

## Anex

## Corsair Vengeance 750M (2018) (Sample #2)

Lab ID#: 422

Receipt Date: -

Test Date: -

Report:

Report Date: Jun 29, 2018

DUT INFORMATION	
Brand	Corsair
Manufacturer (OEM)	HEC
Series	Vengeance
Model Number	Vengeance 750M (2018) (Sample #2)
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
Average Efficiency	88.013
Efficiency With 10W (≤500W) or 2% (>500W) Load -115V	63.931
Average Efficiency 5VSB	78.636
Standby Power Consumption (W) -115V	0.0522852
Standby Power Consumption (W) -230V	0.0945881
Average PF	0.983
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓
Avg Noise Output	21.62
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	A

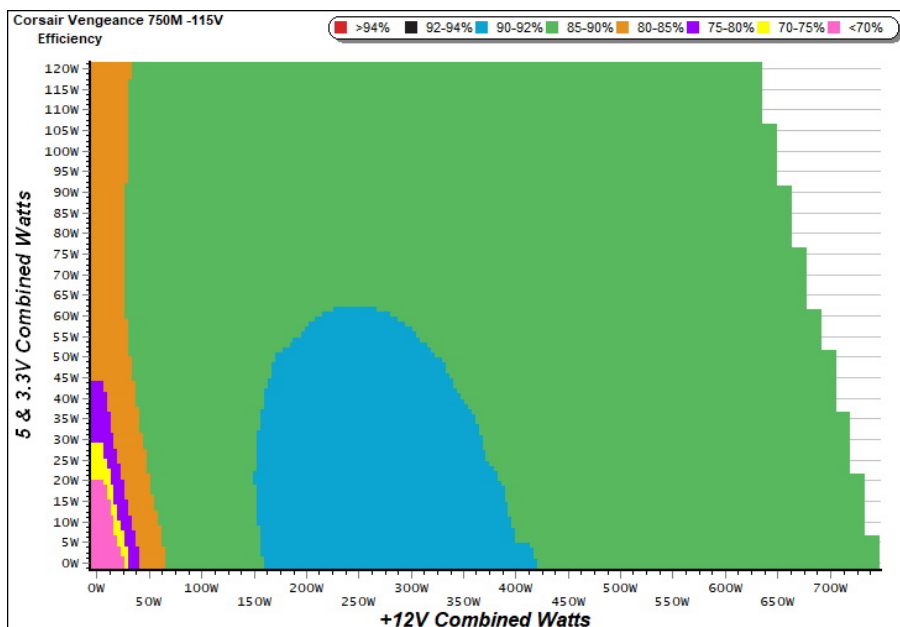
TEST EQUIPMENT		
Electronic Loads	Chroma 6314A x2 63123A x6 63102A 63101A	Chroma 63601-5 x2 Chroma 63600-2 63640-80-80 x10 63610-80-20
AC Sources	Chroma 6530, Chroma 61604	
Power Analyzers	N4L PPA1530, N4L PPA5530	
Oscilloscopes	Picoscope 4444 & 3424, Keysight DSOX3024A, Rigol DS2072A	
Voltmeter	Keithley 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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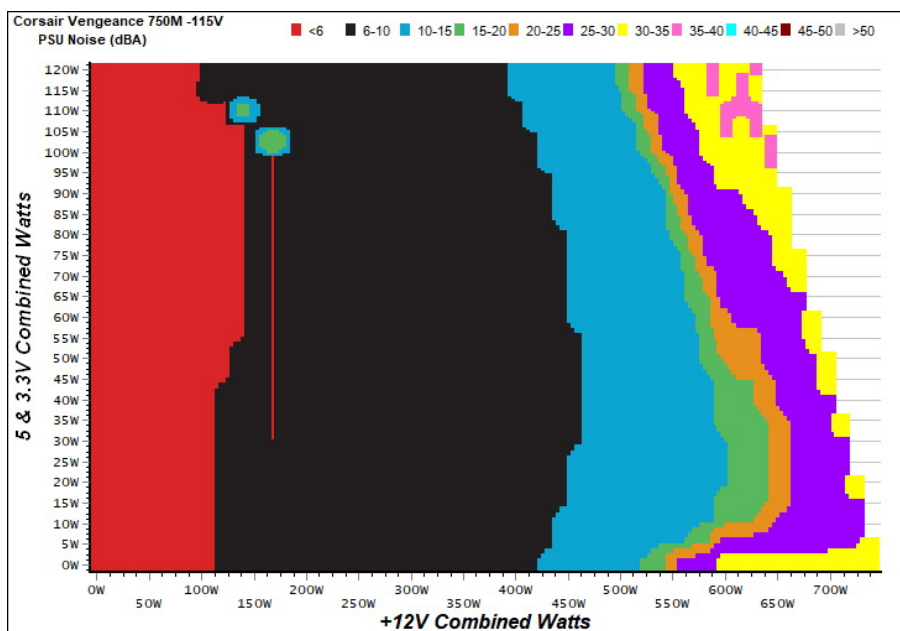
#### EFFICIENCY GRAPH



#### 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



#### 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

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## Corsair Vengeance 750M (2018) (Sample #2)

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

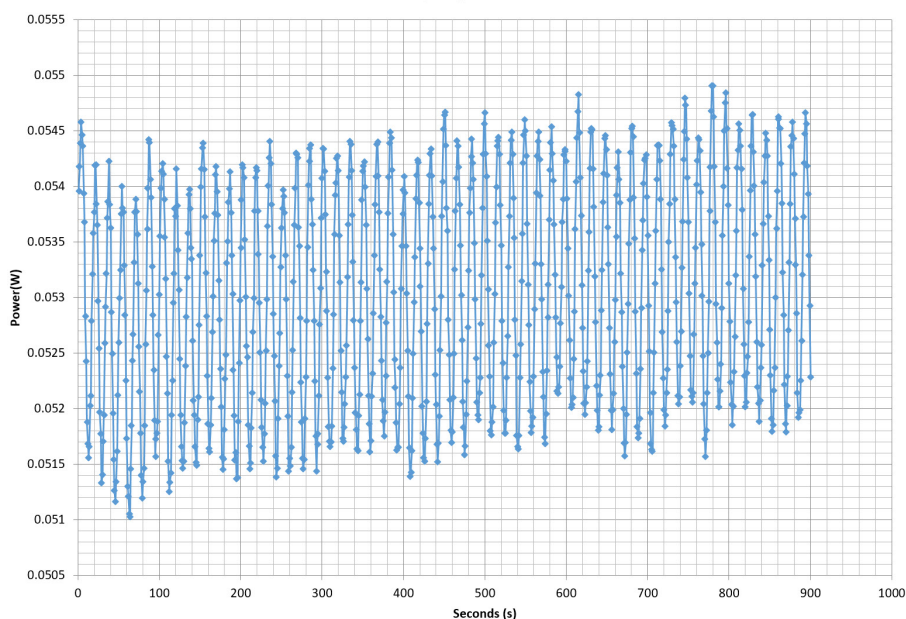
Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.227	68.788%	0.028
	5.037V	0.330		115.37V
2	0.090A	0.454	74.794%	0.050
	5.035V	0.607		115.37V
3	0.550A	2.765	79.960%	0.234
	5.026V	3.458		115.37V
4	1.000A	5.018	80.288%	0.331
	5.018V	6.250		115.36V
5	1.500A	7.514	80.346%	0.389
	5.009V	9.352		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

### 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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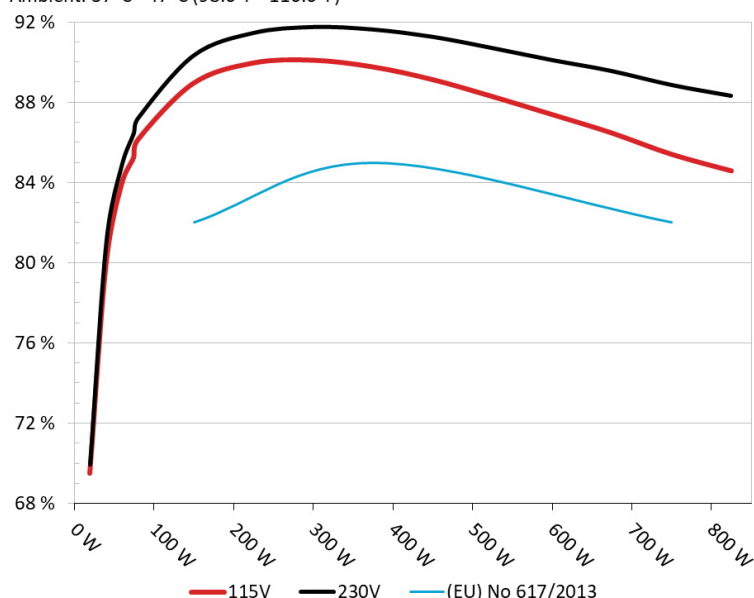
## Anex

## Corsair Vengeance 750M (2018) (Sample #2)

### EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

#### Efficiency: Corsair Vengeance 750M

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



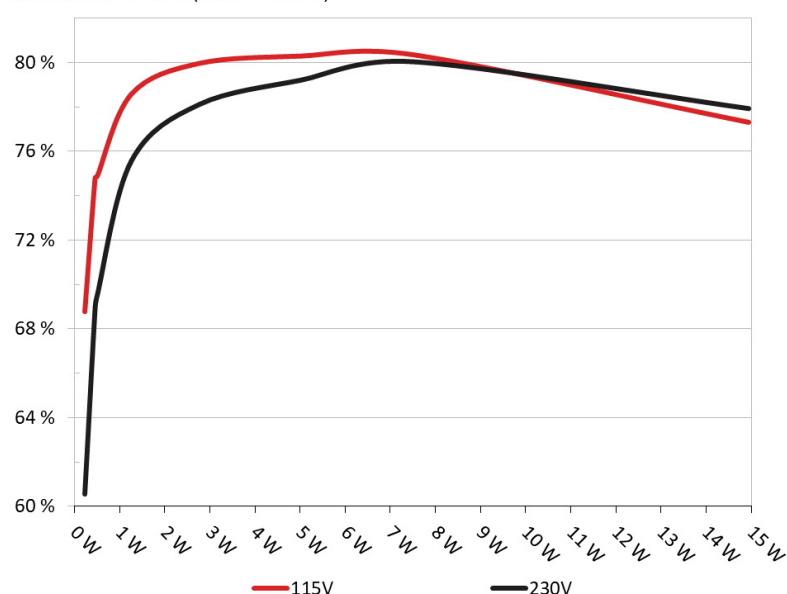
#### INFO

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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## Corsair Vengeance 750M (2018) (Sample #2)

10-110% LOAD TESTS										
Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
1	4.356A	2.006A	1.982A	0.996A	74.497	85.232%	0	<6.0	45.38°C	0.972
	12.145V	4.986V	3.326V	5.019V	87.405				39.25°C	115.27V
2	9.764A	3.011A	2.979A	1.197A	149.397	88.930%	427	7.4	40.46°C	0.974
	12.136V	4.983V	3.322V	5.014V	167.994				46.81°C	115.18V
3	15.578A	3.514A	3.464A	1.398A	224.904	89.947%	427	7.4	40.93°C	0.979
	12.126V	4.981V	3.320V	5.008V	250.041				47.98°C	115.13V
4	21.333A	4.018A	3.979A	1.599A	299.677	90.085%	429	7.5	41.93°C	0.984
	12.116V	4.979V	3.318V	5.003V	332.659				49.74°C	115.07V
5	26.776A	5.024A	4.978A	1.801A	374.608	89.752%	527	8.5	42.26°C	0.988
	12.104V	4.978V	3.315V	4.997V	417.383				50.31°C	114.96V
6	32.230A	6.030A	5.976A	2.004A	449.533	89.123%	655	9.2	42.86°C	0.989
	12.092V	4.976V	3.313V	4.992V	504.397				51.90°C	114.85V
7	37.725A	7.038A	6.978A	2.207A	524.833	88.279%	788	11.6	43.56°C	0.988
	12.080V	4.975V	3.310V	4.986V	594.515				53.41°C	114.83V
8	43.229A	8.046A	7.982A	2.410A	600.143	87.377%	1191	26.4	43.99°C	0.989
	12.069V	4.973V	3.307V	4.980V	686.847				54.40°C	114.72V
9	49.104A	8.554A	8.475A	2.411A	674.664	86.466%	1635	34.2	45.10°C	0.991
	12.059V	4.970V	3.304V	4.979V	780.265				55.98°C	114.59V
10	54.795A	9.060A	8.993A	3.022A	749.879	85.400%	1785	37.1	45.98°C	0.992
	12.048V	4.968V	3.302V	4.965V	878.077				57.42°C	114.57V
11	61.087A	9.068A	9.005A	3.023A	825.083	84.575%	1783	37.1	46.57°C	0.993
	12.038V	4.964V	3.298V	4.964V	975.566				58.61°C	114.45V
CL1	0.144A	14.004A	13.999A	0.000A	117.990	83.209%	464	7.1	42.29°C	0.976
	12.131V	4.986V	3.316V	5.034V	141.799				51.68°C	115.19V
CL2	62.513A	1.001A	1.000A	1.000A	766.573	85.903%	1783	37.1	45.55°C	0.993
	12.050V	4.971V	3.308V	5.007V	892.375				57.16°C	114.56V

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## Corsair Vengeance 750M (2018) (Sample #2)

### 20-80W LOAD TESTS

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	PF/AC Volts
1	1.191A	0.502A	0.480A	0.199A	19.577	69.521%	0	<6.0	0.847
	12.153V	4.987V	3.328V	5.036V	28.160				115.34V
2	2.446A	1.004A	0.990A	0.398A	40.023	79.961%	0	<6.0	0.937
	12.150V	4.987V	3.327V	5.032V	50.053				115.31V
3	3.628A	1.505A	1.472A	0.597A	59.476	83.914%	0	<6.0	0.965
	12.148V	4.986V	3.327V	5.028V	70.877				115.29V
4	4.884A	2.005A	1.984A	0.796A	79.908	86.126%	0	<6.0	0.976
	12.145V	4.985V	3.326V	5.023V	92.780				115.27V

### RIPPLE MEASUREMENTS

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	15.2 mV	11.3 mV	8.5 mV	5.4 mV	Pass
20% Load	9.1 mV	14.4 mV	9.3 mV	8.7 mV	Pass
30% Load	9.7 mV	13.1 mV	10.5 mV	10.0 mV	Pass
40% Load	17.4 mV	14.3 mV	10.4 mV	13.1 mV	Pass
50% Load	14.2 mV	16.0 mV	11.0 mV	16.9 mV	Pass
60% Load	15.3 mV	18.2 mV	13.4 mV	17.0 mV	Pass
70% Load	16.6 mV	18.9 mV	12.8 mV	17.0 mV	Pass
80% Load	18.7 mV	22.2 mV	14.1 mV	20.0 mV	Pass
90% Load	22.1 mV	22.5 mV	15.2 mV	24.3 mV	Pass
100% Load	25.1 mV	26.7 mV	17.6 mV	38.5 mV	Pass
110% Load	26.1 mV	28.4 mV	18.7 mV	40.1 mV	Pass
Crossload 1	9.2 mV	30.9 mV	20.8 mV	10.0 mV	Pass
Crossload 2	26.5 mV	24.9 mV	11.6 mV	23.3 mV	Pass

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
### Corsair Vengeance 750M (2018) (Sample #2)

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

Hold-Up Time (ms)	14.50
AC Loss to PWR_OK Hold Up Time (ms)	12.90
PWR_OK Inactive to DC Loss Delay (ms)	1.60



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 AC 입력 Entrada de CA	100V ~ 240V • 12A ~ 6A • 47Hz ~ 63Hz			
直流電 輸出	DC OUTPUT DC 출력 Salida de CC	+5V	+3.3V	+12V	-12V +5Vsb
最大電 流	MAX LOAD 최대 부하 Carga Máximo	20A	25A	62.5A	0.3A 3A
最大 功率	MAX POWER 최대 출력 Wattaje Combinado Máximo	120W		750W	3.6W 15W
		TOTAL POWER: 750W PODER TOTAL / 总功率 / 總功率 / 총출력			
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Power specifications label

## CERTIFICATIONS



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