

Anex

Corsair VS550

Lab ID#: 558

Receipt Date: Apr 28, 2018

Test Date: May 8, 2018

Report:

Report Date: May 12, 2018

DUT INFORMATION

Brand	Corsair
Manufacturer (OEM)	HEC
Series	VS
Model Number	
Serial Number	18389853000052597430
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	83.290%
Efficiency With 10W (≤500W) or 2% (>500W)	54.513
Average Efficiency 5VSB	79.597%
Standby Power Consumption (W)	0.0462126
Average PF	0.990
Avg Noise Output	29.69 dB(A)
Efficiency Rating (ETA)	BRONZE
Noise Rating (LAMBDA)	A-

230V

Average Efficiency	85.561%
Average Efficiency 5VSB	78.848%
Standby Power Consumption (W)	0.1057410
Average PF	0.960
Avg Noise Output	30.12 dB(A)
Efficiency Rating (ETA)	BRONZE
Noise Rating (LAMBDA)	Standard++

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)	12.80
AC Loss to PWR_OK Hold Up Time (ms)	10.20
PWR_OK Inactive to DC Loss Delay (ms)	2.60

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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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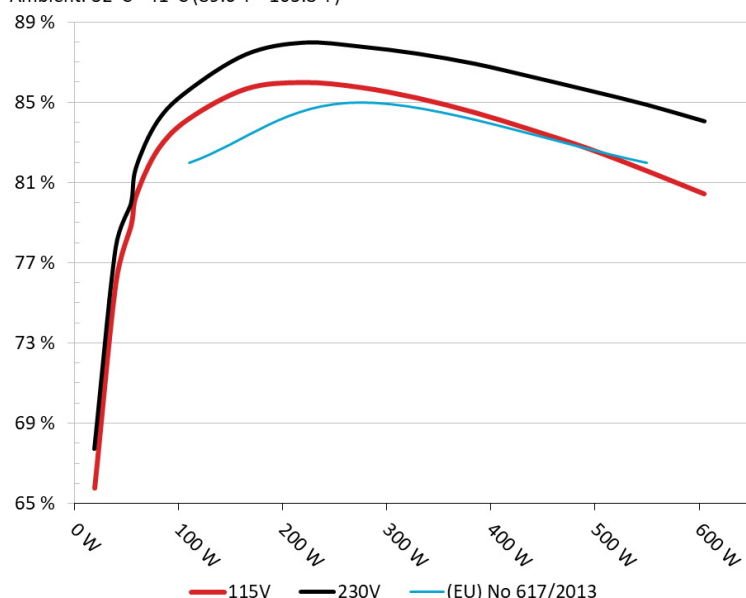
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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Corsair VS550

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



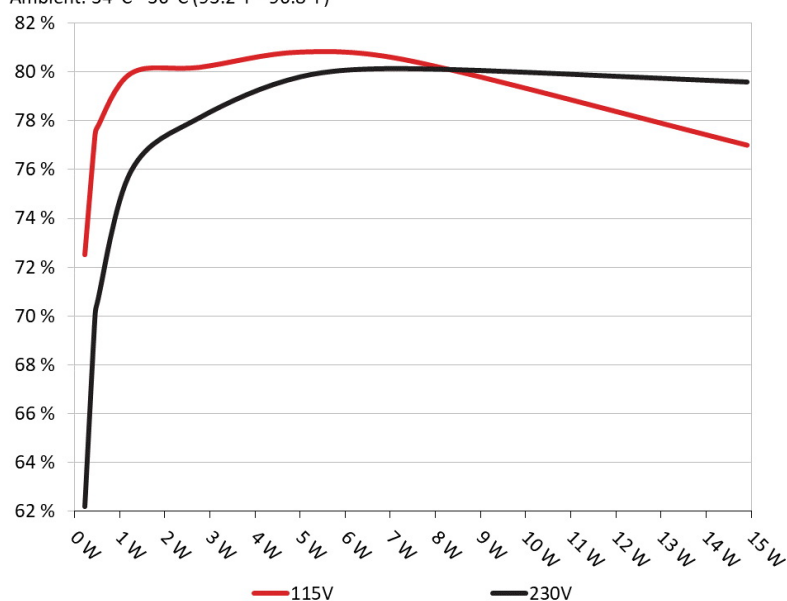
INFO

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	0.227	72.524%	0.036
	5.030V	0.313		115.05V
2	0.090A	0.453	77.436%	0.067
	5.030V	0.585		115.05V
3	0.550A	2.762	80.197%	0.272
	5.021V	3.444		115.05V
4	1.000A	5.012	80.826%	0.349
	5.011V	6.201		115.05V
5	1.500A	7.502	80.442%	0.393
	5.001V	9.326		115.05V
6	2.999A	14.907	77.011%	0.455
	4.970V	19.357		115.05V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.227	62.192%	0.013
	5.030V	0.365		230.20V
2	0.090A	0.453	70.015%	0.023
	5.030V	0.647		230.20V
3	0.550A	2.762	78.111%	0.115
	5.021V	3.536		230.18V
4	1.000A	5.012	79.796%	0.183
	5.012V	6.281		230.19V
5	1.500A	7.502	80.124%	0.237
	5.001V	9.363		230.19V
6	3.000A	14.904	79.581%	0.326
	4.968V	18.728		230.19V

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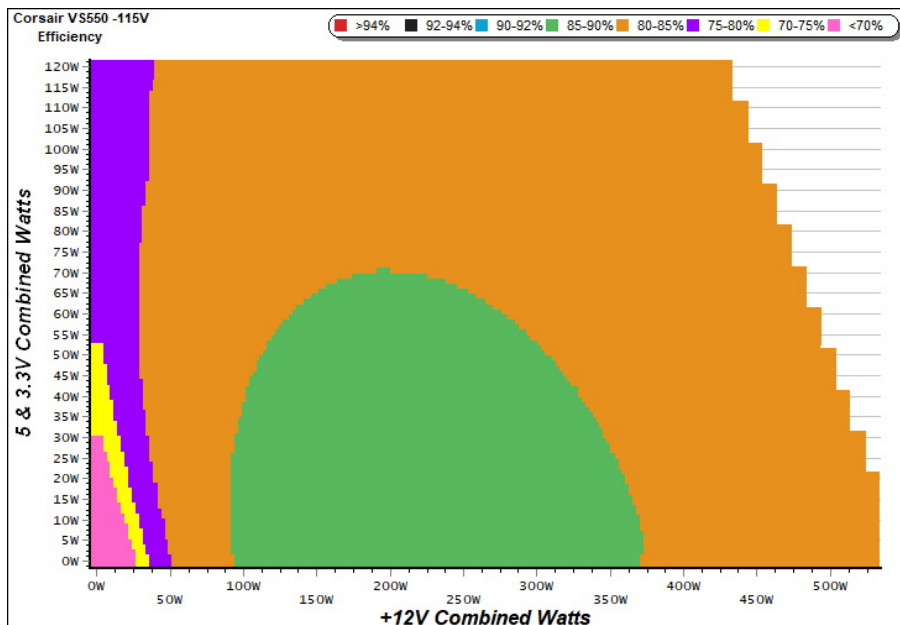
115V

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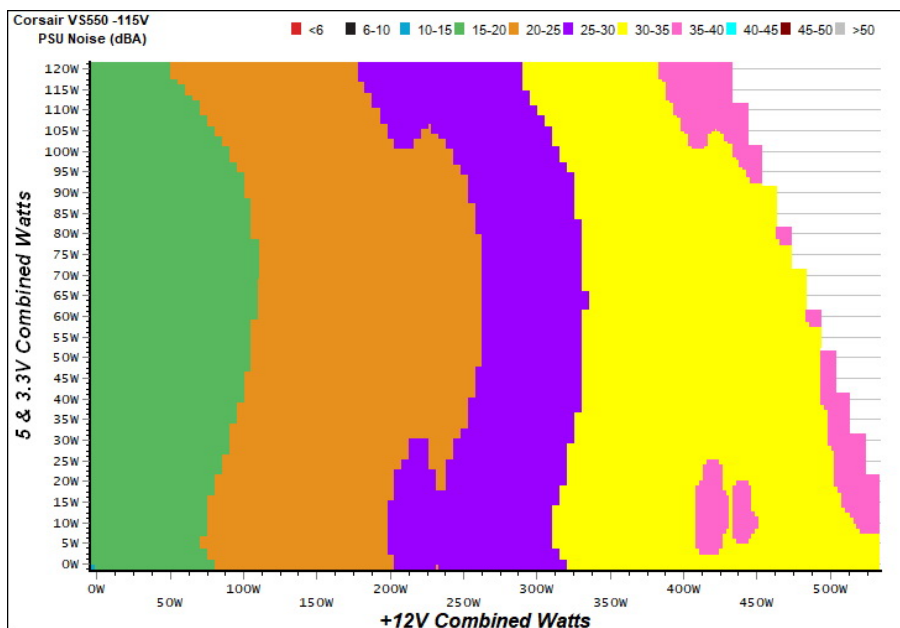
EFFICIENCY GRAPH 115V



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

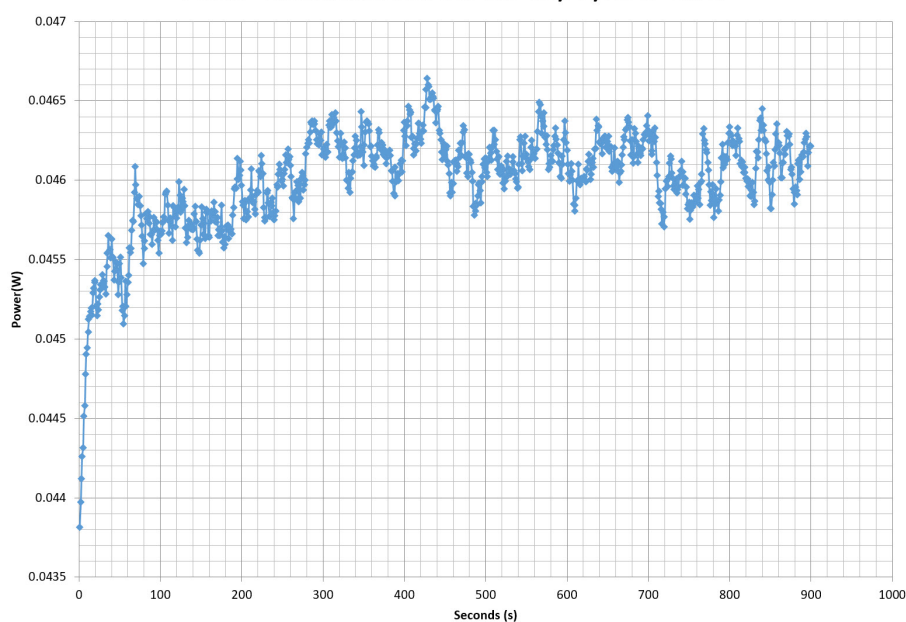
The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

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VAMPIRE POWER -115V

Power - 18389853000052597430 - 30/11/2018 - 13:47



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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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	2.672A	1.982A	1.949A	1.001A	54.101	78.867%	687	16.1	35.03°C	0.969
	12.179V	5.034V	3.377V	4.994V	68.598				38.61°C	115.01V
2	6.422A	2.983A	2.938A	1.206A	108.990	84.167%	716	16.8	35.36°C	0.983
	12.165V	5.021V	3.365V	4.977V	129.493				39.43°C	115.01V
3	10.594A	3.486A	3.424A	1.411A	164.512	85.680%	837	20.6	35.89°C	0.985
	12.133V	5.017V	3.354V	4.962V	192.007				40.36°C	115.01V
4	14.715A	3.988A	3.946A	1.617A	219.323	85.999%	903	22.3	36.15°C	0.989
	12.106V	5.012V	3.344V	4.948V	255.031				40.95°C	115.01V
5	18.503A	5.001A	4.949A	1.826A	274.226	85.756%	1029	25.7	36.38°C	0.992
	12.092V	4.998V	3.332V	4.930V	319.776				41.59°C	115.01V
6	22.312A	6.017A	5.962A	2.036A	329.142	85.223%	1157	28.7	36.76°C	0.994
	12.073V	4.983V	3.319V	4.911V	386.214				42.39°C	115.01V
7	26.159A	7.042A	6.982A	2.248A	384.454	84.499%	1281	32.1	36.97°C	0.996
	12.056V	4.969V	3.307V	4.893V	454.979				43.15°C	115.01V
8	30.026A	8.070A	8.014A	2.462A	439.770	83.621%	1433	34.0	37.46°C	0.997
	12.036V	4.955V	3.293V	4.874V	525.908				44.38°C	115.01V
9	34.289A	8.579A	8.529A	2.469A	494.297	82.690%	1574	37.2	38.30°C	0.997
	12.010V	4.954V	3.281V	4.861V	597.772				45.80°C	115.01V
10	38.385A	9.092A	9.088A	3.104A	549.502	81.598%	1726	39.6	39.09°C	0.997
	11.979V	4.949V	3.267V	4.833V	673.423				47.47°C	115.01V
11	43.149A	9.081A	9.122A	3.113A	604.716	80.449%	1875	42.5	40.59°C	0.998
	11.936V	4.955V	3.255V	4.819V	751.672				49.65°C	115.01V
CL1	0.119A	13.999A	13.995A	0.000A	111.567	76.928%	1251	31.1	36.50°C	0.984
	12.547V	4.531V	3.333V	4.954V	145.028				41.11°C	115.02V
CL2	43.966A	0.999A	0.997A	1.000A	531.056	82.222%	1642	38.0	38.85°C	0.997
	11.774V	5.209V	3.295V	4.910V	645.880				47.65°C	115.01V

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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	1.157A	0.488A	0.467A	0.199A	19.140	65.787%	636	14.8	0.917
	12.169V	5.079V	3.389V	5.022V	29.094				115.01V
2	2.408A	0.984A	0.971A	0.399A	39.573	76.029%	651	15.0	0.955
	12.168V	5.066V	3.384V	5.014V	52.050				115.01V
3	3.593A	1.481A	1.445A	0.599A	59.084	80.375%	663	15.2	0.969
	12.168V	5.053V	3.379V	5.004V	73.510				115.01V
4	4.844A	1.979A	1.951A	0.801A	79.491	82.627%	685	16.0	0.977
	12.165V	5.043V	3.374V	4.994V	96.205				115.01V

RIPPLE MEASUREMENTS 115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	5.4 mV	6.0 mV	10.2 mV	8.1 mV	Pass
20% Load	7.1 mV	6.7 mV	12.3 mV	9.9 mV	Pass
30% Load	9.5 mV	7.9 mV	14.0 mV	11.5 mV	Pass
40% Load	12.2 mV	9.0 mV	15.9 mV	12.9 mV	Pass
50% Load	16.2 mV	10.4 mV	18.4 mV	13.3 mV	Pass
60% Load	17.9 mV	12.2 mV	20.8 mV	14.4 mV	Pass
70% Load	20.9 mV	13.9 mV	23.4 mV	14.6 mV	Pass
80% Load	24.5 mV	14.8 mV	27.2 mV	13.4 mV	Pass
90% Load	27.0 mV	16.6 mV	29.3 mV	16.1 mV	Pass
100% Load	41.3 mV	26.0 mV	32.4 mV	21.4 mV	Pass
110% Load	47.6 mV	28.5 mV	34.8 mV	23.2 mV	Pass
Crossload 1	17.1 mV	37.1 mV	16.7 mV	11.5 mV	Pass
Crossload 2	43.7 mV	27.2 mV	28.0 mV	12.3 mV	Pass

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Corsair VS550

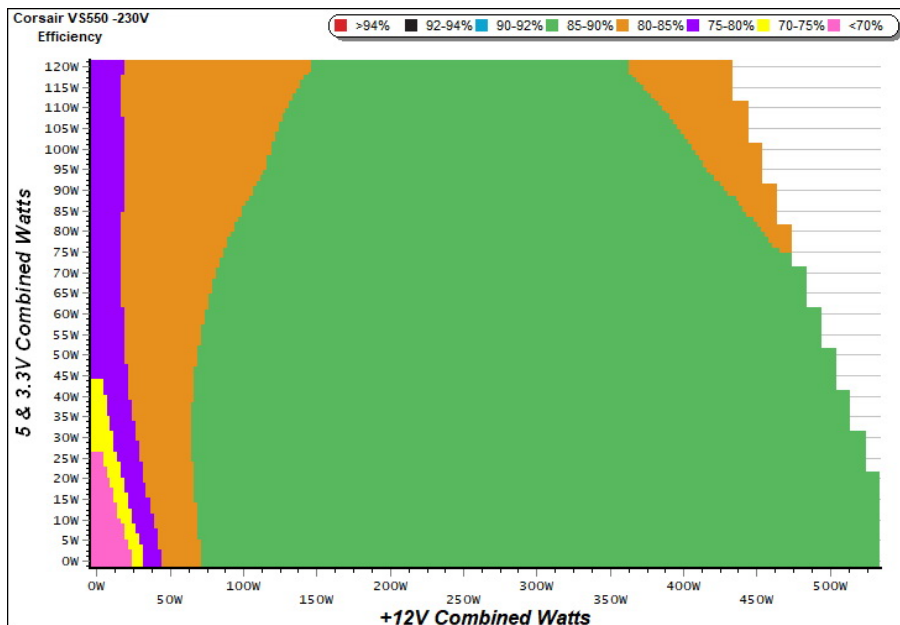
230V

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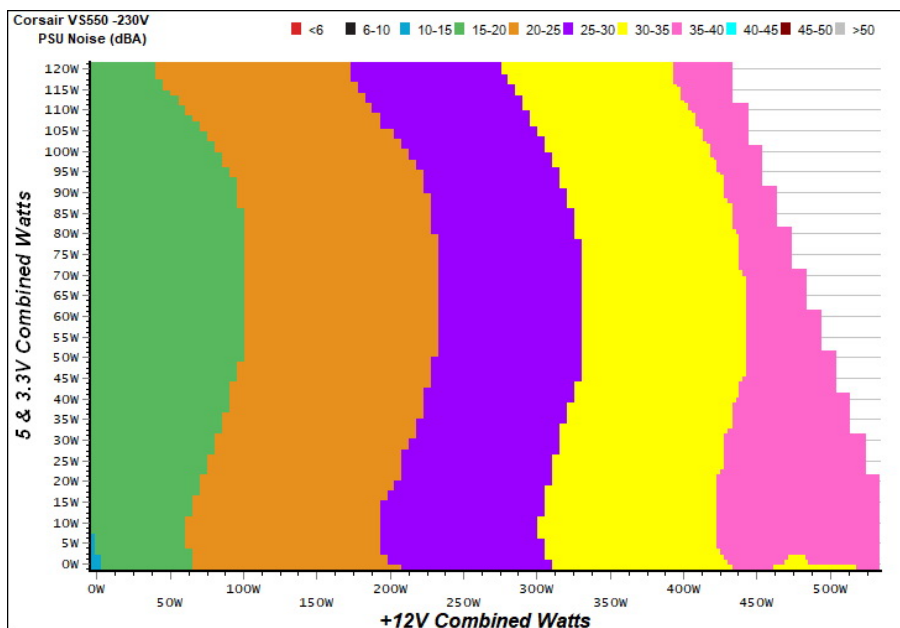
EFFICIENCY GRAPH 230V



INFO

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NOISE GRAPH 230V



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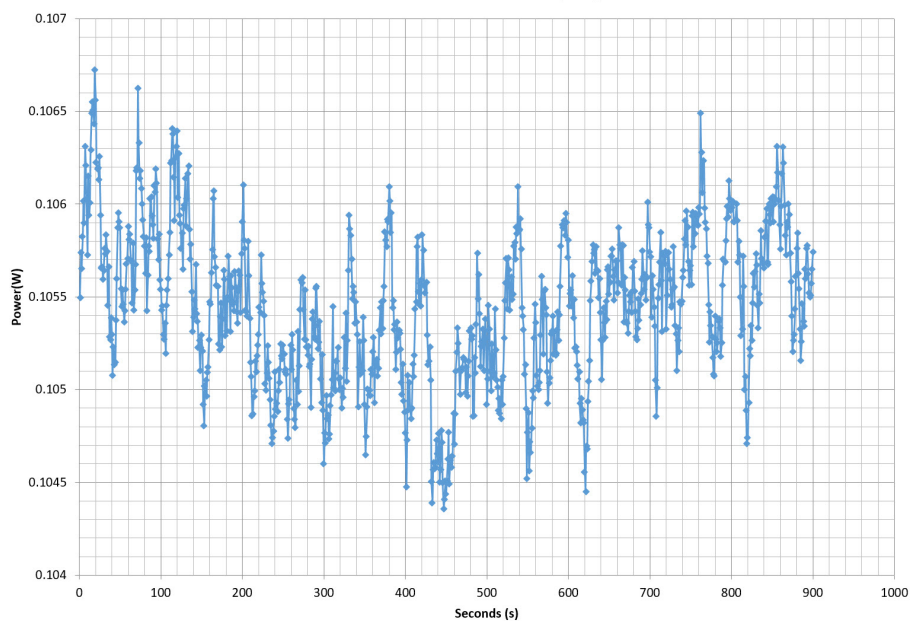
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10-110% LOAD TESTS 230V

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
1	2.689A	1.987A	1.953A	1.001A	54.355	79.941%	623	14.5	34.36°C	0.843
	12.184V	5.030V	3.378V	4.995V	67.994				37.24°C	230.19V
2	6.445A	2.988A	2.941A	1.206A	109.298	85.580%	693	16.5	35.11°C	0.921
	12.165V	5.019V	3.365V	4.976V	127.715				38.21°C	230.19V
3	10.618A	3.489A	3.427A	1.411A	164.808	87.386%	766	18.3	35.60°C	0.948
	12.132V	5.016V	3.353V	4.960V	188.597				39.30°C	230.02V
4	14.742A	3.991A	3.951A	1.618A	219.629	87.971%	910	22.6	36.35°C	0.962
	12.103V	5.011V	3.342V	4.946V	249.662				40.68°C	230.02V
5	18.532A	5.001A	4.955A	1.827A	274.522	87.775%	1035	25.8	36.66°C	0.970
	12.089V	4.996V	3.330V	4.928V	312.757				41.74°C	230.18V
6	22.339A	6.023A	5.968A	2.038A	329.438	87.420%	1182	29.6	37.20°C	0.976
	12.070V	4.982V	3.317V	4.909V	376.843				42.82°C	230.19V
7	26.180A	7.047A	6.988A	2.249A	384.711	86.915%	1272	31.8	37.45°C	0.979
	12.056V	4.966V	3.304V	4.892V	442.631				43.44°C	230.19V
8	30.065A	8.072A	8.024A	2.465A	440.050	86.254%	1520	36.2	37.94°C	0.982
	12.029V	4.956V	3.289V	4.869V	510.179				44.71°C	230.02V
9	34.328A	8.579A	8.543A	2.472A	494.581	85.581%	1622	37.6	38.10°C	0.985
	12.004V	4.955V	3.277V	4.856V	577.913				45.39°C	230.19V
10	38.383A	9.086A	9.091A	3.102A	549.477	84.876%	1750	39.9	39.70°C	0.988
	11.979V	4.952V	3.266V	4.836V	647.387				47.70°C	230.16V
11	43.153A	9.076A	9.123A	3.113A	604.760	84.054%	1915	42.6	40.55°C	0.989
	11.936V	4.958V	3.254V	4.819V	719.491				49.51°C	230.16V
CL1	0.123A	14.001A	13.997A	0.000A	111.677	78.381%	1216	30.1	36.93°C	0.930
	12.550V	4.534V	3.333V	4.955V	142.480				41.83°C	230.17V
CL2	43.984A	0.999A	0.998A	1.000A	531.225	85.457%	1651	38.1	39.45°C	0.987
	11.773V	5.208V	3.295V	4.910V	621.631				47.60°C	230.17V

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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	1.172A	0.489A	0.470A	0.199A	19.336	67.741%	602	13.4	0.639
	12.168V	5.078V	3.388V	5.021V	28.544				230.17V
2	2.425A	0.986A	0.975A	0.399A	39.795	77.755%	624	14.5	0.791
	12.166V	5.064V	3.383V	5.013V	51.180				230.17V
3	3.610A	1.483A	1.448A	0.600A	59.312	81.745%	630	14.7	0.852
	12.168V	5.052V	3.378V	5.004V	72.557				230.18V
4	4.861A	1.982A	1.955A	0.801A	79.712	84.039%	665	15.2	0.890
	12.163V	5.042V	3.373V	4.993V	94.851				230.19V

RIPPLE MEASUREMENTS 230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	6.3 mV	6.0 mV	10.4 mV	7.8 mV	Pass
20% Load	8.4 mV	7.1 mV	12.0 mV	8.4 mV	Pass
30% Load	11.7 mV	8.3 mV	13.6 mV	10.2 mV	Pass
40% Load	14.8 mV	9.0 mV	15.9 mV	12.6 mV	Pass
50% Load	17.8 mV	10.7 mV	18.5 mV	12.5 mV	Pass
60% Load	20.5 mV	12.4 mV	20.8 mV	12.9 mV	Pass
70% Load	25.9 mV	13.2 mV	23.5 mV	13.2 mV	Pass
80% Load	28.1 mV	15.0 mV	26.9 mV	14.3 mV	Pass
90% Load	33.7 mV	16.7 mV	29.4 mV	14.3 mV	Pass
100% Load	49.4 mV	26.5 mV	31.9 mV	18.4 mV	Pass
110% Load	55.0 mV	29.1 mV	33.9 mV	23.9 mV	Pass
Crossload 1	18.3 mV	38.7 mV	16.7 mV	11.1 mV	Pass
Crossload 2	45.9 mV	27.2 mV	27.8 mV	11.0 mV	Pass

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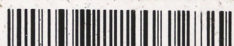
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Anex

Corsair VS550



Top side

MODEL / MODELO / 型号 / 모델 / 型號: RPS0101 POWER SUPPLY / FUENTE DE ALIMENTACIÓN / FONTE DE ALIMENTAÇÃO / 전원 공급 장치						
PART NUMBER : CP-9020171 / 75-003436						
交流電源 輸入	AC INPUT ENTRADA DE CA / ENTRADA CA / AC 입력	100V - 240V • 10A - 5A • 47Hz - 63Hz				
直流電源 輸出	DC OUTPUT SALIDA DE CC / SAIDA CC / DC 출력	+5V	+3.3V	+12V	-12V	+5Vsb
最大電流	MAX LOAD 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				
<div><div><div></div><div></div><div></div><div></div><div></div><div></div><div></div></div><div><div>CCC</div><div>UL</div><div>FCC</div><div>CE</div><div>EAC</div><div>10</div><div>RoHS</div></div></div> <div><div></div><div>S/N: 18389853000052597430</div></div>						

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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