

Anex

Seasonic SS-1050XP3

Lab ID#: 155

Receipt Date: -

Test Date: -

Report: 19PS155A

Report Date: Jul 8, 2018

DUT INFORMATION		DUT SPECIFICATIONS	
Brand	Seasonic	Rated Voltage (Vrms)	100-240
Manufacturer (OEM)	Seasonic	Rated Current (Arms)	13-6.5
Series	Snow Silent	Rated Frequency (Hz)	50-60
Model Number	SS-1050XP3	Rated Power (W)	1050
Serial Number	R1410AA1A1490005	Type	ATX12V
DUT Notes		Cooling	120mm Double Ball-Bearing Fan (9S1212H403)
		Semi-Passive Operation	✓ (selectable)
		Cable Design	Fully Modular

POWER SPECIFICATIONS						
Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	25	25	87	3	0.5
	Watts	125		1044	15	6
Total Max. Power (W)		1050				

CABLES AND CONNECTORS			
Modular Cables			
Description	Cable Count	Connector Count (Total)	Gauge
ATX connector 20+4 pin (610mm)	1	1	18-22AWG
4+4 pin EPS12V (650mm)	1	1	18AWG
8 pin EPS12V (650mm)	1	1	18AWG
6+2 pin PCIe (560mm+100mm) / 6+2 pin PCIe (600mm)	2 / 4	4 / 4	18AWG
SATA (400mm+110mm+115mm+120mm)	3	12	18AWG
SATA (310mm+115mm)	1	2	18AWG
4 pin Molex (410mm+125mm+125mm)	1	3	18AWG
4 pin Molex (310mm+125mm)	1	2	18AWG
FDD Adapter (+105mm)	1	1	22AWG

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RESULTS	
Temperature Range (°C /°F)	30-32 / 86-89.6
Average Efficiency	89.513
Efficiency With 10W ($\leq 500W$) or 2% ($> 500W$) Load -115V	0.000
Average Efficiency 5VSB	78.863
Standby Power Consumption (W) -115V	0.0958909
Standby Power Consumption (W) -230V	0.1409320
Average PF	0.990
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓
Avg Noise Output	26.13
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	A-

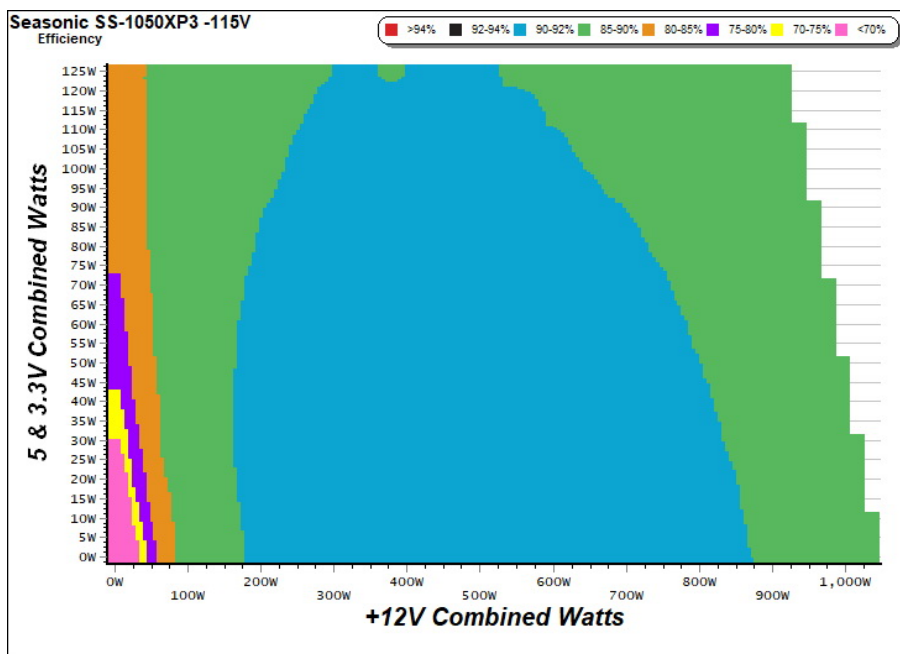
TEST EQUIPMENT		
Electronic Loads	Chroma 6314A x2 63123A x6 63102A 63101A	Chroma 63601-5 x2 Chroma 63600-2 63640-80-80 x10 63610-80-20
AC Sources	Chroma 6530, Chroma 61604	
Power Analyzers	N4L PPA1530, N4L PPA5530	
Oscilloscopes	Picoscope 4444 & 3424, Keysight DSOX3024A, Rigol DS2072A	
Voltmeter	Keithley 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	

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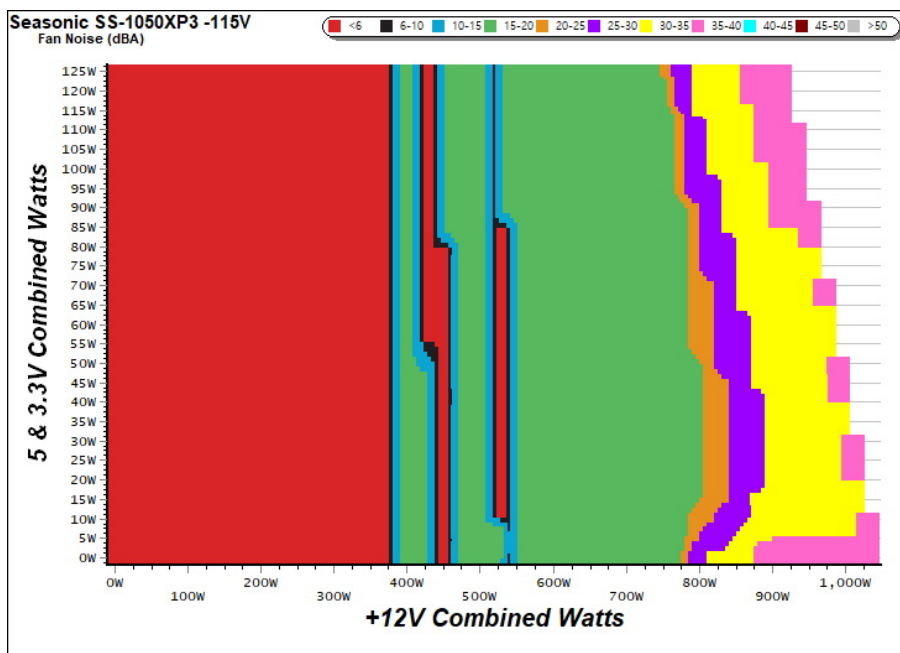
EFFICIENCY GRAPH



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



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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5VSB EFFICIENCY -115V (ERP LOT 3/6 & CEC)

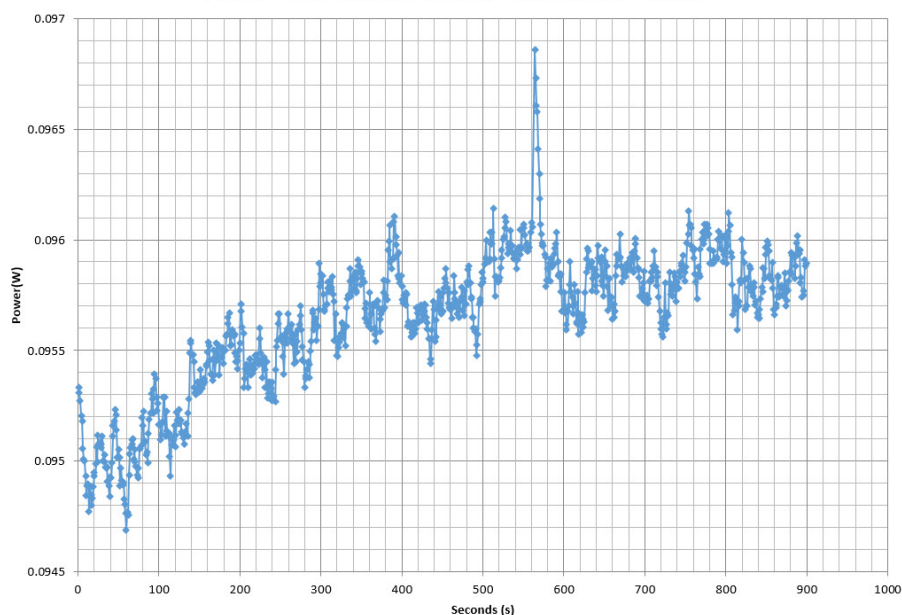
Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.042A	0.213	69.836%	0.050
	5.116V	0.305		115.14V
2	0.087A	0.446	75.084%	0.094
	5.115V	0.594		115.16V
3	0.542A	2.766	78.848%	0.336
	5.103V	3.508		115.13V
4	1.002A	5.103	80.286%	0.409
	5.093V	6.356		115.14V
5	1.502A	7.630	79.946%	0.448
	5.081V	9.544		115.14V
6	3.001A	15.142	79.552%	0.499
	5.045V	19.034		115.14V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.042A	0.213	60.000%	0.017
	5.116V	0.355		230.39V
2	0.087A	0.446	68.721%	0.030
	5.115V	0.649		230.40V
3	0.542A	2.767	75.375%	0.151
	5.103V	3.671		230.38V
4	1.002A	5.103	78.969%	0.230
	5.093V	6.462		230.39V
5	1.502A	7.630	79.720%	0.288
	5.081V	9.571		230.39V
6	3.001A	15.142	80.061%	0.373
	5.045V	18.913		230.39V

VAMPIRE POWER -115V

Power - R1501AA1C2330062 - 03/08/2017 - 13:36



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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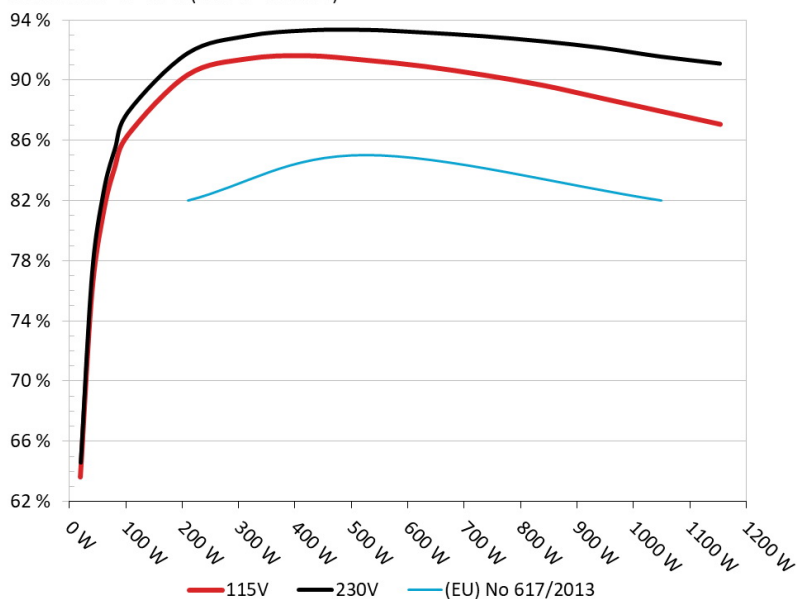
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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Seasonic SS-1050XP3

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



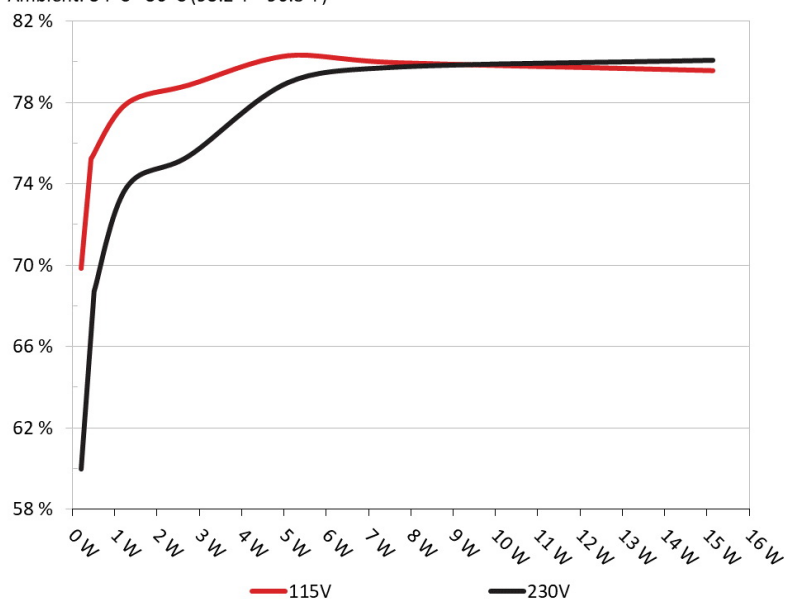
INFO

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: Seasonic SS-1050XP3

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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10-110% LOAD TESTS

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	Fan Noise (dB[A])	Temps (In/Out)	PF/AC Volts
1	6.781A	1.976A	1.964A	0.981A	104.789	86.411%	0	< 6	44.03°C	0.980
	12.269V	5.063V	3.360V	5.087V	121.268				38.66°C	115.18V
2	14.574A	2.960A	2.944A	1.181A	209.632	90.366%	0	< 6	45.02°C	0.983
	12.266V	5.062V	3.359V	5.075V	231.982				39.06°C	115.16V
3	22.729A	3.459A	3.454A	1.380A	314.827	91.437%	0	< 6	45.87°C	0.982
	12.264V	5.059V	3.356V	5.064V	344.309				39.52°C	115.15V
4	30.866A	3.957A	3.930A	1.580A	419.630	91.649%	0	< 6	47.57°C	0.987
	12.261V	5.058V	3.355V	5.052V	457.868				40.20°C	115.15V
5	38.680A	4.951A	4.916A	1.784A	524.568	91.353%	745	16.3	41.13°C	0.991
	12.256V	5.055V	3.354V	5.040V	574.220				50.36°C	115.15V
6	46.514A	5.935A	5.905A	1.985A	629.473	90.937%	745	16.3	42.05°C	0.993
	12.248V	5.055V	3.351V	5.028V	692.206				51.83°C	115.16V
7	54.343A	6.932A	6.886A	2.191A	734.407	90.363%	1020	27.5	43.41°C	0.995
	12.243V	5.052V	3.352V	5.013V	812.733				53.43°C	115.15V
8	62.174A	7.924A	7.878A	2.398A	839.283	89.679%	1610	38.5	44.30°C	0.996
	12.238V	5.049V	3.351V	5.000V	935.871				54.52°C	115.15V
9	70.439A	8.432A	8.386A	2.400A	944.304	88.813%	2220	46.1	44.89°C	0.996
	12.233V	5.047V	3.349V	4.993V	1063.254				55.16°C	115.16V
10	78.447A	8.927A	8.868A	3.016A	1049.036	87.947%	2715	49.4	45.42°C	0.997
	12.229V	5.044V	3.348V	4.970V	1192.798				55.79°C	115.16V
11	87.059A	8.932A	8.869A	3.020A	1154.011	87.084%	2745	49.6	46.48°C	0.997
	12.225V	5.042V	3.347V	4.965V	1325.171				57.22°C	115.17V
CL1	0.097A	15.022A	15.004A	0.004A	127.666	83.194%	725	15.9	44.42°C	0.988
	12.272V	5.057V	3.365V	5.095V	153.455				53.73°C	115.20V
CL2	86.937A	1.003A	1.003A	1.002A	1076.179	87.990%	2745	49.6	46.20°C	0.997
	12.224V	5.048V	3.349V	5.029V	1223.074				54.15°C	115.17V

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20-80W LOAD TESTS

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	Fan Noise (dB[A])	PF/AC Volts
1	1.188A	0.493A	0.474A	0.196A	19.664	63.633%	0	< 6	0.886
	12.266V	5.065V	3.361V	5.113V	30.902				115.17V
2	2.405A	0.981A	0.979A	0.390A	39.753	75.724%	0	< 6	0.941
	12.267V	5.065V	3.361V	5.105V	52.497				115.17V
3	3.621A	1.474A	1.485A	0.585A	59.860	81.091%	0	< 6	0.957
	12.268V	5.064V	3.360V	5.099V	73.818				115.18V
4	4.825A	1.975A	1.963A	0.784A	79.785	84.121%	0	< 6	0.976
	12.269V	5.063V	3.360V	5.092V	94.845				115.17V

RIPPLE MEASUREMENTS

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	10.4 mV	10.2 mV	8.4 mV	6.9 mV	Pass
20% Load	15.3 mV	11.0 mV	9.7 mV	9.0 mV	Pass
30% Load	18.1 mV	13.3 mV	10.3 mV	10.3 mV	Pass
40% Load	20.7 mV	14.8 mV	12.3 mV	12.8 mV	Pass
50% Load	24.0 mV	14.4 mV	13.2 mV	14.5 mV	Pass
60% Load	26.6 mV	14.3 mV	12.7 mV	16.1 mV	Pass
70% Load	30.1 mV	14.7 mV	13.8 mV	18.3 mV	Pass
80% Load	33.4 mV	14.8 mV	14.3 mV	19.0 mV	Pass
90% Load	39.8 mV	17.4 mV	16.6 mV	20.7 mV	Pass
100% Load	45.6 mV	20.1 mV	22.3 mV	24.3 mV	Pass
110% Load	50.2 mV	21.6 mV	23.7 mV	26.0 mV	Pass
Crossload 1	13.8 mV	15.0 mV	12.3 mV	29.3 mV	Pass
Crossload 2	45.3 mV	18.6 mV	17.7 mV	24.1 mV	Pass

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

Hold-Up Time (ms)	20.50
AC Loss to PWR_OK Hold Up Time (ms)	17.10
PWR_OK Inactive to DC Loss Delay (ms)	3.40

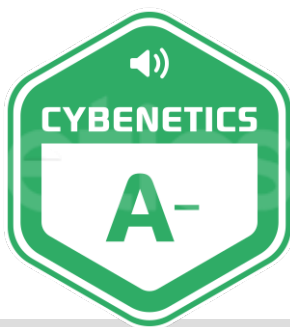


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Power specifications label

CERTIFICATIONS



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