

## Anex

Corsair VS550 (#2)

Lab ID#: 560

Receipt Date: Jun 3, 2018

Test Date: Jun 9, 2018

Report:

Report Date: Jun 12, 2018

### DUT INFORMATION

Brand	Corsair
Manufacturer (OEM)	HEC
Series	VS
Model Number	
Serial Number	18389853000052597432
DUT Notes	CP-9020171

### DUT SPECIFICATIONS

Rated Voltage (Vrms)	100-240
Rated Current (Arms)	10-5
Rated Frequency (Hz)	47-63
Rated Power (W)	550
Type	ATX12V
Cooling	120mm Sleeve Bearing Fan (D12SH-12)
Semi-Passive Operation	X
Cable Design	Fixed cables

### TEST EQUIPMENT

Electronic Loads	Chroma 6314A x2 63123A x6 63102A 63101A	Chroma 63601-5 x4 Chroma 63600-2 x2 63640-80-80 x20 63610-80-20 x2
AC Sources	Chroma 6530, Chroma 61604, Keysight AC6804B	
Power Analyzers	N4L PPA1530 x2, 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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### RESULTS

Temperature Range (°C /°F)	28-30 / 82.4-86
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓

#### 115V

Average Efficiency	82.826%
Efficiency With 10W (≤500W) or 2% (>500W)	53.965
Average Efficiency 5VSB	79.731%
Standby Power Consumption (W)	0.0445783
Average PF	0.991
Avg Noise Output	29.11 dB(A)
Efficiency Rating (ETA)	BRONZE
Noise Rating (LAMBDA)	A-

#### 230V

Average Efficiency	85.204%
Average Efficiency 5VSB	78.599%
Standby Power Consumption (W)	0.1029090
Average PF	0.963
Avg Noise Output	29.81 dB(A)
Efficiency Rating (ETA)	BRONZE
Noise Rating (LAMBDA)	A-

### POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	24	20	44	3	0.3
	Watts	120		528	15	3.6
Total Max. Power (W)		550				

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

Hold-Up Time (ms)	13
AC Loss to PWR_OK Hold Up Time (ms)	10.4
PWR_OK Inactive to DC Loss Delay (ms)	2.6

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## CABLES AND CONNECTORS

### Captive Cables

Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 20+4 pin (550mm)	1	1	18-20AWG	No
4+4 pin EPS12V (620mm)	1	1	18AWG	No
6+2 pin PCIe (550mm+110mm)	1	2	18AWG	No
SATA (440mm+120mm+120mm)	2	6	18AWG	No
SATA (450mm) / 4-pin Molex (+120mm+120mm) / FDD (+120mm)	1	1 / 2 / 1	18-20AWG	No
AC Power Cord (1380mm) - C13 coupler	1	1	18AWG	-

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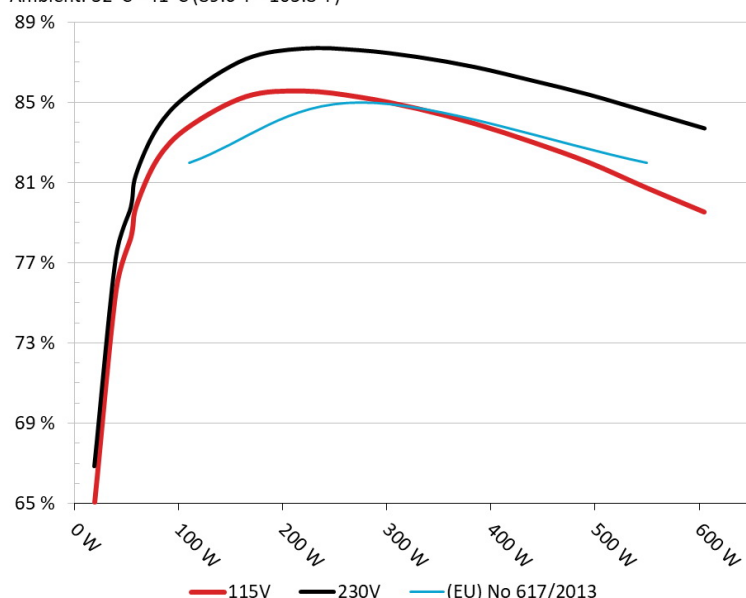
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### EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

#### Efficiency: Corsair VS550

Ambient: 32°C - 41°C (89.6°F - 105.8°F)



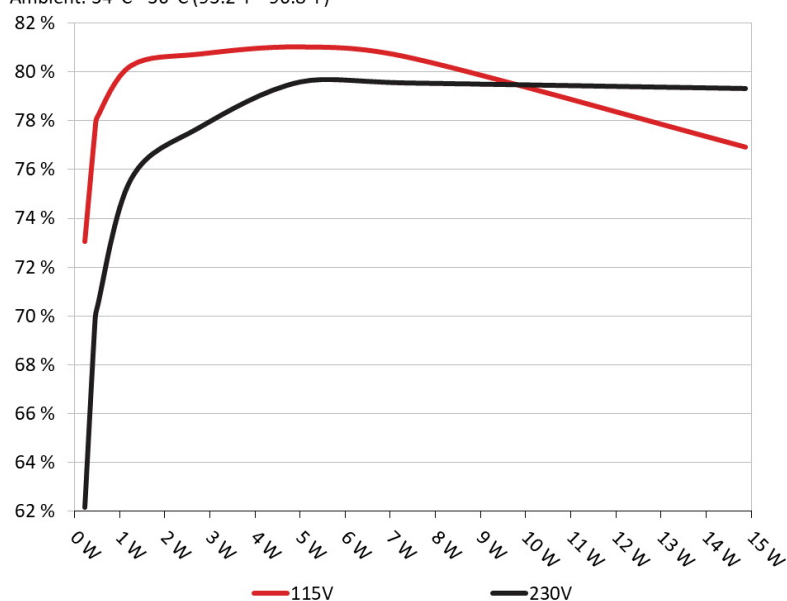
#### INFO

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 VS550

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	0.225	73.052%	0.038
	5.018V	0.308		115.02V
2	0.090A	0.451	77.625%	0.070
	5.017V	0.581		115.03V
3	0.550A	2.754	80.739%	0.276
	5.008V	3.411		115.02V
4	1.000A	4.999	81.034%	0.351
	4.998V	6.169		115.02V
5	1.500A	7.483	80.575%	0.392
	4.989V	9.287		115.02V
6	3.000A	14.875	76.925%	0.451
	4.958V	19.337		115.02V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.225	62.155%	0.013
	5.017V	0.362		230.12V
2	0.090A	0.451	69.814%	0.024
	5.016V	0.646		230.12V
3	0.550A	2.754	77.709%	0.120
	5.008V	3.544		230.12V
4	1.000A	4.999	79.589%	0.189
	4.999V	6.281		230.12V
5	1.500A	7.477	79.543%	0.244
	4.985V	9.400		230.12V
6	3.000A	14.866	79.319%	0.331
	4.956V	18.742		230.13V

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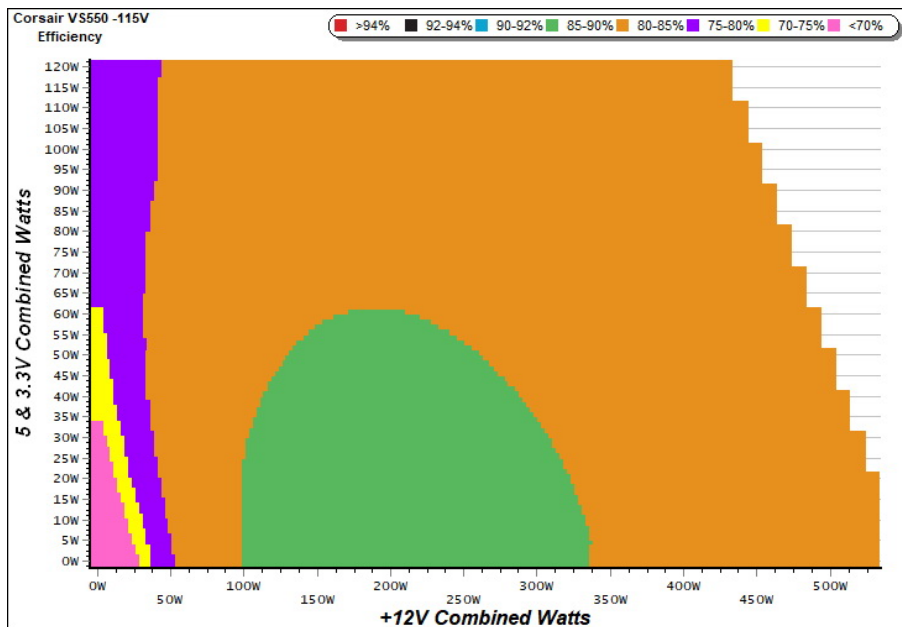
# 115V

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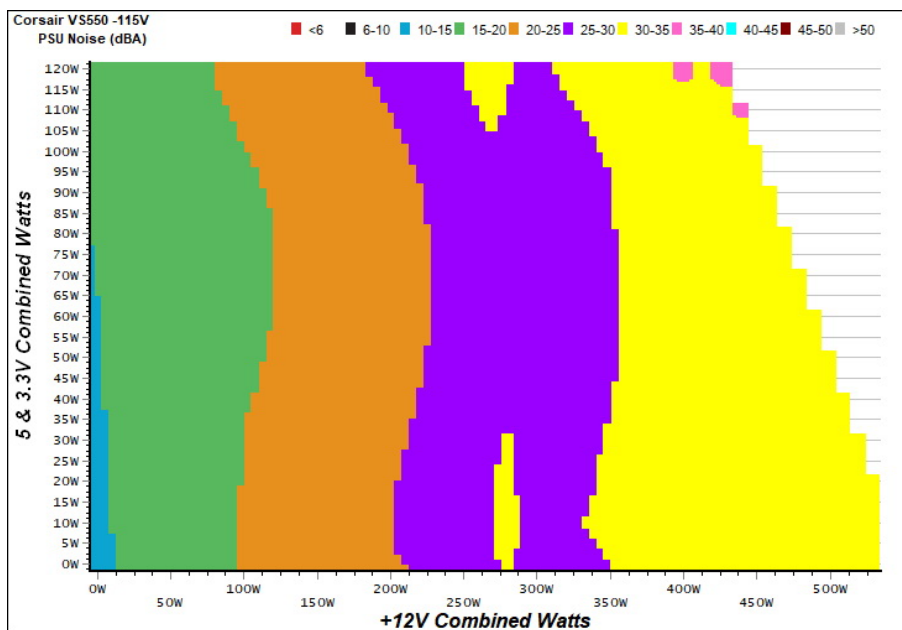
### EFFICIENCY GRAPH 115V



#### 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 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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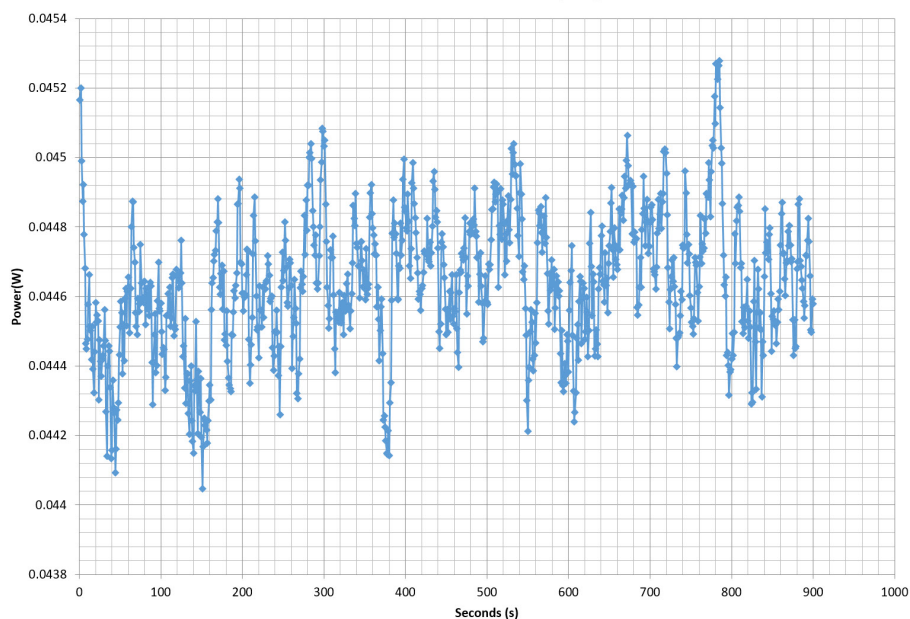
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## VAMPIRE POWER -115V

Power - 18389853000052597432 - 04/12/2018 - 08:54



### 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

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### 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
1	2.698A	1.987A	1.957A	1.004A	54.406	78.311%	701	16.7	34.91°C	0.974
	12.161V	5.032V	3.370V	4.981V	69.474				38.77°C	115.12V
2	6.458A	2.988A	2.942A	1.209A	109.320	83.768%	724	16.9	35.16°C	0.985
	12.144V	5.022V	3.360V	4.965V	130.504				39.52°C	115.11V
3	10.638A	3.486A	3.431A	1.414A	164.828	85.298%	782	18.7	35.55°C	0.986
	12.110V	5.020V	3.352V	4.952V	193.238				41.00°C	115.11V
4	14.778A	3.987A	3.947A	1.621A	219.693	85.574%	915	22.7	35.80°C	0.989
	12.078V	5.018V	3.343V	4.937V	256.729				41.98°C	115.11V
5	18.579A	4.993A	4.948A	1.829A	274.567	85.263%	1037	25.8	36.17°C	0.993
	12.060V	5.008V	3.334V	4.923V	322.025				43.39°C	115.13V
6	22.392A	6.004A	5.957A	2.038A	329.410	84.698%	1166	28.9	36.49°C	0.994
	12.040V	4.997V	3.325V	4.907V	388.924				44.61°C	115.12V
7	26.256A	7.016A	6.967A	2.249A	384.682	83.945%	1302	32.5	37.29°C	0.996
	12.020V	4.988V	3.314V	4.891V	458.255				45.93°C	115.11V
8	30.133A	8.034A	7.988A	2.463A	439.963	83.023%	1452	34.6	37.84°C	0.996
	11.999V	4.979V	3.304V	4.873V	529.929				47.46°C	115.10V
9	34.432A	8.534A	8.496A	2.469A	494.474	82.003%	1605	37.4	38.78°C	0.996
	11.965V	4.980V	3.295V	4.861V	602.992				49.23°C	115.10V
10	38.551A	9.038A	9.040A	3.103A	549.675	80.743%	1763	40.0	39.65°C	0.997
	11.932V	4.978V	3.284V	4.836V	680.772				51.32°C	115.09V
11	43.330A	9.022A	9.063A	3.109A	604.887	79.540%	1886	42.6	40.52°C	0.997
	11.890V	4.987V	3.277V	4.825V	760.477				52.70°C	115.09V
CL1	0.130A	14.000A	13.998A	0.000A	112.135	76.766%	1265	31.6	36.34°C	0.985
	12.512V	4.564V	3.330V	4.946V	146.074				43.60°C	115.09V
CL2	43.979A	1.000A	0.998A	1.000A	529.738	81.300%	1688	39.3	39.94°C	0.997
	11.740V	5.205V	3.312V	4.913V	651.585				51.46°C	115.09V

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### 20-80W LOAD TESTS 115V

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	PF/AC Volts
1	1.181A	0.493A	0.471A	0.200A	19.448	65.070%	646	15.2	0.935
	12.153V	5.073V	3.379V	5.008V	29.888				115.11V
2	2.437A	0.988A	0.975A	0.400A	39.899	75.606%	664	15.2	0.967
	12.149V	5.062V	3.375V	5.000V	52.772				115.11V
3	3.622A	1.486A	1.451A	0.601A	59.397	79.834%	680	15.9	0.975
	12.148V	5.051V	3.371V	4.991V	74.401				115.11V
4	4.873A	1.984A	1.959A	0.803A	79.780	82.186%	696	16.6	0.985
	12.145V	5.041V	3.367V	4.982V	97.073				115.11V

### RIPPLE MEASUREMENTS 115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	6.2 mV	7.5 mV	11.6 mV	14.2 mV	Pass
20% Load	6.3 mV	8.4 mV	12.9 mV	15.9 mV	Pass
30% Load	8.1 mV	10.2 mV	12.7 mV	18.1 mV	Pass
40% Load	17.1 mV	9.9 mV	40.4 mV	17.4 mV	Pass
50% Load	12.7 mV	9.8 mV	14.9 mV	17.6 mV	Pass
60% Load	14.3 mV	11.3 mV	16.0 mV	18.4 mV	Pass
70% Load	17.3 mV	12.0 mV	17.5 mV	17.7 mV	Pass
80% Load	20.1 mV	12.8 mV	21.4 mV	22.3 mV	Pass
90% Load	22.9 mV	13.9 mV	23.9 mV	23.4 mV	Pass
100% Load	34.6 mV	21.8 mV	27.0 mV	25.1 mV	Pass
110% Load	40.1 mV	25.7 mV	29.0 mV	28.0 mV	Pass
Crossload 1	10.7 mV	31.4 mV	22.0 mV	14.0 mV	Pass
Crossload 2	38.0 mV	28.4 mV	22.3 mV	18.2 mV	Pass

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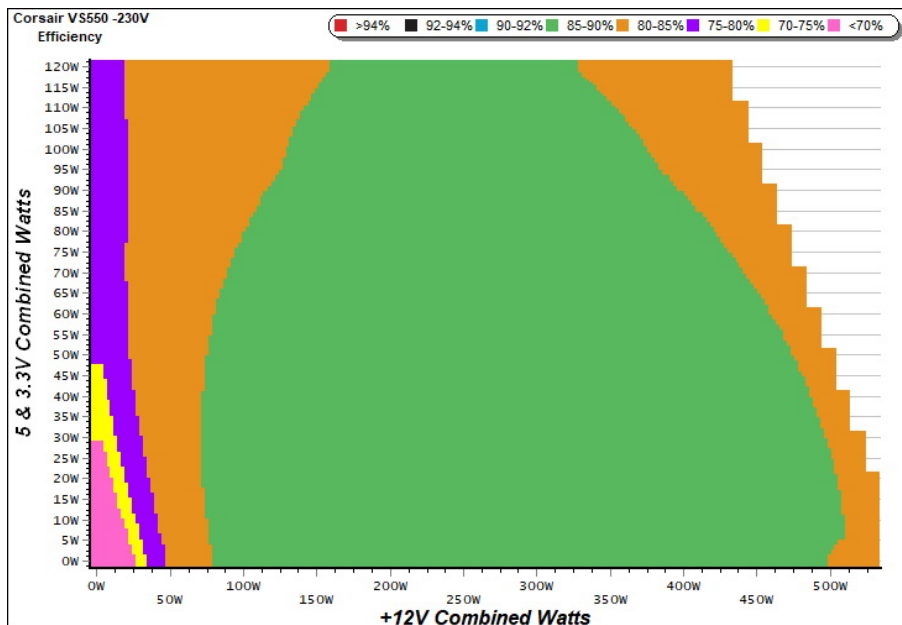
# 230V

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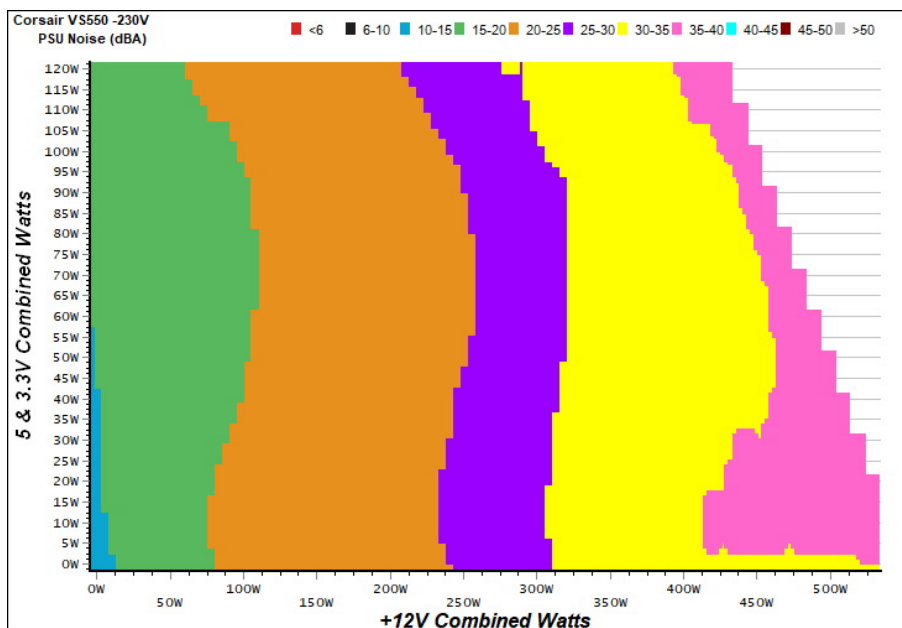
### EFFICIENCY GRAPH 230V



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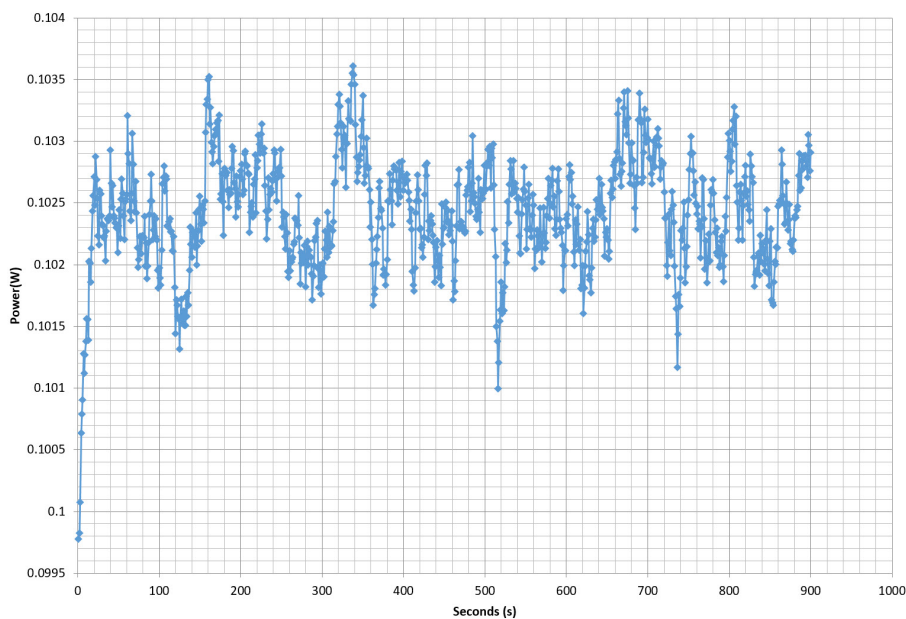
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Corsair VS550 (#2)

## VAMPIRE POWER -230V

Power - 18389853000052597432 - 04/12/2018 - 08:54



### INFO

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### 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
1	2.673A	1.984A	1.954A	1.004A	54.081	79.751%	699	16.6	34.45°C	0.855
	12.162V	5.033V	3.370V	4.982V	67.812				37.95°C	230.12V
2	6.433A	2.983A	2.942A	1.208A	108.999	85.377%	726	16.9	35.01°C	0.929
	12.145V	5.023V	3.361V	4.966V	127.668				38.82°C	230.13V
3	10.613A	3.481A	3.427A	1.413A	164.503	87.159%	835	20.6	35.41°C	0.949
	12.111V	5.022V	3.352V	4.954V	188.739				39.58°C	230.13V
4	14.747A	3.982A	3.944A	1.620A	219.324	87.681%	920	22.8	35.72°C	0.964
	12.080V	5.020V	3.344V	4.939V	250.138				40.28°C	230.13V
5	18.553A	4.987A	4.944A	1.828A	274.237	87.598%	1082	27.5	36.64°C	0.974
	12.061V	5.010V	3.334V	4.924V	313.062				41.64°C	230.14V
6	22.370A	6.001A	5.950A	2.038A	329.159	87.262%	1227	30.3	37.47°C	0.978
	12.042V	4.998V	3.325V	4.908V	377.207				42.83°C	230.14V
7	26.221A	7.020A	6.966A	2.249A	384.452	86.757%	1309	32.6	37.65°C	0.980
	12.027V	4.984V	3.316V	4.893V	443.135				43.50°C	230.15V
8	30.117A	8.032A	7.984A	2.463A	439.785	86.081%	1481	35.3	38.36°C	0.984
	12.000V	4.979V	3.305V	4.873V	510.899				45.16°C	230.15V
9	34.413A	8.535A	8.490A	2.468A	494.327	85.377%	1639	37.9	39.20°C	0.984
	11.968V	4.978V	3.296V	4.863V	578.996				46.43°C	230.16V
10	38.537A	9.037A	9.036A	3.102A	549.541	84.539%	1760	40.0	39.48°C	0.986
	11.933V	4.979V	3.285V	4.836V	650.046				47.27°C	230.16V
11	43.313A	9.023A	9.059A	3.108A	604.773	83.702%	1883	42.5	40.55°C	0.987
	11.892V	4.987V	3.278V	4.827V	722.528				48.88°C	230.15V
CL1	0.117A	13.999A	13.998A	0.000A	112.023	78.255%	1263	31.5	36.62°C	0.939
	12.508V	4.569V	3.329V	4.944V	143.152				41.81°C	230.15V
CL2	43.956A	1.000A	0.997A	1.000A	529.725	84.949%	1658	38.1	39.35°C	0.987
	11.746V	5.201V	3.313V	4.914V	623.578				47.11°C	230.16V

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### 20-80W LOAD TESTS 230V

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	PF/AC Volts
1	1.158A	0.490A	0.469A	0.200A	19.146	66.853%	661	15.2	0.653
	12.152V	5.075V	3.379V	5.008V	28.639				230.12V
2	2.413A	0.985A	0.973A	0.400A	39.587	77.195%	668	15.2	0.802
	12.149V	5.062V	3.375V	5.001V	51.282				230.12V
3	3.599A	1.482A	1.446A	0.601A	59.086	81.392%	682	15.9	0.867
	12.149V	5.052V	3.371V	4.992V	72.594				230.12V
4	4.849A	1.979A	1.956A	0.803A	79.461	83.717%	694	16.5	0.901
	12.146V	5.042V	3.367V	4.983V	94.916				230.12V

### RIPPLE MEASUREMENTS 230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	6.3 mV	8.0 mV	13.6 mV	13.1 mV	Pass
20% Load	8.5 mV	8.3 mV	13.2 mV	15.2 mV	Pass
30% Load	9.3 mV	10.1 mV	14.6 mV	16.2 mV	Pass
40% Load	11.2 mV	8.8 mV	17.4 mV	18.5 mV	Pass
50% Load	13.7 mV	9.0 mV	15.4 mV	18.0 mV	Pass
60% Load	16.4 mV	11.6 mV	17.0 mV	17.9 mV	Pass
70% Load	18.5 mV	11.6 mV	17.7 mV	17.7 mV	Pass
80% Load	22.1 mV	13.2 mV	21.5 mV	21.2 mV	Pass
90% Load	24.9 mV	14.4 mV	39.6 mV	41.0 mV	Pass
100% Load	38.2 mV	22.5 mV	26.5 mV	25.4 mV	Pass
110% Load	46.3 mV	27.7 mV	28.8 mV	24.5 mV	Pass
Crossload 1	11.5 mV	33.4 mV	22.2 mV	13.2 mV	Pass
Crossload 2	39.8 mV	29.0 mV	20.3 mV	17.2 mV	Pass

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Top side

MODEL / MODELO / 型号 / 모델: RPS0101 POWER SUPPLY / FUENTE DE ALIMENTACIÓN / FONTE DE ALIMENTAÇÃO / 전원 공급 장치					
PART NUMBER : CP-9020171 / 75-003436					
交流输入 ENTRADA DE CA / ENTRADA CA / AC 입력	100V - 240V • 10A - 5A • 47Hz - 63Hz				
直流输出 SALIDA DE CC / SAÍDA CC / DC 출력	+5V	+3.3V	+12V	-12V	+5Vsb
最大電流 CARGA MÁXIMA / CARGA MÁX / 최대 부하	20A	24A	44A	0.3A	3A
最大瓦特數 MAXIMUM COMBINED WATTAGE VATAJE COMBINADO MÁXIMO POTÊNCIA MÁXIMA COMBINADA 최대 결합 와트	120W	528W	3.6W	15W	
TOTAL POWER: 550W 总功率 / 總功率 / 총출력					
					
 S/N: 18389853000052597432					

Power specifications label

## CERTIFICATIONS 115V




**Aristeidis Bitziopoulos**  
Lab Director

## 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

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