

Anex

EVGA 700B

Lab ID#: 171
Receipt Date: Nov 3, 2018
Test Date: Nov 7, 2018

Report:

Report Date: Nov 9, 2018

DUT INFORMATION

Brand	EVGA
Manufacturer (OEM)	HEC
Series	B
Model Number	
Serial Number	1603530715800787
DUT Notes	

DUT SPECIFICATIONS

Rated Voltage (Vrms)	100-240
Rated Current (Arms)	10-6
Rated Frequency (Hz)	50-60
Rated Power (W)	700
Type	ATX12V
Cooling	120mm Sleeve Bearing Fan (EFS-12E12H)
Semi-Passive Operation	X
Cable Design	Fixed cables

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	24	20	56	3	0.3
	Watts	150		672	15	3.6
Total Max. Power (W)		700				

CABLES AND CONNECTORS

Captive Cables

Description	Cable Count	Connector Count (Total)	Gauge
ATX connector 20+4 pin (540mm)	1	1	18-20AWG
4+4 pin EPS12V (600mm)	1	1	18AWG
6+2 pin PCIe (550mm+120mm)	1	2	18AWG
SATA (450mm+120mm+120mm)	3	9	18AWG
4 pin Molex (450mm+120mm+120mm+120mm)+FDD (+120mm)	1	4 / 1	18-20AWG

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PAGE 1/10

Anex

EVGA 700B

RESULTS

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

115V

Average Efficiency	84.561%
Efficiency With 10W (≤500W) or 2% (>500W)	0.000
Average Efficiency 5VSB	79.616%
Standby Power Consumption (W)	0.0509768
Average PF	0.986
Avg Noise Output	34.88 dB(A)
Efficiency Rating (ETA)	BRONZE
Noise Rating (LAMBDA)	S++

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	

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

Hold-Up Time (ms)	17.04
AC Loss to PWR_OK Hold Up Time (ms)	14.48
PWR_OK Inactive to DC Loss Delay (ms)	2.56

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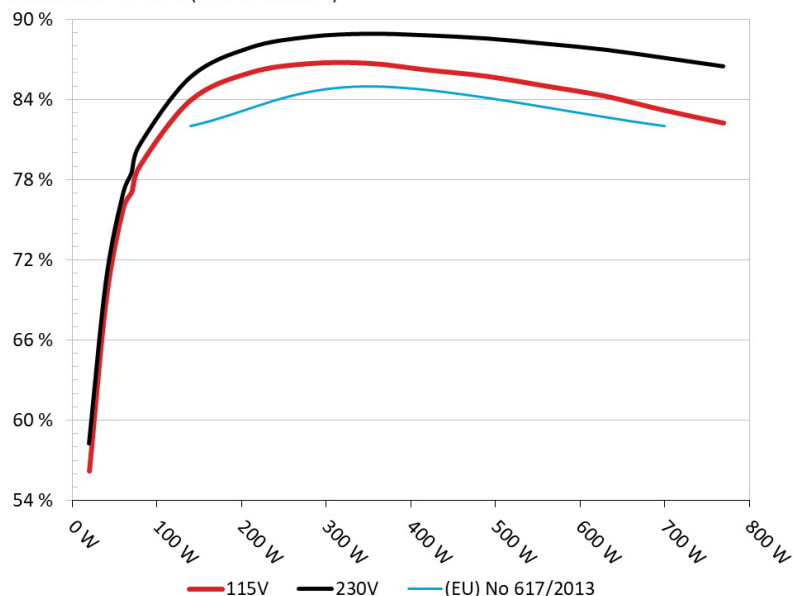
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PAGE 2/10

EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: EVGA 700B

Ambient: 37°C - 46°C (98.6°F - 114.8°F)



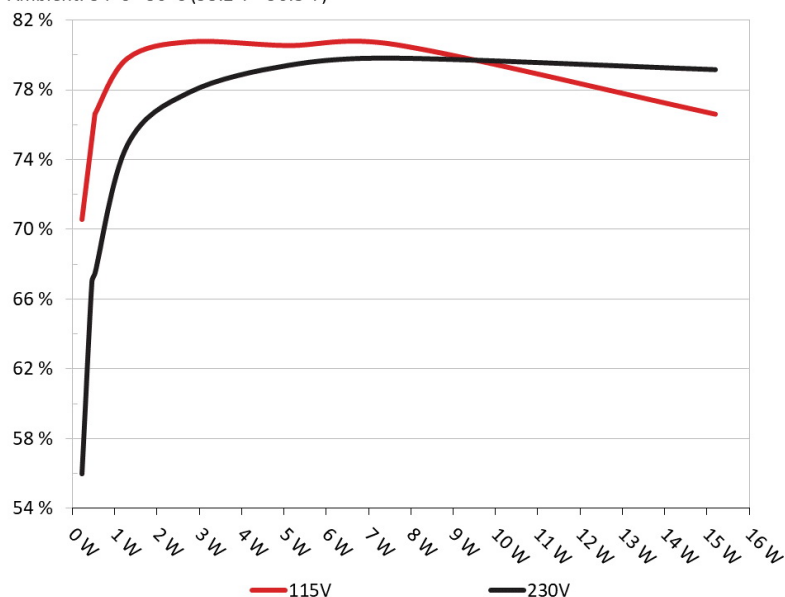
INFO

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: EVGA 700B

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	0.042A	0.216	70.588%	0.044
	5.116V	0.306		115.11V
2	0.088A	0.449	76.621%	0.082
	5.115V	0.586		115.11V
3	0.542A	2.771	80.740%	0.291
	5.108V	3.432		115.11V
4	1.003A	5.113	80.520%	0.354
	5.099V	6.350		115.11V
5	1.502A	7.645	80.575%	0.387
	5.090V	9.488		115.12V
6	3.002A	15.202	76.604%	0.438
	5.064V	19.845		115.11V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.042A	0.215	55.990%	0.017
	5.116V	0.384		230.31V
2	0.088A	0.449	67.015%	0.029
	5.115V	0.670		230.32V
3	0.543A	2.771	77.903%	0.138
	5.107V	3.557		230.31V
4	1.003A	5.111	79.437%	0.211
	5.097V	6.434		230.32V
5	1.503A	7.645	79.843%	0.263
	5.088V	9.575		230.32V
6	3.002A	15.198	79.185%	0.337
	5.063V	19.193		230.32V

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Anex

EVGA 700B

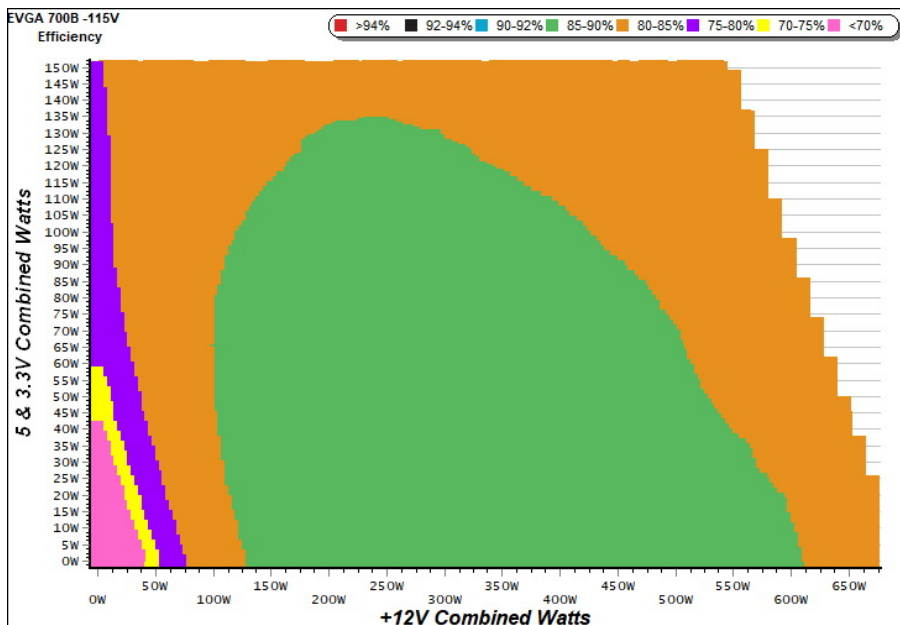
115V

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PAGE 5/10

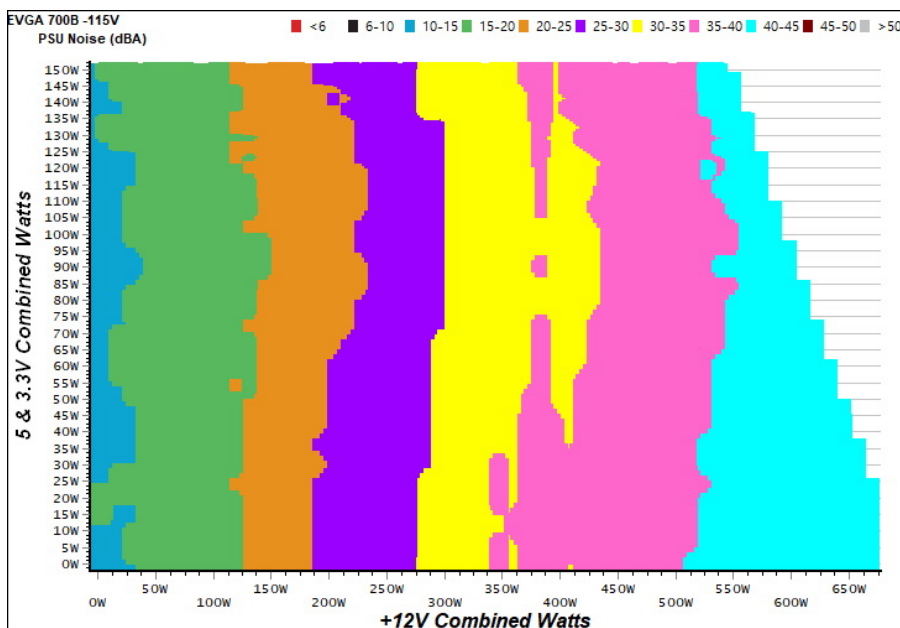
EFFICIENCY GRAPH 115V



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

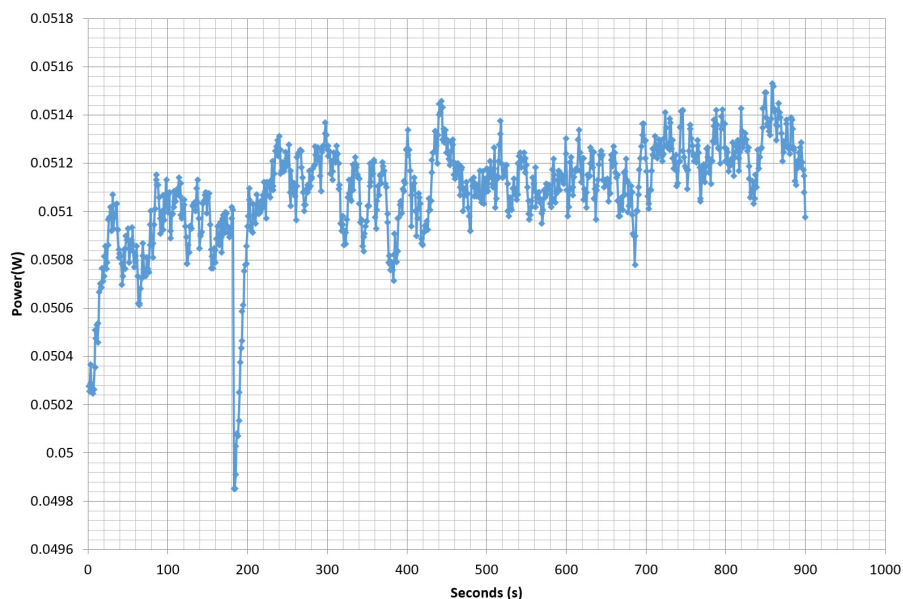
The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

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VAMPIRE POWER -115V

Power - 1603530715800787 - 02/09/2017 - 10:23



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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PAGE 7/10

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	3.975A	1.975A	1.964A	0.981A	69.792	77.071%	1605	35.5	38.14°C	0.975
	12.129V	5.060V	3.360V	5.083V	90.556				41.75°C	115.14V
2	8.998A	2.969A	2.954A	1.181A	139.771	83.946%	1705	37.4	38.30°C	0.982
	12.106V	5.043V	3.347V	5.065V	166.502				42.40°C	115.14V
3	14.384A	3.482A	3.472A	1.385A	209.903	85.988%	1805	39.1	38.83°C	0.979
	12.084V	5.029V	3.336V	5.050V	244.107				43.46°C	115.14V
4	19.787A	3.986A	3.968A	1.586A	279.773	86.665%	1915	40.9	39.69°C	0.982
	12.059V	5.015V	3.324V	5.033V	322.821				44.88°C	115.13V
5	24.867A	5.000A	4.976A	1.791A	349.743	86.687%	1965	41.2	40.02°C	0.986
	12.035V	4.999V	3.313V	5.019V	403.455				46.19°C	115.13V
6	29.966A	6.027A	5.997A	1.997A	419.686	86.182%	1975	41.2	40.47°C	0.989
	12.010V	4.980V	3.300V	5.002V	486.978				47.98°C	115.13V
7	35.090A	7.050A	7.022A	2.206A	489.630	85.714%	1975	41.2	41.88°C	0.991
	11.985V	4.964V	3.288V	4.983V	571.237				50.59°C	115.13V
8	40.243A	8.093A	8.060A	2.416A	559.597	84.981%	1990	41.4	43.28°C	0.992
	11.957V	4.946V	3.274V	4.965V	658.493				53.59°C	115.13V
9	45.854A	8.627A	8.614A	2.420A	629.656	84.230%	1990	41.4	44.19°C	0.994
	11.930V	4.931V	3.262V	4.950V	747.547				55.64°C	115.13V
10	51.245A	9.161A	9.155A	3.045A	699.500	83.167%	1975	41.2	44.85°C	0.994
	11.900V	4.912V	3.244V	4.922V	841.076				57.13°C	115.15V
11	57.251A	9.189A	9.192A	3.055A	769.458	82.218%	1975	41.2	45.79°C	0.995
	11.873V	4.900V	3.231V	4.907V	935.873				59.16°C	115.14V
CL1	0.095A	18.029A	18.001A	0.005A	150.179	78.980%	1975	41.2	42.12°C	0.982
	12.071V	4.953V	3.317V	5.042V	190.148				50.70°C	115.18V
CL2	55.950A	1.003A	1.003A	1.002A	680.463	83.987%	1990	41.4	44.98°C	0.994
	11.925V	4.969V	3.268V	4.988V	810.202				56.29°C	115.14V

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Anex

EVGA 700B

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	1.110A	0.492A	0.473A	0.196A	19.678	56.194%	1480	33.7	0.934
	12.150V	5.076V	3.370V	5.106V	35.018				115.15V
2	2.429A	0.980A	0.980A	0.391A	39.746	69.108%	1440	32.2	0.966
	12.140V	5.069V	3.365V	5.099V	57.513				115.15V
3	3.663A	1.478A	1.484A	0.586A	59.894	75.875%	1520	34.4	0.973
	12.132V	5.063V	3.361V	5.092V	78.938				115.14V
4	4.885A	1.974A	1.964A	0.786A	79.806	79.061%	1585	35.4	0.975
	12.125V	5.058V	3.358V	5.085V	100.942				115.14V

RIPPLE MEASUREMENTS 115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	8.1 mV	13.0 mV	31.4 mV	10.1 mV	Pass
20% Load	10.5 mV	17.3 mV	30.7 mV	12.3 mV	Pass
30% Load	13.2 mV	19.0 mV	30.0 mV	13.3 mV	Pass
40% Load	15.3 mV	21.4 mV	38.0 mV	16.3 mV	Pass
50% Load	18.9 mV	23.5 mV	31.3 mV	15.0 mV	Pass
60% Load	22.0 mV	27.4 mV	34.9 mV	17.5 mV	Pass
70% Load	24.9 mV	30.2 mV	37.1 mV	18.0 mV	Pass
80% Load	28.3 mV	33.7 mV	37.1 mV	20.1 mV	Pass
90% Load	32.3 mV	35.0 mV	31.1 mV	22.4 mV	Pass
100% Load	39.0 mV	39.1 mV	32.0 mV	27.1 mV	Pass
110% Load	45.8 mV	43.1 mV	35.2 mV	27.4 mV	Pass
Crossload 1	17.4 mV	26.0 mV	41.5 mV	17.0 mV	Pass
Crossload 2	37.0 mV	36.8 mV	34.5 mV	20.3 mV	Pass

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PAGE 9/10

Anex

EVGA 700B



Top side



+40°C ambient @ full load					
AC Input	AC 100-240V~, 50-60 Hz, 10/6A				
DC Output	+5V	+3.3V	+12V	-12V	+5Vsb
Max Output, A	20A	24A	56A	0.3A	3A
Combined, W	150W		672W	3.6W	15W
Output Power, P _{cont}	700W @ +40°C				

Power specifications label

CERTIFICATIONS 115V



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PAGE 10/10