

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

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RESULTS

Temperature Range (°C /°F)	30-32 / 86-89.6 (+-2°C / +- 3.6°F)
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					

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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

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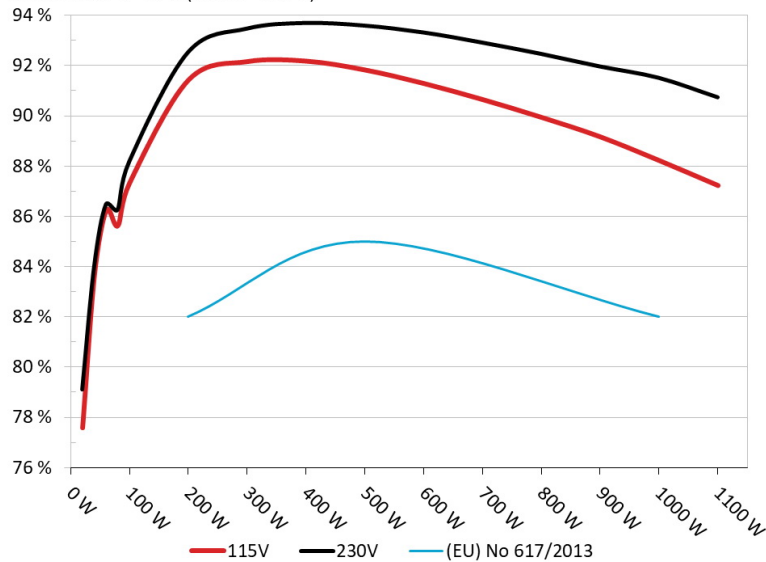
General Data	-
Manufacturer (OEM)	HEC
PCB Type	Double Sided
Primary Side	-
Transient Filter	4x Y caps, 3x X caps, 2x CM chokes, 1x MOV, 1x Power Integrations CAP200DG (Discharge IC)
Inrush Protection	NTC Thermistor SCK-056 (5 Ohm) & Relay
Bridge Rectifier(s)	2x GBU15L06 (800V, 10A @ 100°C)
APFC MOSFETs	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

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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Corsair Mei RM-e 1000W
Ambient: 32°C - 40°C (89.6°F - 104°F)

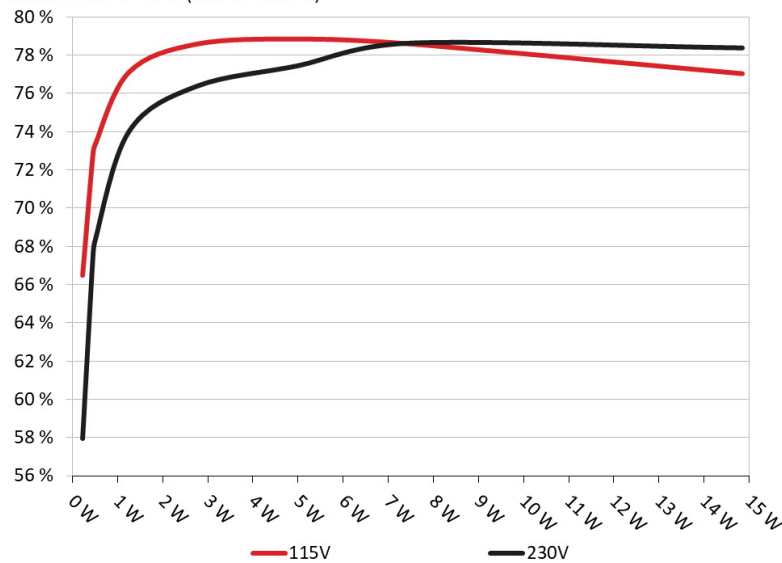


INFO

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

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.225W	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

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115V

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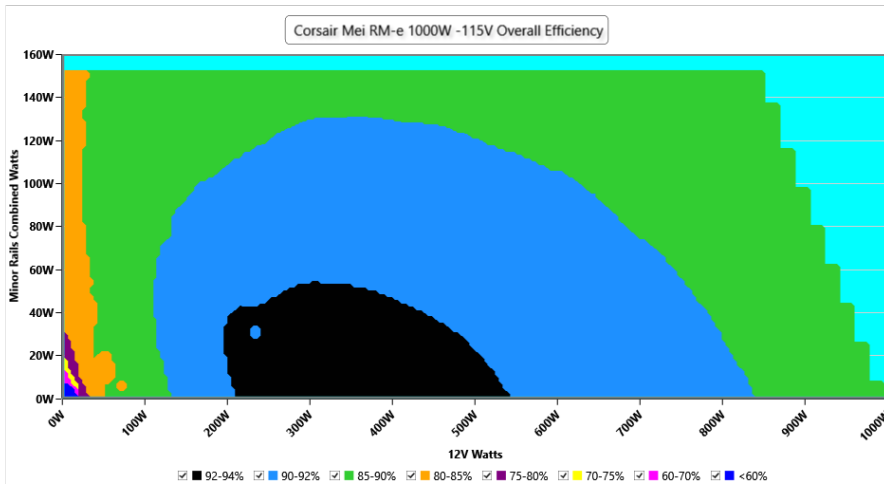
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EFFICIENCY GRAPH 115V

INFO

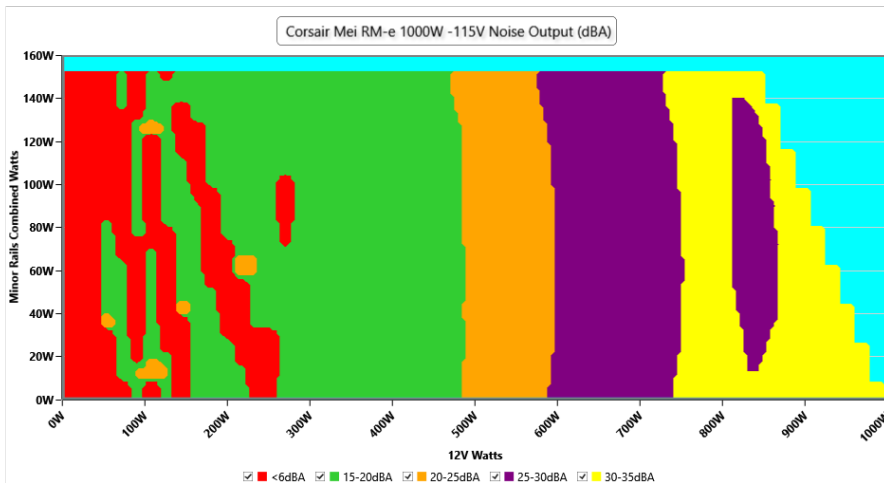
This graph depicts the PSU's efficiency throughout its entire operational range. For the generation of the efficiency and noise graphs we set our loaders to auto mode through our custom-made software before trying thousands of possible load combinations



NOISE GRAPH 115V

INFO

The PSU's noise in its entire operational range and under 30-32 °C (+2 °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

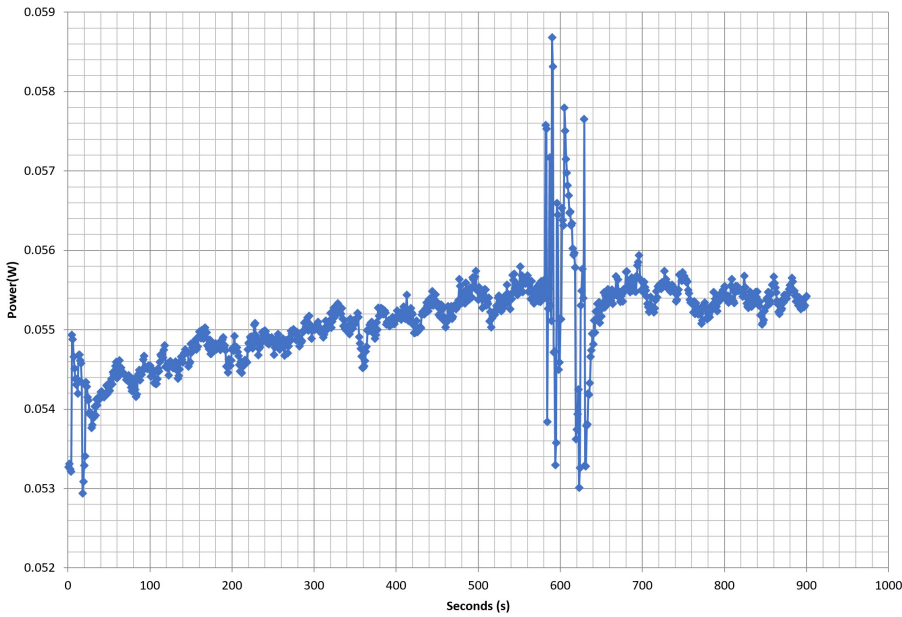


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VAMPIRE POWER -115V

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

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COMMISSION REGULATION (EU) NO 617/2013 TESTING 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
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
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

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230V

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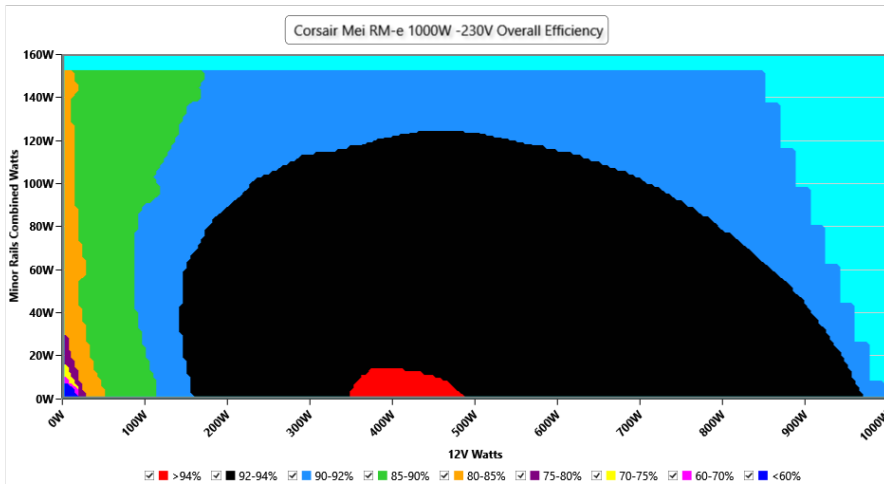
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EFFICIENCY GRAPH 230V

INFO

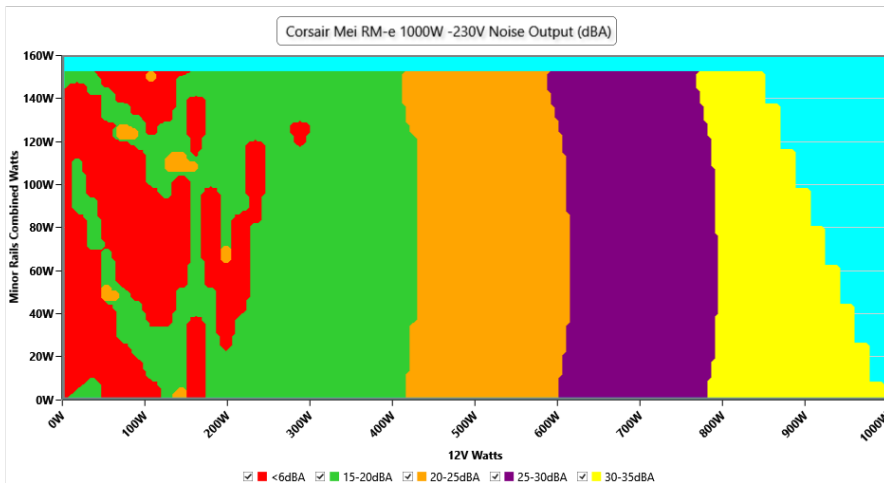
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NOISE GRAPH 230V

INFO

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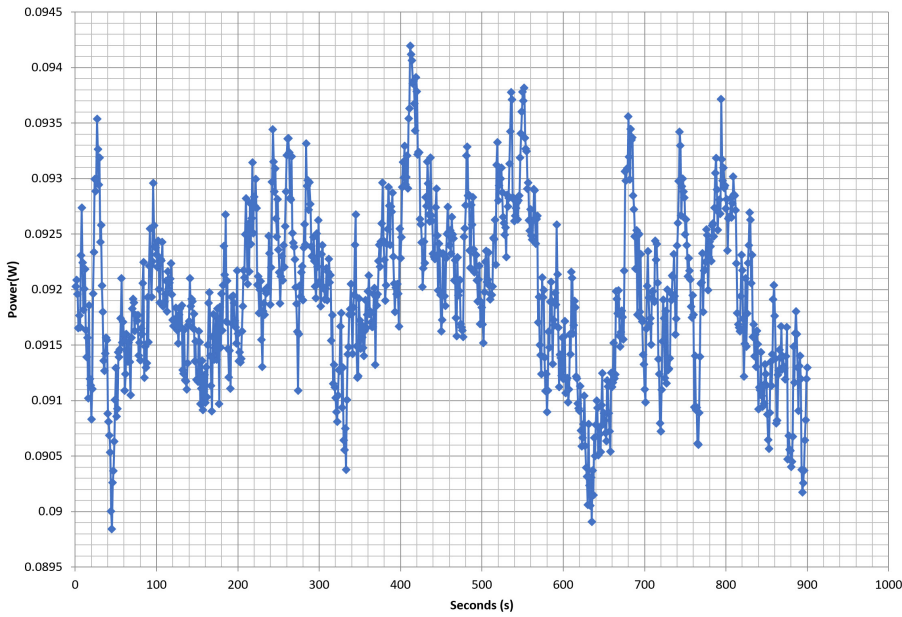


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COMMISSION REGULATION (EU) NO 617/2013 TESTING 230V

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
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
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

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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




Aris Mpitsiopoulos
Lab Director

CERTIFICATIONS 230V



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