Anex

EVGA 550 B3

Lab ID#: 147
Receipt Date: Jul 14, 2018
Test Date: Jul 25, 2018

Report:
Report Date: Jul 27, 2018

DUT INFORMATION

Brand	EVGA
Manufacturer (OEM)	Super Flower
Series	B3
Model Number	
Serial Number	1703460505800699
DUT Notes	

DUT SPECIFICATIONS

Rated Voltage (Vrms)	100-240
Rated Current (Arms)	10
Rated Frequency (Hz)	50-60
Rated Power (W)	550
Type	ATX12V
Cooling	130mm Sleeve Bearing Fan (S1282412H)
Semi-Passive Operation	✓ (selectable)
Cable Design	Fully Modular

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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RESULTS

Temperature Range (°C /°F)	30-32 / 86-89.6
ErP Lot 3/6 Ready	ErP Lot 3/6 2010: ✓ ErP Lot 3/6 2013: Partially ErP Lot 3/6 2014, CEC: Partially
(EU) No 617/2013 Compliance	✓

115V

Average Efficiency	86.127%
Efficiency With 10W (≤500W) or 2% (>500W)	0.000
Average Efficiency 5VSB	76.343%
Standby Power Consumption (W)	0.1292250
Average PF	0.985
Avg Noise Output	29.74 dB(A)
Efficiency Rating (ETA)	SILVER
Noise Rating (LAMBDA)	A-

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	20	20	45.8	3	0.5
	Watts	110		549.6	15	6
Total Max. Power (W)		550				

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

Hold-Up Time (ms)	15.98
AC Loss to PWR_OK Hold Up Time (ms)	14.18
PWR_OK Inactive to DC Loss Delay (ms)	1.80

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CABLES AND CONNECTORS

Modular Cables

Description	Cable Count	Connector Count (Total)	Gauge
ATX connector 20+4 pin (600mm)	1	1	18-22AWG
4+4 pin EPS12V (600mm)	1	1	18-22AWG
6+2 pin PCIe (550mm+150mm)	1	2	18-22AWG
SATA (500mm+100mm+100mm)	2	6	18-20AWG
4 pin Molex (500mm+100mm+100mm)	1	3	18AWG
FDD Adapter (+105mm)	1	1	24AWG

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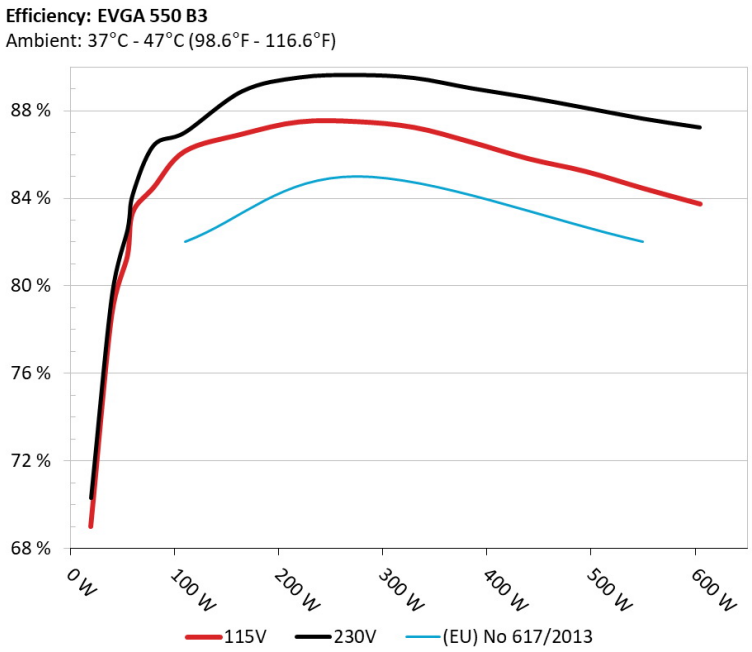
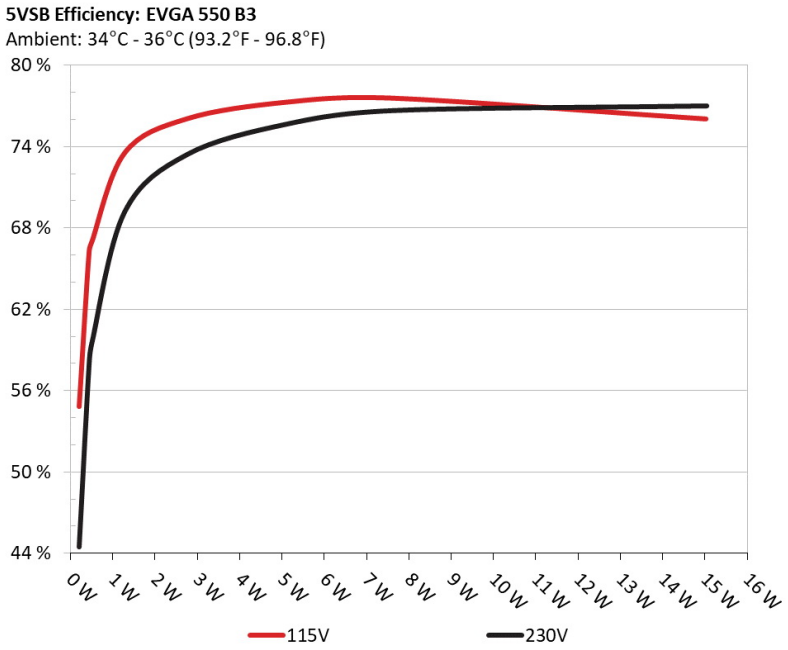
EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE



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



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	0.041A	0.210	54.830%	0.028
	5.126V	0.383		115.22V
2	0.086A	0.443	66.218%	0.049
	5.125V	0.669		115.22V
3	0.541A	2.764	76.080%	0.218
	5.108V	3.633		115.21V
4	1.001A	5.096	77.294%	0.310
	5.090V	6.593		115.21V
5	1.500A	7.609	77.595%	0.364
	5.071V	9.806		115.21V
6	3.000A	15.020	76.062%	0.436
	5.006V	19.747		115.21V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.041A	0.210	44.492%	0.011
	5.126V	0.472		230.50V
2	0.086A	0.443	57.908%	0.017
	5.125V	0.765		230.50V
3	0.541A	2.764	73.433%	0.080
	5.108V	3.764		230.50V
4	1.001A	5.094	75.657%	0.136
	5.089V	6.733		230.50V
5	1.501A	7.609	76.665%	0.185
	5.069V	9.925		230.50V
6	3.001A	15.033	77.009%	0.284
	5.010V	19.521		230.50V

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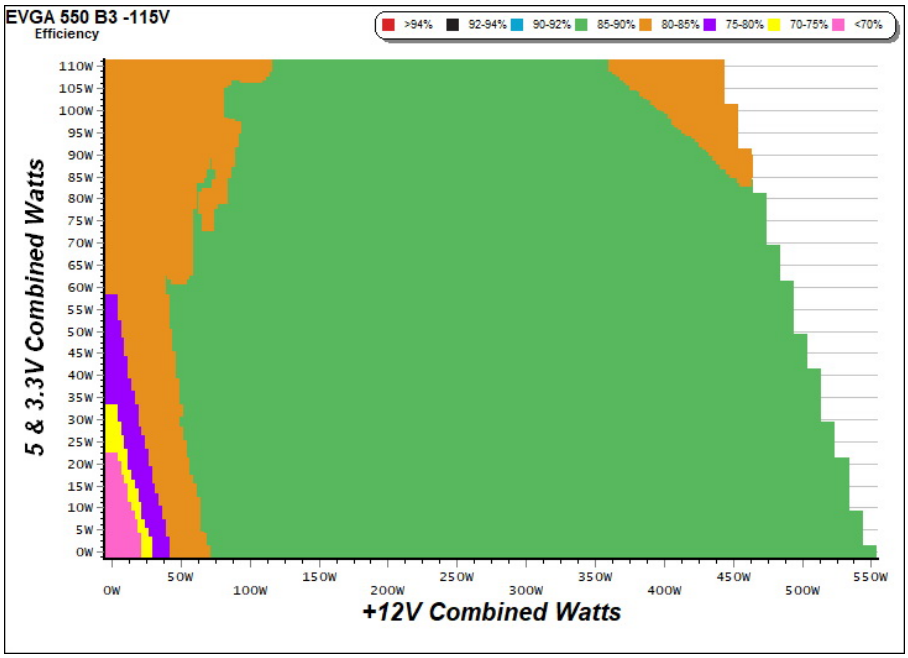
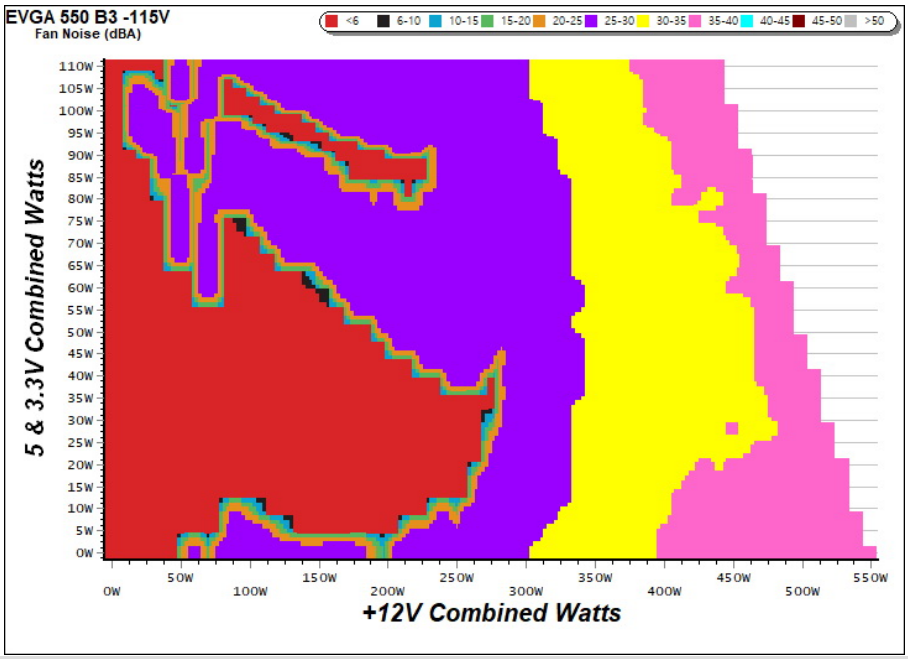
EFFICIENCY GRAPH 115V



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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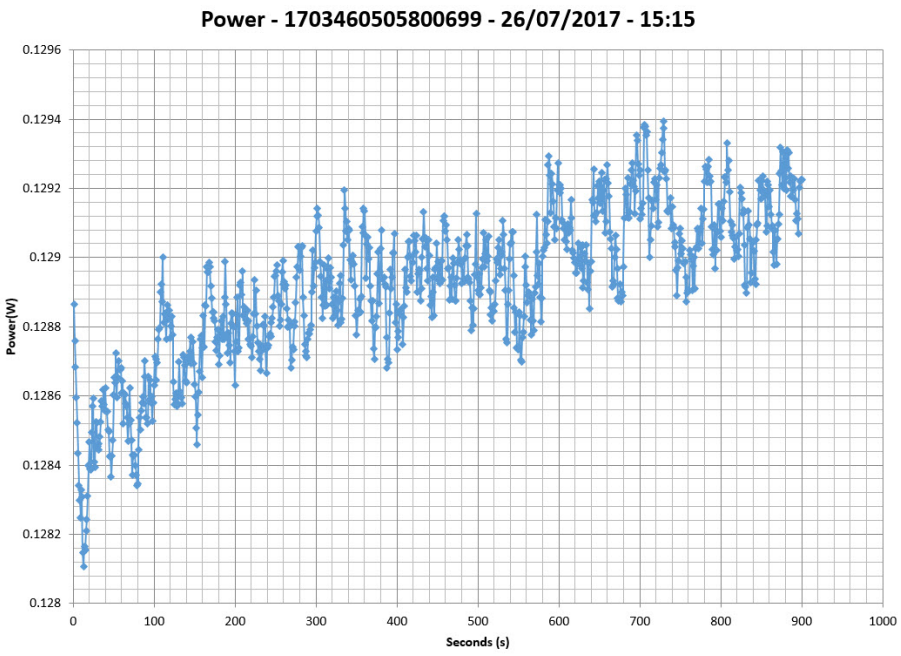
VAMPIRE POWER -115V



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	2.723A	1.976A	1.984A	0.983A	54.766	81.349%	1218	27.3	38.40°C	0.930
	12.192V	5.054V	3.323V	5.074V	67.322				44.04°C	115.23V
2	6.473A	2.969A	2.977A	1.185A	109.762	86.143%	1180	26.7	38.56°C	0.975
	12.188V	5.049V	3.320V	5.059V	127.418				44.28°C	115.23V
3	10.571A	3.468A	3.494A	1.385A	164.846	86.933%	1218	27.3	39.08°C	0.984
	12.182V	5.045V	3.316V	5.045V	189.625				44.95°C	115.23V
4	14.664A	3.967A	3.980A	1.589A	219.727	87.490%	1240	27.8	40.26°C	0.989
	12.176V	5.040V	3.314V	5.031V	251.146				46.17°C	115.23V
5	18.425A	4.970A	4.983A	1.791A	274.745	87.504%	1276	29.0	40.48°C	0.992
	12.171V	5.035V	3.309V	5.015V	313.980				46.51°C	115.24V
6	22.197A	5.966A	5.989A	2.000A	329.735	87.239%	1338	30.7	41.23°C	0.993
	12.161V	5.030V	3.305V	4.997V	377.967				47.41°C	115.22V
7	25.976A	6.971A	7.000A	2.205A	384.707	86.566%	1462	34.3	42.75°C	0.994
	12.150V	5.024V	3.299V	4.981V	444.409				49.55°C	115.22V
8	29.755A	7.972A	8.009A	2.415A	439.617	85.809%	1584	35.9	43.46°C	0.995
	12.140V	5.019V	3.295V	4.965V	512.318				51.06°C	115.22V
9	33.975A	8.479A	8.531A	2.419A	494.712	85.224%	1667	38.1	44.18°C	0.995
	12.130V	5.015V	3.292V	4.956V	580.481				52.08°C	115.21V
10	37.952A	8.990A	9.030A	3.043A	549.583	84.457%	1796	41.4	45.29°C	0.995
	12.117V	5.010V	3.288V	4.925V	650.723				53.89°C	115.21V
11	42.527A	8.995A	9.040A	3.049A	604.547	83.738%	1910	42.1	46.64°C	0.995
	12.106V	5.007V	3.284V	4.916V	721.949				56.12°C	115.21V
CL1	0.100A	13.020A	13.004A	0.000A	109.713	80.343%	1425	32.3	43.82°C	0.975
	12.172V	5.031V	3.306V	5.088V	136.555				50.50°C	115.23V
CL2	45.779A	1.005A	1.001A	1.001A	568.165	85.142%	1817	42.0	45.88°C	0.995
	12.119V	5.021V	3.296V	5.019V	667.314				54.60°C	115.21V

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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	1.192A	0.492A	0.480A	0.195A	19.639	69.003%	0	<6.0	0.760
	12.210V	5.059V	3.329V	5.116V	28.461				115.23V
2	2.413A	0.978A	0.990A	0.390A	39.672	78.647%	0	<6.0	0.893
	12.202V	5.057V	3.326V	5.103V	50.443				115.23V
3	3.638A	1.481A	1.501A	0.585A	59.820	83.347%	0	<6.0	0.936
	12.195V	5.055V	3.324V	5.093V	71.772				115.23V
4	4.853A	1.976A	1.982A	0.785A	79.733	84.482%	0	<6.0	0.959
	12.193V	5.054V	3.323V	5.080V	94.379				115.23V

RIPPLE MEASUREMENTS 115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	6.0 mV	5.8 mV	7.4 mV	4.7 mV	Pass
20% Load	8.2 mV	5.4 mV	8.2 mV	5.5 mV	Pass
30% Load	7.9 mV	6.4 mV	9.1 mV	5.8 mV	Pass
40% Load	7.8 mV	5.9 mV	10.6 mV	6.4 mV	Pass
50% Load	8.3 mV	7.0 mV	12.6 mV	6.9 mV	Pass
60% Load	8.9 mV	7.4 mV	12.1 mV	6.9 mV	Pass
70% Load	9.6 mV	7.8 mV	14.1 mV	8.0 mV	Pass
80% Load	9.9 mV	9.1 mV	14.3 mV	9.5 mV	Pass
90% Load	10.0 mV	8.9 mV	16.4 mV	9.9 mV	Pass
100% Load	12.3 mV	10.5 mV	17.4 mV	10.7 mV	Pass
110% Load	12.8 mV	10.9 mV	17.3 mV	11.1 mV	Pass
Crossload 1	12.8 mV	7.9 mV	10.2 mV	10.1 mV	Pass
Crossload 2	11.7 mV	10.3 mV	16.2 mV	11.1 mV	Pass

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Top side

Power specifications label

CERTIFICATIONS 115V

CYBENETICS SILVER

CYBENETICS A-

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