

Lab ID#: CR75001801
Receipt Date: Feb 10, 2021
Test Date: Mar 2, 2021

Report: 21PS1801A
Report Date: Mar 30, 2021

DUT INFORMATION

Brand	Corsair
Manufacturer (OEM)	Channel Well Technology
Series	RMx
Model Number	RPS0123
Serial Number	20277131000038970172
DUT Notes	

DUT SPECIFICATIONS

Rated Voltage (Vrms)	100-240
Rated Current (Arms)	10-5
Rated Frequency (Hz)	47-63
Rated Power (W)	750
Type	ATX12V
Cooling	140mm Magnetic Levitation Fan (NR140ML)
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	87.980%
Efficiency With 10W (≤500W) or 2% (>500W)	77.021
Average Efficiency 5VSB	78.090%
Standby Power Consumption (W)	0.0354107
Average PF	0.992
Avg Noise Output	27.98 dB(A)
Efficiency Rating (ETA)	GOLD
Noise Rating (LAMBDA)	A-

230V

Average Efficiency	90.238%
Average Efficiency 5VSB	77.503%
Standby Power Consumption (W)	0.0552711
Average PF	0.967
Avg Noise Output	28.00 dB(A)
Efficiency Rating (ETA)	GOLD
Noise Rating (LAMBDA)	A-

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	20	20	62.5	3	0.3
	Watts	150		750	15	3.6
Total Max. Power (W)		750				

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CABLES AND CONNECTORS

Modular Cables

Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 20+4 pin (610mm)	1	1	16-20AWG	Yes
4+4 pin EPS12V (650mm)	2	2	18AWG	Yes
6+2 pin PCIe (600mm+150mm)	2	4	16-18AWG	Yes
SATA (500mm+110mm+110mm+110mm)	1	4	18AWG	No
SATA (520mm+110mm+110mm)	2	6	18AWG	No
4-pin Molex (450mm+100mm+100mm+100mm)	1	4	18AWG	No
AC Power Cord (1400mm) - C13 coupler	1	1	18AWG	-

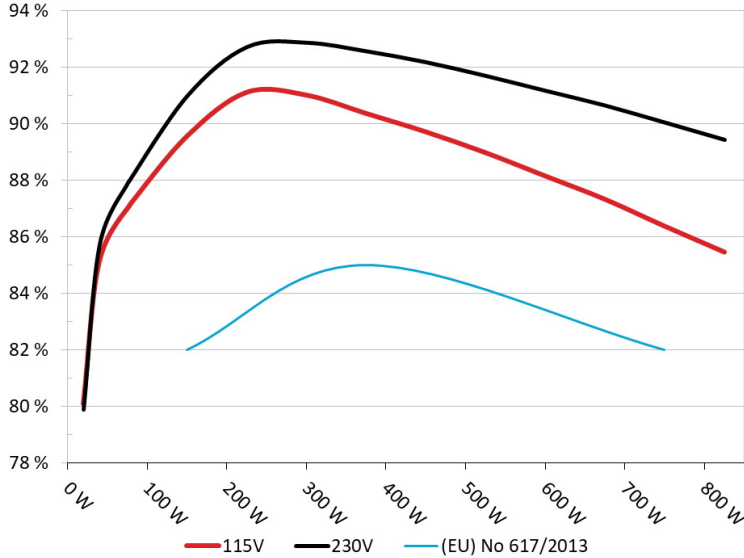
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PAGE 3/13

EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Corsair RM750x
Ambient: 37°C - 47°C (98.6°F - 116.6°F)

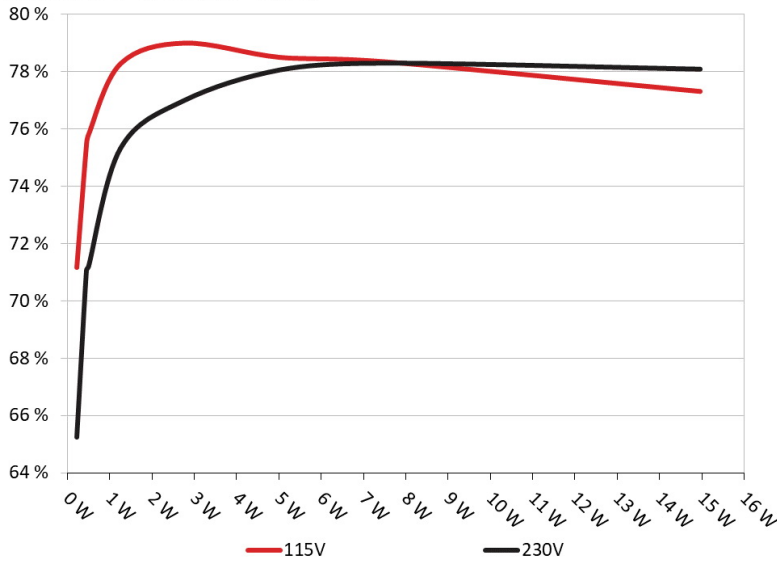


INFO

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: Corsair RM750x
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	0.227	71.160%	0.033
	5.045V	0.319		115.15V
2	0.090A	0.454	75.415%	0.061
	5.043V	0.602		115.15V
3	0.550A	2.769	78.979%	0.262
	5.034V	3.506		115.17V
4	1.000A	5.026	78.482%	0.350
	5.025V	6.404		115.16V
5	1.500A	7.524	78.326%	0.400
	5.015V	9.606		115.15V
6	3.000A	14.959	77.296%	0.466
	4.986V	19.353		115.15V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.227	65.230%	0.011
	5.046V	0.348		230.34V
2	0.090A	0.454	71.049%	0.020
	5.044V	0.639		230.33V
3	0.550A	2.770	76.987%	0.105
	5.036V	3.598		230.32V
4	1.000A	5.028	78.050%	0.171
	5.027V	6.442		230.32V
5	1.500A	7.528	78.286%	0.228
	5.017V	9.616		230.32V
6	3.000A	14.965	78.077%	0.327
	4.988V	19.167		230.31V

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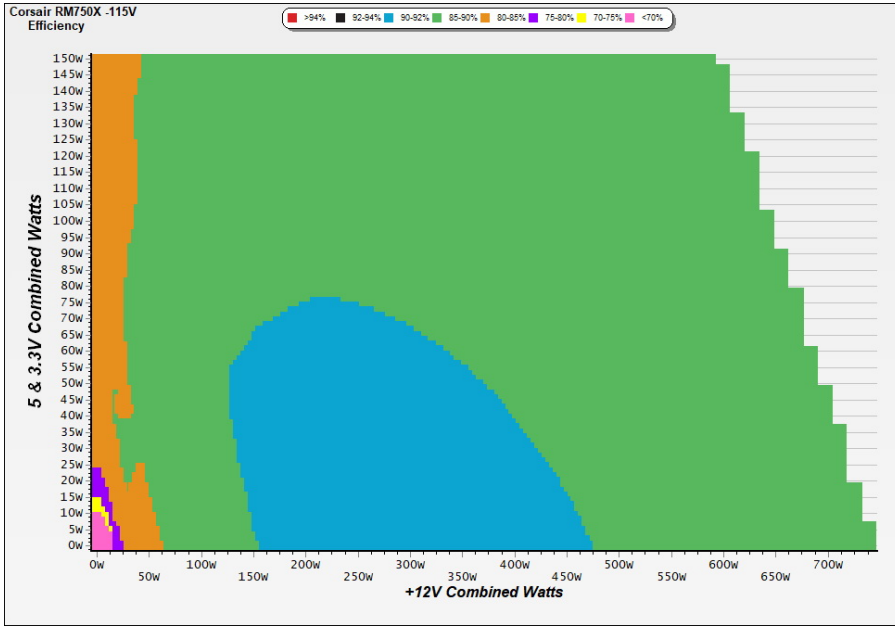
115V

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PAGE 6/13

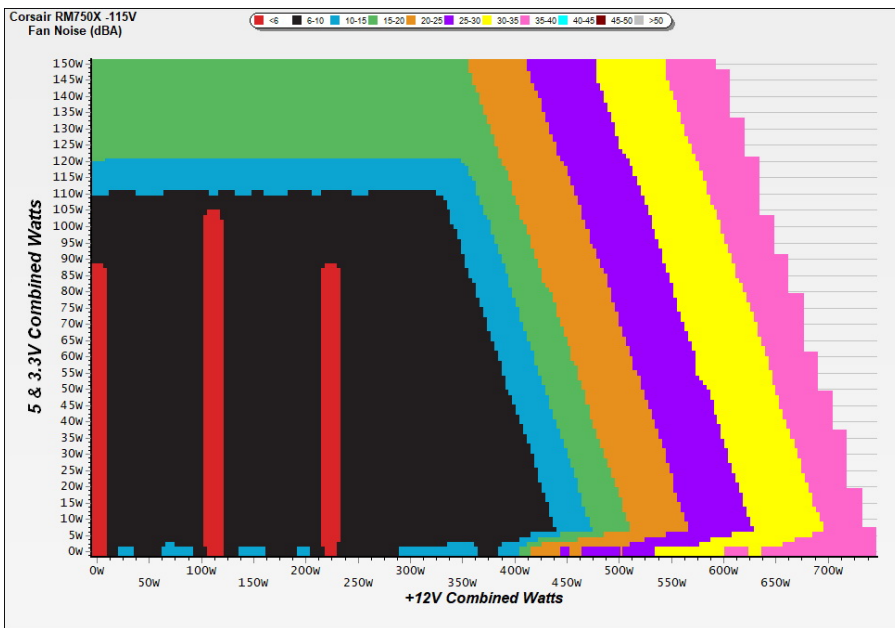
EFFICIENCY GRAPH 115V



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

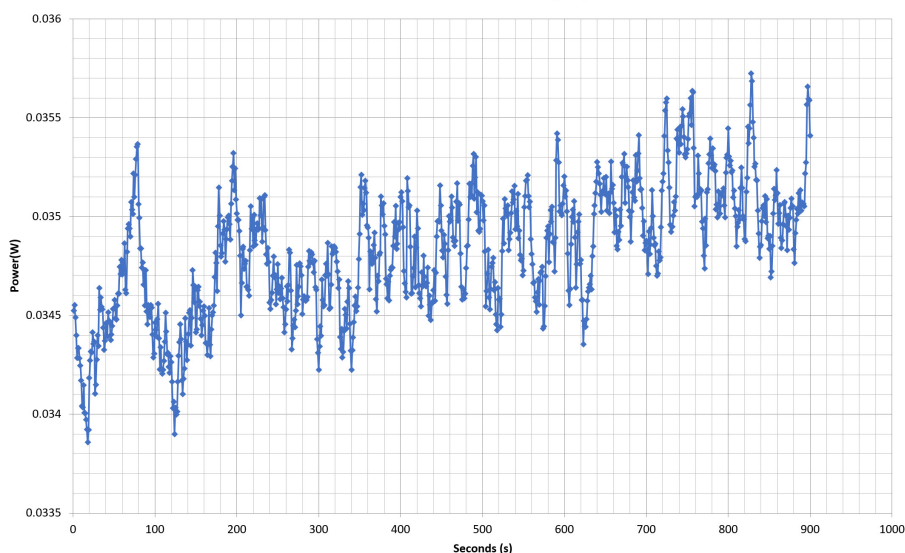
The PSU's noise in its entire operational range and under 30-32 °C (+-2 °C) ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

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VAMPIRE POWER -115V

Power - 20277131000038970172 - 26/02/2021 - 14:25



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
1	4.426A	1.981A	2.003A	0.994A	74.964	86.350%	0	<6.0	45.68°C	0.976
	12.057V	5.046V	3.296V	5.032V	86.814				40.72°C	115.17V
2	9.890A	2.974A	3.006A	1.194A	150.044	89.565%	0	<6.0	46.61°C	0.991
	12.047V	5.042V	3.294V	5.027V	167.526				40.96°C	115.17V
5	27.021A	4.964A	5.015A	1.795A	374.621	90.381%	361	7.2	42.58°C	0.994
	11.995V	5.037V	3.290V	5.015V	414.492				49.84°C	115.11V
10	55.308A	8.964A	9.048A	3.009A	749.982	86.381%	1512	42.5	45.23°C	0.997
	11.938V	5.022V	3.282V	4.986V	868.225				55.74°C	115.10V

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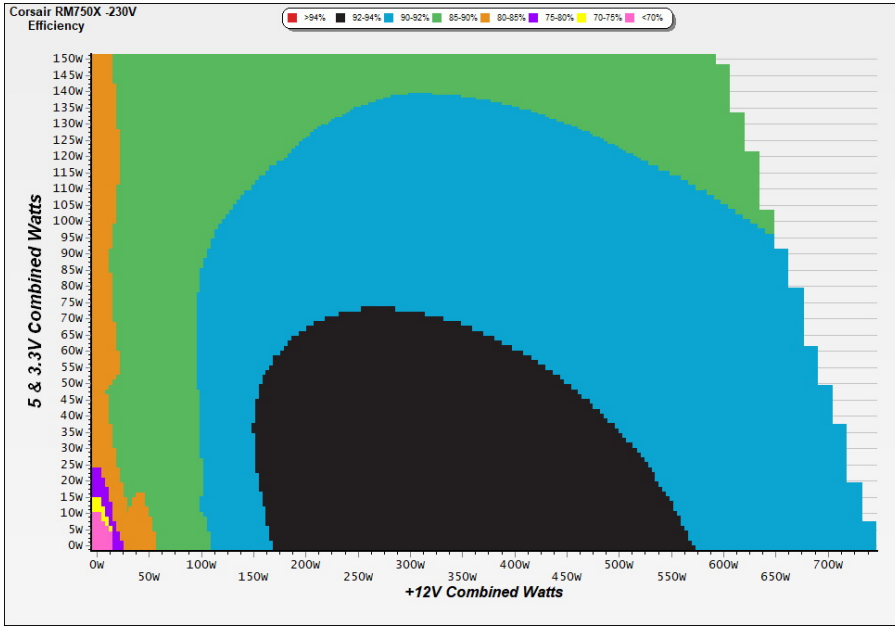
230V

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PAGE 10/13

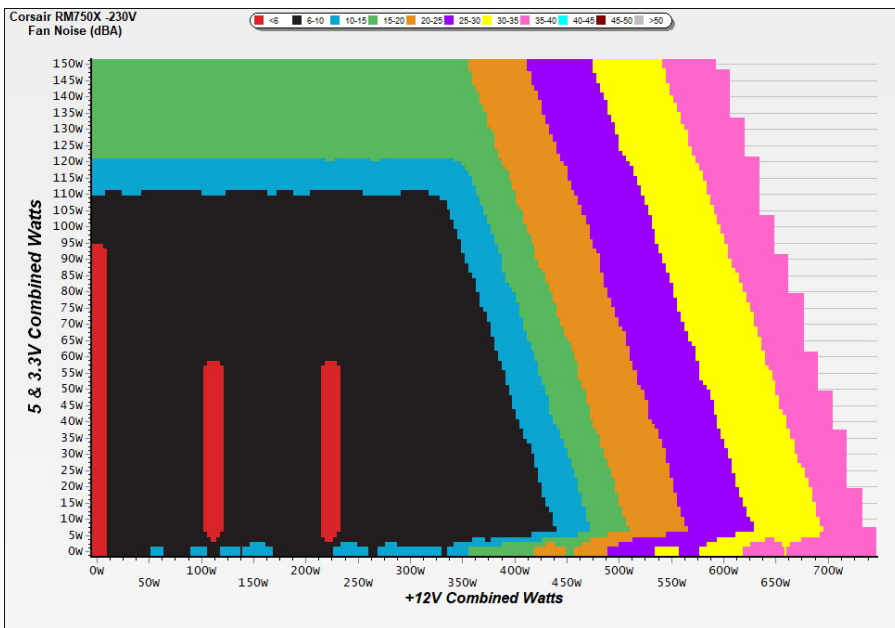
EFFICIENCY GRAPH 230V



INFO

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NOISE GRAPH 230V



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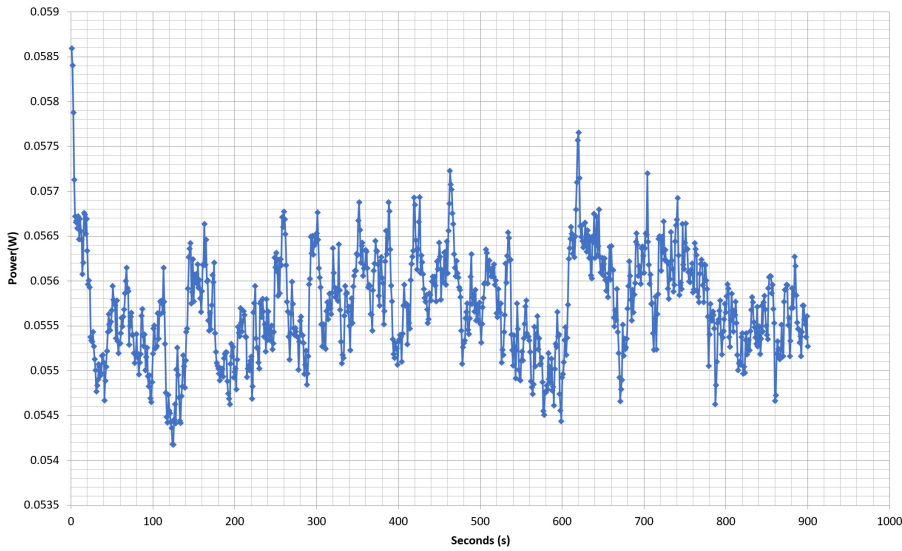
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VAMPIRE POWER -230V

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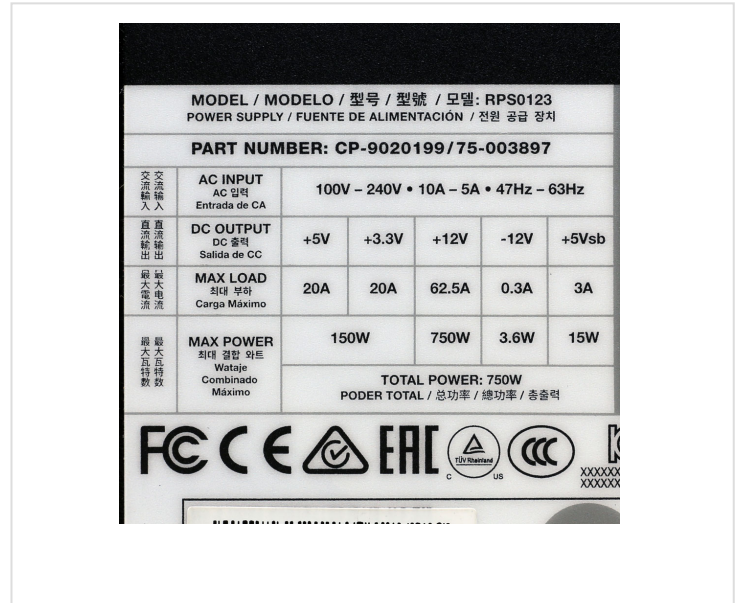
Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
1	4.426A	1.981A	2.003A	0.994A	74.959	87.221%	0	<6.0	45.19°C	0.839
	12.056V	5.046V	3.296V	5.032V	85.941				40.29°C	230.36V
2	9.889A	2.975A	3.004A	1.194A	150.031	90.974%	0	<6.0	46.41°C	0.938
	12.047V	5.042V	3.294V	5.027V	164.916				40.76°C	230.36V
5	27.020A	4.965A	5.017A	1.795A	374.594	92.563%	362	7.3	42.16°C	0.983
	11.994V	5.037V	3.290V	5.015V	404.691				49.44°C	230.36V
10	55.310A	8.961A	9.046A	3.009A	749.938	90.040%	1515	42.6	45.91°C	0.992
	11.937V	5.022V	3.283V	4.986V	832.890				56.20°C	230.43V

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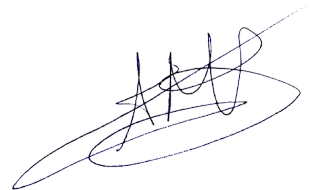


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Power specifications label

CERTIFICATIONS 115V

Aristeidis Bitziopoulos
Lab Director

CERTIFICATIONS 230V



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