

Lab ID#: 422

Receipt Date: Jun 17, 2018

Test Date: Jun 27, 2018

Report:

Report Date: Jun 29, 2018

DUT INFORMATION

Brand	Corsair
Manufacturer (OEM)	HEC
Series	Vengeance
Model Number	
Serial Number	
DUT Notes	CP-9020176

DUT SPECIFICATIONS

Rated Voltage (Vrms)	100-240
Rated Current (Arms)	12-6
Rated Frequency (Hz)	47-63
Rated Power (W)	750
Type	ATX12V
Cooling	120mm Rifle Bearing Fan (NR120L)
Semi-Passive Operation	✓
Cable Design	Semi Modular

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	25	20	62.5	3	0.3
	Watts	120		750	15	3.6
Total Max. Power (W)		750				

CABLES AND CONNECTORS

Captive Cables

Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 20+4 pin (630mm)	1	1	18-22AWG	Yes
4+4 pin EPS12V (660mm)	1	1	18-22AWG	Yes
6+2 pin PCIe (660mm+100mm)	1	2	18AWG	Yes

Modular Cables

4+4 pin EPS12V (650mm)	1	1	18AWG	No
6+2 pin PCIe (650mm+100mm)	2	4	16-18AWG	No
SATA (470mm+120mm+120mm)	1	3	18AWG	No
SATA (540mm+120mm)	1	2	18AWG	No
4 pin Molex (450mm+100mm+100mm+100mm)	2	8	18AWG	No
FDD Adapter (+105mm)	1	1	20AWG	No
AC Power Cord (1400mm) - C13 coupler	1	1	16AWG	-

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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	✓

115V

Average Efficiency	88.013%
Efficiency With 10W (≤500W) or 2% (>500W)	63.931
Average Efficiency 5VSB	78.636%
Standby Power Consumption (W)	0.0522852
Average PF	0.983
Avg Noise Output	21.62 dB(A)
Efficiency Rating (ETA)	GOLD
Noise Rating (LAMBDA)	A

TEST EQUIPMENT

Electronic Loads	Chroma 6314A x2 63123A x6 63102A 63101A	Chroma 63601-5 x2 Chroma 63600-2 63640-80-80 x10 63610-80-20
AC Sources	Chroma 6530, Chroma 61604	
Power Analyzers	N4L PPA1530, N4L PPA5530	
Oscilloscopes	Picoscope 4444 & 3424, Keysight DSOX3024A, Rigol DS2072A	
Voltmeter	Keithley 2015 THD 6.5 Digit	
Sound Analyzer	Bruel & Kjaer 2250-L G4	
Microphone	Bruel & Kjaer Type 4955-A, Bruel & Kjaer Type 4189	
Data Loggers	Picoscope TC-08 x2, Labjack U3-HV x2	

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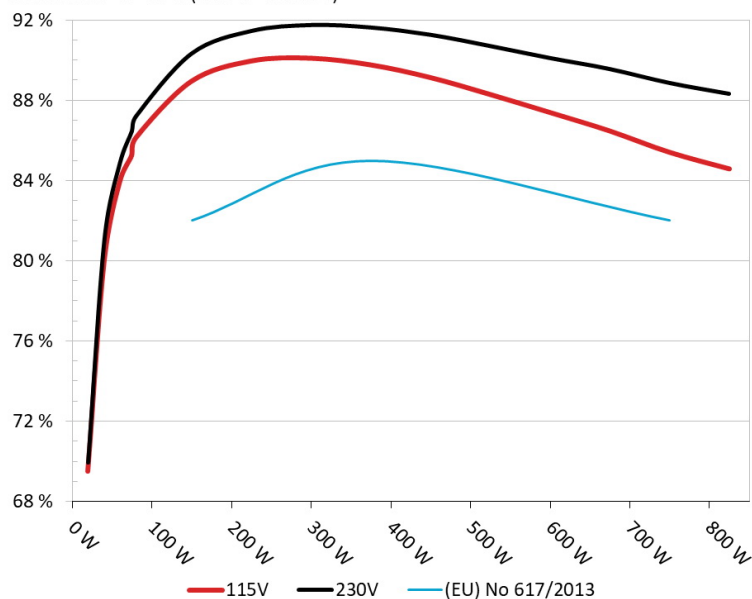
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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Corsair Vengeance 750M

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



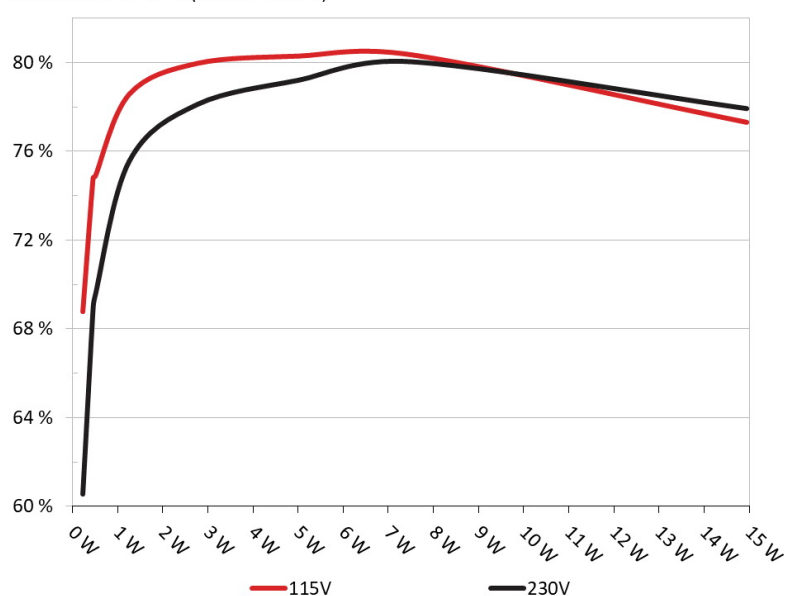
INFO

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 Vengeance 750M

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	68.788%	0.028
	5.037V	0.330		115.37V
2	0.090A	0.454	74.794%	0.050
	5.035V	0.607		115.37V
3	0.550A	2.765	79.960%	0.234
	5.026V	3.458		115.37V
4	1.000A	5.018	80.288%	0.331
	5.018V	6.250		115.36V
5	1.500A	7.514	80.346%	0.389
	5.009V	9.352		115.37V
6	3.000A	14.946	77.308%	0.465
	4.982V	19.333		115.34V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.227	60.533%	0.011
	5.037V	0.375		230.76V
2	0.090A	0.454	68.892%	0.019
	5.035V	0.659		230.93V
3	0.550A	2.765	78.107%	0.099
	5.026V	3.540		230.92V
4	1.000A	5.019	79.202%	0.165
	5.018V	6.337		230.92V
5	1.500A	7.515	80.032%	0.222
	5.009V	9.390		230.92V
6	3.000A	14.945	77.920%	0.330
	4.981V	19.180		230.92V

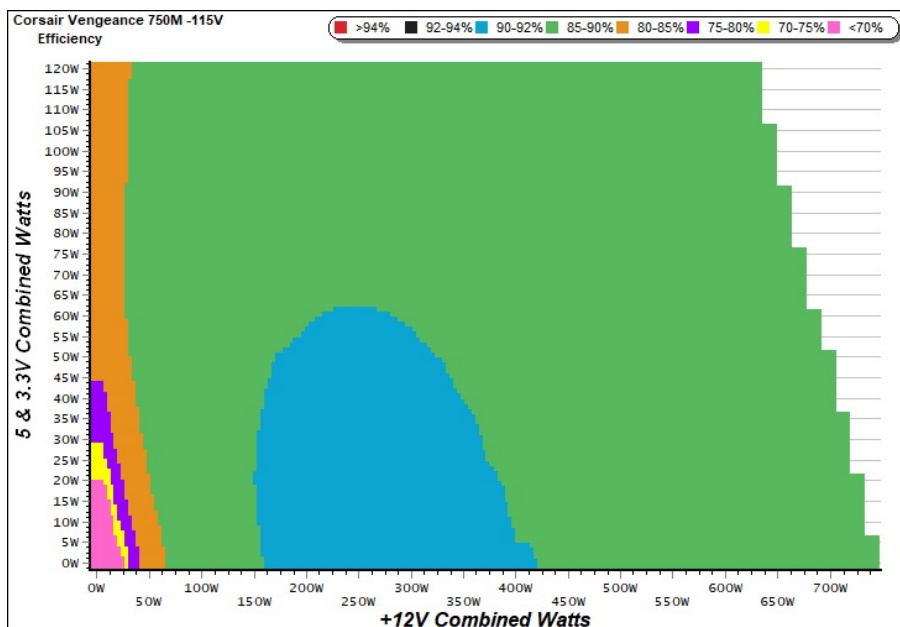
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115V

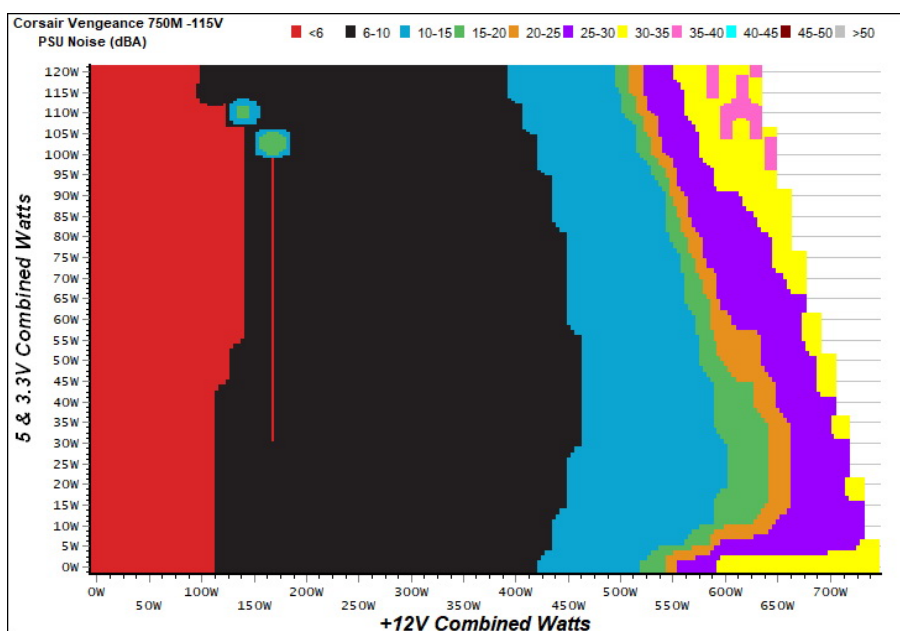
EFFICIENCY GRAPH 115V



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

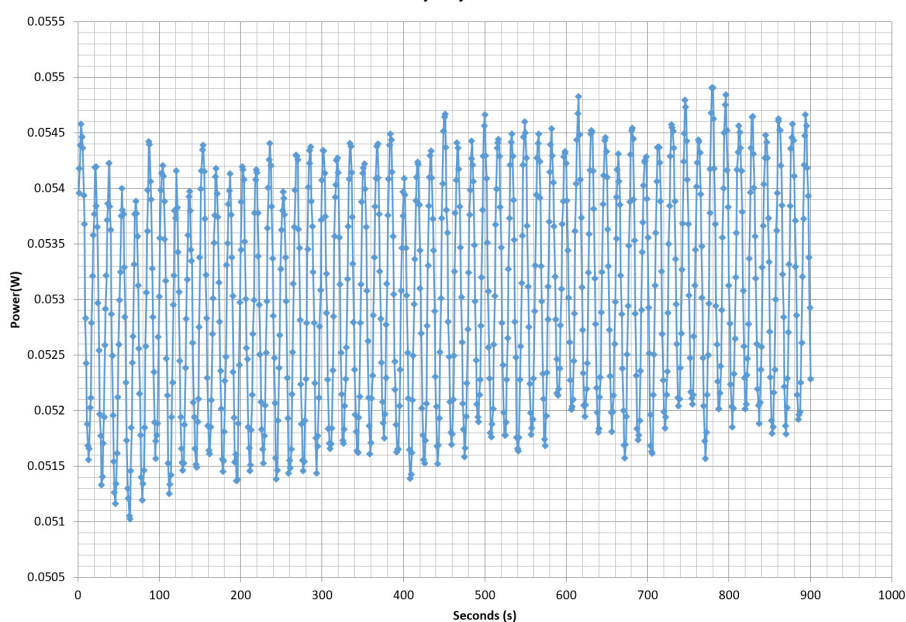
The PSU's noise in its entire operational range and under 30-32 °C (+2 °C) ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

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VAMPIRE POWER -115V

Power - 26/06/2018 - 09:53



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

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Top side

CORSAIR					
MODEL / MODELO / 型号 / 型號 / 모델 : RPS0106 POWER SUPPLY / FUENTE DE ALIMENTACIÓN / 전원 공급 장치					
PART NUMBER: CP-9020176/75-003441					
交流電輸入 AC INPUT	100V - 240V • 12A - 6A • 47Hz - 63Hz				
直流電輸出 DC OUTPUT	+5V	+3.3V	+12V	-12V	+5Vsb
最大電流 MAX LOAD	20A	25A	62.5A	0.3A	3A
最大電壓 MAX POWER	120W	750W	3.6W	15W	
TOTAL POWER: 750W POWER TOTAL / 總功率 / 총출력					
					

Power specifications label

CERTIFICATIONS 115V




Aris Mpitsiopoulos
Lab Director

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