

Anex

Seasonic SSR-1200GD

Lab ID#: 75
Receipt Date: -
Test Date: -

Report:

Report Date: Jan 4, 2018

DUT INFORMATION	
Brand	Seasonic
Manufacturer (OEM)	Sea Sonic Electronics Co., Ltd.
Series	Prime Gold
Model Number	SSR-1200GD
Serial Number	R1701TA101500010
DUT Notes	

DUT SPECIFICATIONS	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	15-7.5
Rated Frequency (Hz)	50-60
Rated Power (W)	1200
Type	ATX12V
Cooling	135mm Fluid Dynamic Bearing Fan (HA13525M12F-Z)
Semi-Passive Operation	✓ (selectable)
Cable Design	Fully Modular

POWER SPECIFICATIONS						
Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	25	25	100	3	0.3
	Watts	125		1200	15	3.6
Total Max. Power (W)		1200				

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)	2	2	18AWG
6+2 pin PCIe (680mm+80mm)	4	8	18AWG
SATA (450mm+115mm+115mm+115mm)	3	12	18AWG
4 pin Molex (450mm+120mm+120mm)	1	3	18AWG
4 pin Molex (350mm+120mm)	1	2	18AWG
FDD Adapter (+110mm)	1	1	22AWG

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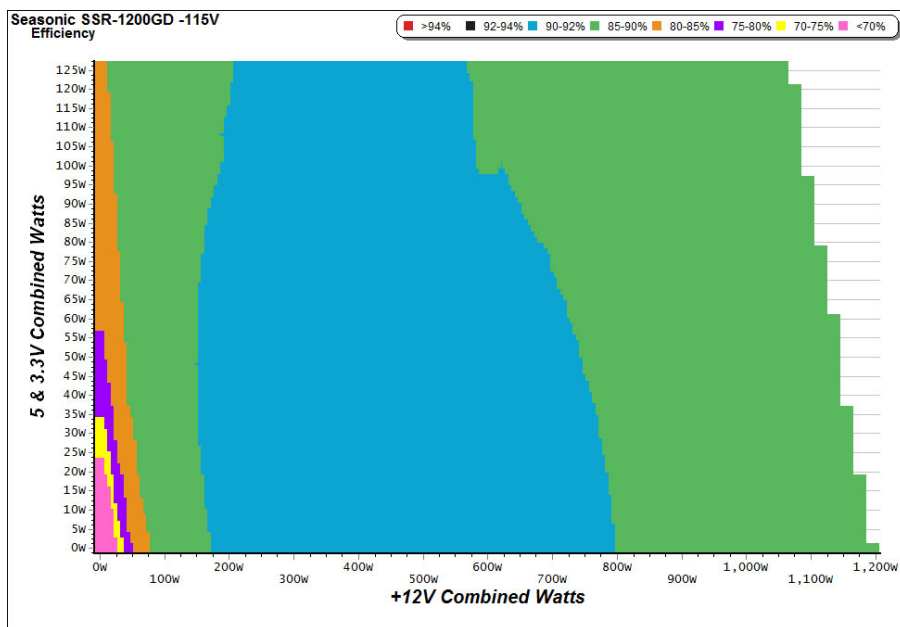
RESULTS	
Temperature Range (°C /°F)	30-32 / 86-89.6
Average Efficiency	89.346
Efficiency With 10W ($\leq 500W$) or 2% ($> 500W$) Load -115V	0.000
Average Efficiency 5VSB	79.943
Standby Power Consumption (W) -115V	0.0564252
Standby Power Consumption (W) -230V	0.0886190
Average PF	0.992
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓
Avg Noise Output	47.53
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	None

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 4189	
Data Loggers	Picoscope TC-08 x2, Labjack U3-HV x2	

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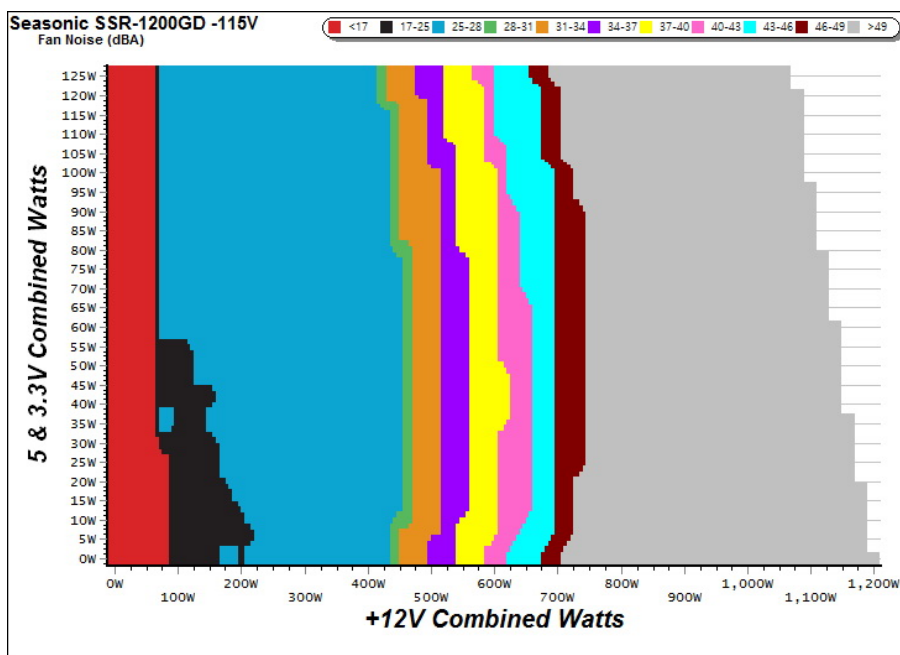
EFFICIENCY GRAPH



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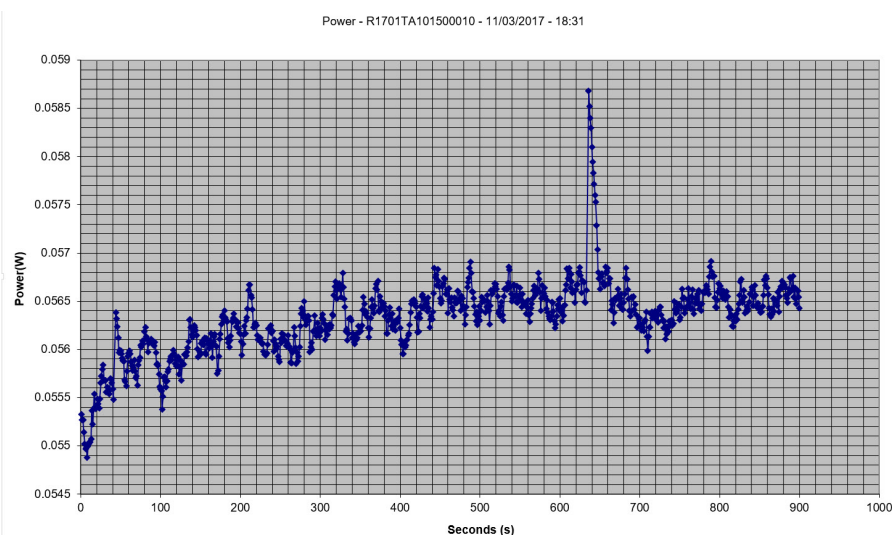
5VSB EFFICIENCY -115V (ERP LOT 3/6 & CEC)

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.102A	0.518	74.106%	0.075
	5.110V	0.699		115.07V
2	0.252A	1.284	78.725%	0.162
	5.104V	1.631		115.07V
3	1.002A	5.081	80.281%	0.377
	5.071V	6.329		115.07V
4	3.002A	14.979	78.891%	0.495
	4.990V	18.987		115.07V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.042A	0.213	57.412%	0.012
	5.112V	0.371		230.21V
2	0.087A	0.446	68.092%	0.022
	5.110V	0.655		230.21V
3	0.532A	2.707	78.305%	0.108
	5.090V	3.457		230.22V
4	3.002A	14.936	78.985%	0.347
	4.976V	18.910		230.21V

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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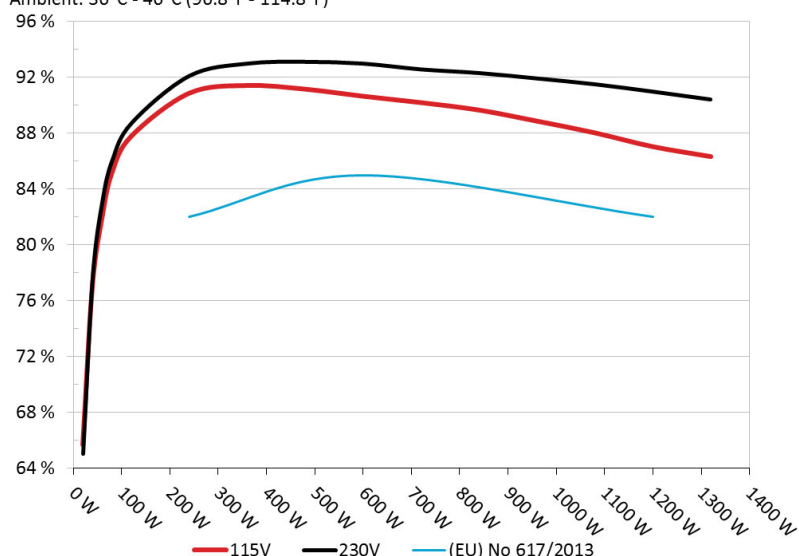
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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Seasonic SSR-1200GD

Ambient: 36°C - 46°C (96.8°F - 114.8°F)



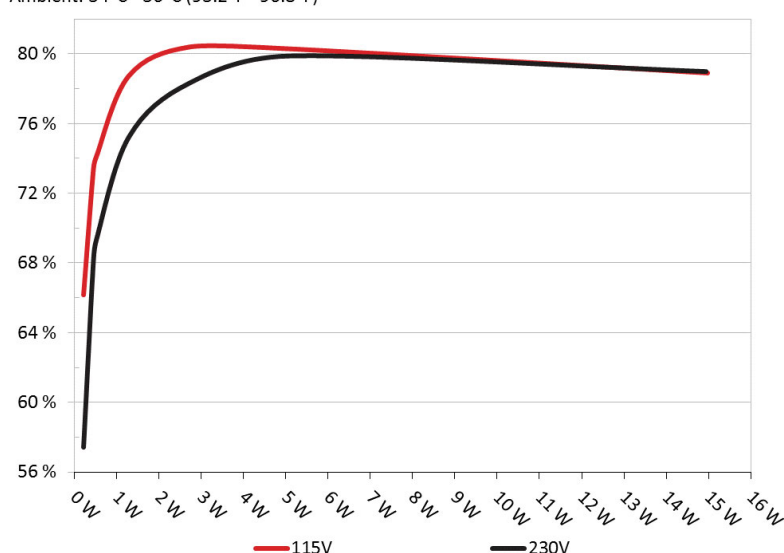
INFO

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 SSR-1200GD

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	8.020A	1.983A	1.985A	0.986A	119.805	87.769%	769	27.4	38.52°C	0.982
	12.246V	5.049V	3.323V	5.055V	136.500				43.85°C	115.10V
2	17.064A	2.969A	2.978A	1.190A	239.650	90.853%	1007	33.6	39.35°C	0.984
	12.235V	5.049V	3.321V	5.036V	263.777				44.89°C	115.09V
3	26.481A	3.466A	3.494A	1.395A	359.845	91.406%	1349	42.1	39.98°C	0.989
	12.226V	5.048V	3.319V	5.015V	393.679				45.86°C	115.08V
4	35.898A	3.964A	3.976A	1.600A	479.643	91.147%	1808	51.2	40.88°C	0.993
	12.214V	5.047V	3.317V	4.994V	526.233				46.61°C	115.09V
5	44.991A	4.959A	4.974A	1.806A	599.565	90.641%	2061	52.4	41.67°C	0.995
	12.204V	5.046V	3.315V	4.974V	661.470				48.01°C	115.10V
6	54.110A	5.943A	5.975A	2.015A	719.468	90.181%	2061	52.4	42.55°C	0.996
	12.192V	5.046V	3.312V	4.953V	797.804				49.46°C	115.10V
7	63.229A	6.938A	6.978A	2.229A	839.365	89.649%	2061	52.4	43.70°C	0.997
	12.182V	5.047V	3.310V	4.933V	936.282				51.95°C	115.11V
8	72.369A	7.925A	7.977A	2.441A	959.236	88.859%	2061	52.4	44.37°C	0.997
	12.172V	5.047V	3.307V	4.909V	1079.504				53.82°C	115.12V
9	81.963A	8.433A	8.501A	2.448A	1079.285	88.017%	2061	52.4	45.23°C	0.998
	12.160V	5.043V	3.305V	4.898V	1226.225				55.72°C	115.12V
10	91.313A	8.928A	8.991A	3.084A	1199.062	87.030%	2061	52.4	45.52°C	0.998
	12.149V	5.043V	3.303V	4.857V	1377.763				56.76°C	115.12V
11	101.360A	8.937A	8.999A	3.091A	1319.107	86.320%	2061	52.4	45.58°C	0.998
	12.129V	5.038V	3.300V	4.850V	1528.165				58.01°C	115.11V
CL1	0.099A	15.019A	15.006A	0.005A	127.176	84.037%	1349	42.1	39.53°C	0.991
	12.256V	5.074V	3.314V	5.081V	151.333				44.95°C	115.11V
CL2	99.941A	1.003A	1.002A	1.002A	1225.824	87.099%	2061	52.4	43.49°C	0.998
	12.132V	5.030V	3.312V	4.965V	1407.386				54.91°C	115.12V

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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	1.190A	0.492A	0.479A	0.197A	19.666	65.696%	732	24.3	0.852
	12.252V	5.052V	3.329V	5.099V	29.935				115.10V
2	2.408A	0.985A	0.989A	0.391A	39.751	77.143%	732	24.3	0.929
	12.250V	5.050V	3.326V	5.089V	51.529				115.10V
3	3.625A	1.478A	1.501A	0.591A	59.868	82.050%	732	24.3	0.954
	12.251V	5.049V	3.324V	5.078V	72.965				115.10V
4	4.835A	1.982A	1.983A	0.785A	79.802	85.147%	750	25.1	0.975
	12.249V	5.050V	3.324V	5.068V	93.723				115.10V

RIPPLE MEASUREMENTS

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	7.2 mV	4.4 mV	6.0 mV	6.8 mV	Pass
20% Load	11.1 mV	4.6 mV	6.6 mV	9.2 mV	Pass
30% Load	10.5 mV	5.0 mV	7.0 mV	9.7 mV	Pass
40% Load	9.4 mV	4.9 mV	7.8 mV	11.5 mV	Pass
50% Load	9.8 mV	4.9 mV	7.9 mV	14.0 mV	Pass
60% Load	10.6 mV	5.7 mV	8.3 mV	16.3 mV	Pass
70% Load	11.8 mV	5.7 mV	9.5 mV	18.7 mV	Pass
80% Load	13.0 mV	8.1 mV	11.2 mV	21.7 mV	Pass
90% Load	14.0 mV	8.3 mV	11.8 mV	24.4 mV	Pass
100% Load	16.1 mV	10.5 mV	13.8 mV	28.5 mV	Pass
110% Load	31.0 mV	17.2 mV	14.3 mV	40.1 mV	Pass
Crossload 1	9.9 mV	5.9 mV	8.2 mV	7.7 mV	Pass
Crossload 2	15.6 mV	7.4 mV	12.7 mV	25.8 mV	Pass

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

Hold-Up Time (ms)	23.0
AC Loss to PWR_OK Hold Up Time (ms)	21.2
PWR_OK Inactive to DC Loss Delay (ms)	1.9



Top side



Power specifications label

CERTIFICATIONS



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