209	29.9	37.82°C	0.977
	12.109V	4.986V	3.285V	4.95V	864.456				45.94°C	230.32V
90%	67.468A	8.525A	8.527A	2.426A	899.195	91.965%	1347	33.1	38.69°C	0.979
	12.106V	4.984V	3.282V	4.945V	977.759				47.21°C	230.33V
100%	75.226A	9.033A	9.051A	3.043A	999.121	91.512%	1758	40.4	39.13°C	0.98
	12.090V	4.98V	3.28V	4.928V	1091.792				48.24°C	230.34V
110%	82.829A	10.04A	10.159A	3.044A	1099.842	90.738%	2055	44.8	39.86°C	0.981
	12.092V	4.979V	3.277V	4.926V	1212.112				49.79°C	230.33V
CL1	0.114A	18.065A	18.112A	0A	151.278	84.377%	1090	26.8	36.22°C	0.91
	12.165V	4.999V	3.29V	5.014V	179.29				43.1°C	230.35V
CL2	0.113A	19.973A	0A	0A	101.38	83.303%	940	22.5	37.27°C	0.857
	12.181V	5.007V	3.297V	5.02V	121.7				44.83°C	230.35V
CL3	0.113A	0A	19.994A	0A	67.368	78.003%	875	20.7	38.61°C	0.782
	12.169V	5.005V	3.3V	5.015V	86.365				46.77°C	230.35V
CL4	82.657A	0A	0A	0A	999.875	92.087%	1461	35.5	39.36°C	0.98
	12.096V	4.987V	3.287V	5V	1085.796				48.86°C	230.34V

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

PAGE 15/17

Anex

Corsair RM1000e

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	1.221A	0.499A	0.499A	0.2A	19.991	79.124%	0	<6.0	35.02°C	0.424
	12.154V	5.006V	3.308V	5.012V	25.266				31.74°C	230.33V
40W	2.690A	0.699A	0.698A	0.299A	39.991	83.973%	0	<6.0	36.64°C	0.595
	12.152V	5.006V	3.307V	5.01V	47.624				32.66°C	230.34V
60W	4.156A	0.899A	0.898A	0.399A	59.991	86.468%	0	<6.0	37.05°C	0.715
	12.154V	5.006V	3.307V	5.009V	69.38				32.9°C	230.35V
80W	5.616A	1.099A	1.098A	0.499A	79.949	86.265%	867	20.2	33.45°C	0.797
	12.164V	5.005V	3.306V	5.008V	92.681				37.88°C	230.35V

RIPPLE MEASUREMENTS 230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	25.82mV	14.58mV	7.18mV	9.77mV	Pass
20% Load	17.04mV	15.20mV	7.79mV	11.13mV	Pass
30% Load	15.32mV	16.11mV	7.94mV	10.53mV	Pass
40% Load	15.02mV	17.99mV	9.15mV	11.69mV	Pass
50% Load	15.49mV	19.57mV	9.71mV	12.04mV	Pass
60% Load	16.15mV	19.67mV	10.97mV	12.50mV	Pass
70% Load	16.46mV	20.94mV	12.23mV	13.06mV	Pass
80% Load	17.42mV	21.34mV	13.90mV	13.71mV	Pass
90% Load	17.52mV	22.92mV	14.31mV	14.42mV	Pass
100% Load	27.34mV	25.13mV	16.83mV	17.09mV	Pass
110% Load	29.48mV	27.02mV	17.51mV	17.00mV	Pass
Crossload1	23.18mV	26.05mV	23.83mV	11.20mV	Pass
Crossload2	24.76mV	31.00mV	9.60mV	11.33mV	Pass
Crossload3	61.01mV	15.15mV	15.82mV	15.53mV	Pass
Crossload4	26.93mV	20.97mV	10.49mV	14.49mV	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

PAGE 16/17

Anex

Corsair RM1000e



Top side

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	20	20	83.3	3	0.3
	Watts	150		996.6	15	3.6
Total Max. Power (W)		1000				

Power specifications label

CERTIFICATIONS 115V



CERTIFICATIONS 230V



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