EFFICIENCY AND NOISE REPORT IN ACCORDANCE WITH
CYBENETICS ETA AND CYBENETICS LAMBDA PROCEDURE

SeaSonic Focus Plus Platinum 850W

Lab ID#: 226
Receipt Date: Nov 19, 2018
Test Date: Nov 25, 2018

Report:
Report Date: Nov 28, 2018

DUT INFORMATION

Brand	SeaSonic
Manufacturer (OEM)	Seasonic
Series	FOCUS Plus Platinum
Model Number	SSR-850PX
Serial Number	R1708AA174090120
DUT Notes	

DUT SPECIFICATIONS

Rated Voltage (Vrms)	100-240
Rated Current (Arms)	12-6
Rated Frequency (Hz)	50-60
Rated Power (W)	850
Type	ATX12V
Cooling	120mm Fluid Dynamic Bearing Fan (HA1225M12F-Z)
Semi-Passive Operation	✓ (selectable)
Cable Design	Fully Modular

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	20	20	70	3	0.3
	Watts	100		840	15	3.6
Total Max. Power (W)		850				

CABLES AND CONNECTORS

Modular Cables

Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 20+4 pin (610mm)	1	1	18-22AWG	Yes
4+4 pin EPS12V (660mm)	2	2	18AWG	Yes
6+2 pin PCIe (680mm+80mm)	3	6	18AWG	Yes
SATA (460mm+115mm+115mm+115mm)	2	8	18AWG	No
SATA (460mm+115mm)	1	2	18AWG	No
4 pin Molex (460mm+120mm+120mm)	1	3	18AWG	No
4 pin Molex (360mm+120mm)	1	2	18AWG	No
FDD Adapter (+105mm)	1	1	22AWG	No
AC Power Cord (1360mm) - C13 coupler	1	1	18AWG	No

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RESULTS

Temperature Range (°C /°F)	30-32 / 86-89.6 (+-2°C / +- 3.6°F)
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓

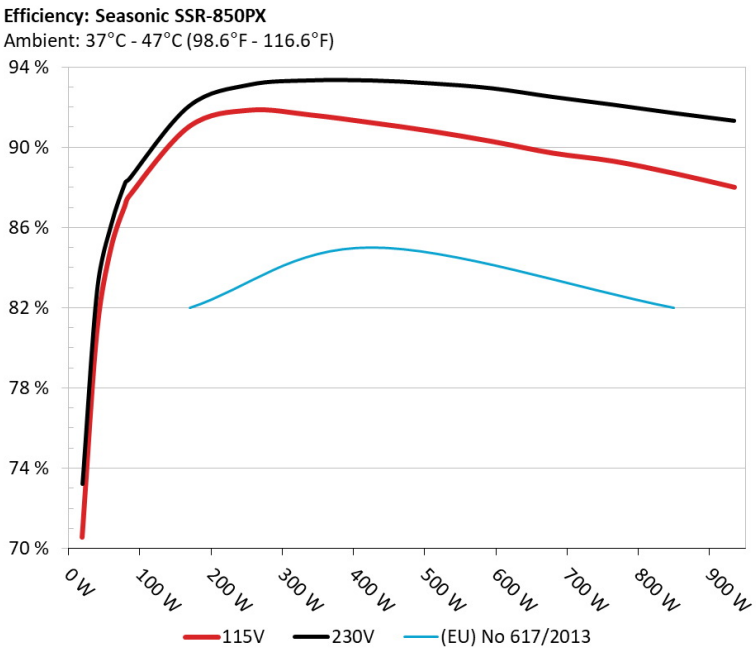
115V

Average Efficiency	90.404%
Efficiency With 10W (≤500W) or 2% (>500W)	0.000
Average Efficiency 5VSB	77.288%
Standby Power Consumption (W)	0.0491633
Average PF	0.984
Avg Noise Output	27.27 dB(A)
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	

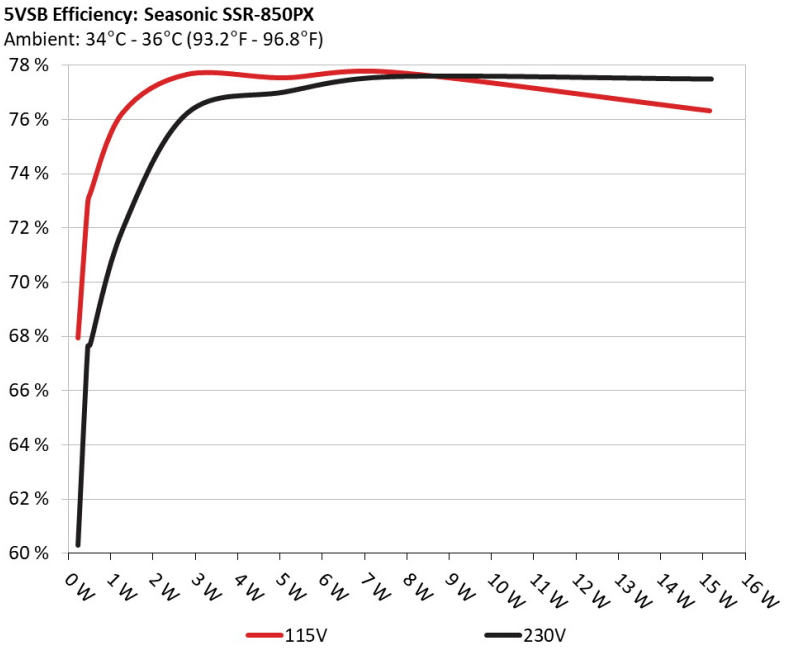
EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE



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	0.045A	0.231	67.941%	0.032
	5.130V	0.340		115.26V
2	0.090A	0.461	72.943%	0.059
	5.129V	0.632		115.27V
3	0.550A	2.815	77.677%	0.265
	5.118V	3.624		115.26V
4	1.000A	5.108	77.547%	0.361
	5.108V	6.587		115.25V
5	1.500A	7.646	77.759%	0.412
	5.098V	9.833		115.25V
6	3.000A	15.157	76.331%	0.478
	5.053V	19.857		115.24V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.231	60.313%	0.013
	5.131V	0.383		230.72V
2	0.090A	0.462	67.643%	0.022
	5.129V	0.683		230.72V
3	0.550A	2.815	76.225%	0.113
	5.118V	3.693		230.71V
4	1.000A	5.108	76.997%	0.186
	5.108V	6.634		230.72V
5	1.500A	7.646	77.561%	0.246
	5.097V	9.858		230.71V
6	2.999A	15.189	77.475%	0.346
	5.064V	19.605		230.70V

115V

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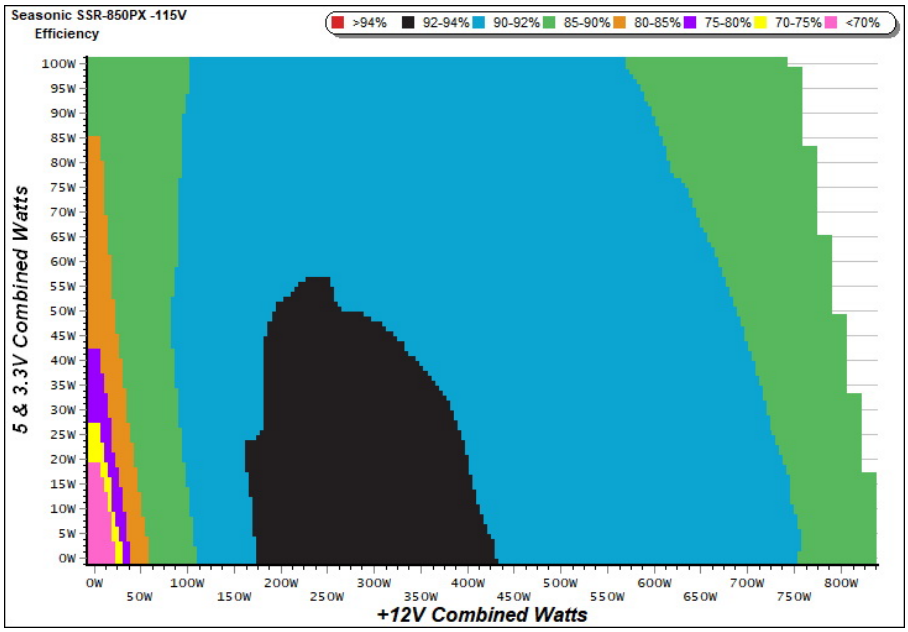
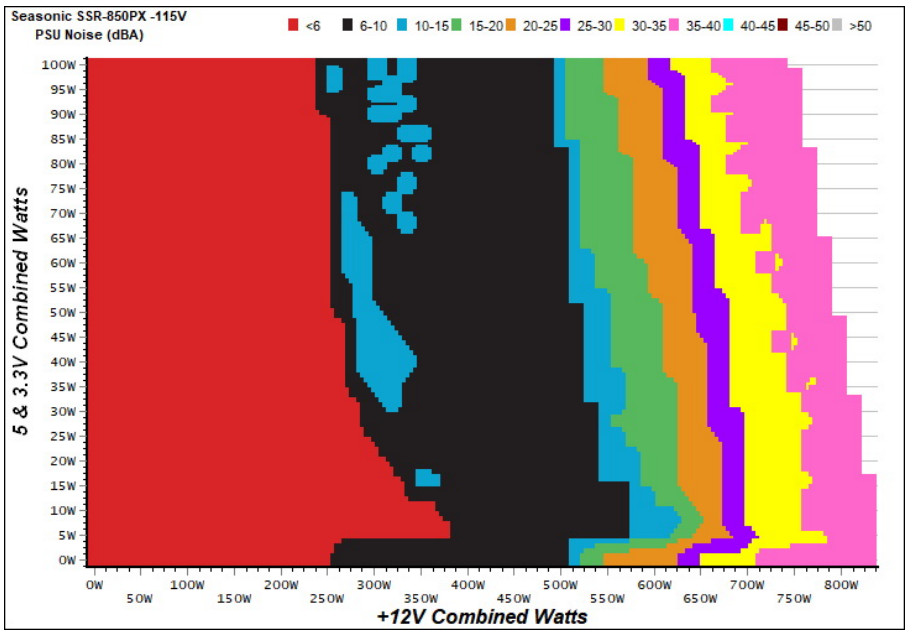
EFFICIENCY GRAPH 115V



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

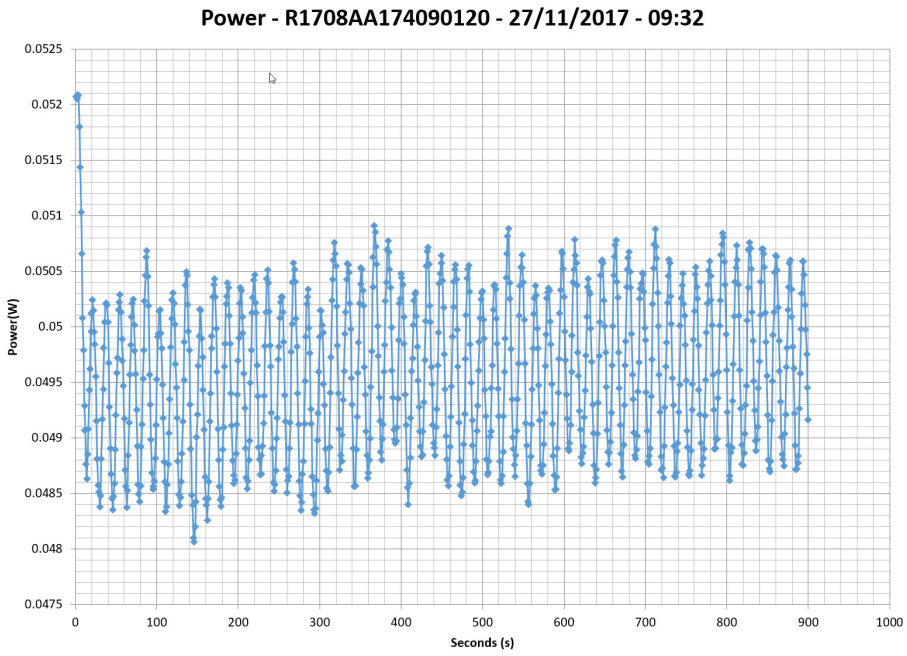
NOISE GRAPH 115V



INFO

The PSU's noise in its entire operational range and under 30-32 °C (+-2 °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

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

COMMISSION REGULATION (EU) NO 617/2013 TESTING 115V

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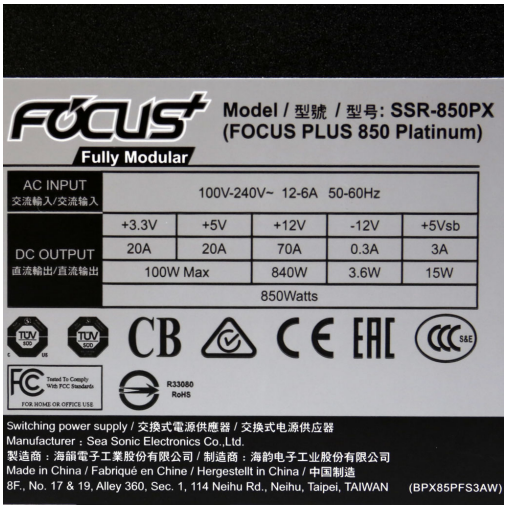
Top side



Power specifications label

CERTIFICATIONS 115V

CYBENETICS PLATINUM

CYBENETICS A-

Aris Mpitsiopoulos
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