

Lab ID#: SS10002239
Receipt Date: Aug 17, 2023
Test Date: Sep 18, 2023

Report: 23PS2239A
Report Date: Sep 19, 2023

DUT INFORMATION	
Brand	Seasonic
Manufacturer (OEM)	Seasonic
Series	Focus GX
Model Number	SSR-1000FX
Serial Number	
DUT Notes	

DUT SPECIFICATIONS	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	13-6.5
Rated Frequency (Hz)	50-60
Rated Power (W)	1000
Type	ATX12V
Cooling	135mm Fluid Dynamic Bearing Fan (HA13525H12F-Z)
Semi-Passive Operation	✓ (selectable)
Cable Design	Fully Modular

TEST EQUIPMENT	
Electronic Loads	Chroma 63601-5 x2 Chroma 63600-2 63640-80-80 x10 63610-80-20
AC Sources	Chroma 6530, APM SP300VAC4000W-P
Power Analyzers	RS HMC8015, N4L PPA1530, N4L PPA5530
Oscilloscopes	Picoscope 4444, Rigol DS7014, Siglent SDS2104X PLUS
Sound Analyzer	Bruel & Kjaer 2270 G4
Microphone	Bruel & Kjaer Type 4955-A
Temperature Logger	Picoscope TC-08
Tachometer	UNI-T UT372
Multimeters	Keysight 34465A, Keithley 2015 - THD
UPS	FSP Champ Tower 3kVA, CyberPower OLS3000E 3kVA
Isolation Transformer	4kVA

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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	✓
ALPM (Alternative Low Power Mode) compatible	✓
ATX v3.0 PSU Power Excursion	✓

115V

Average Efficiency	88.916%
Efficiency With 10W (≤500W) or 2% (>500W)	72.451
Average Efficiency 5VSB	76.118%
Standby Power Consumption (W)	0.0505000
Average PF	0.977
Avg Noise Output	29.47 dB(A)
Efficiency Rating (ETA)	GOLD
Noise Rating (LAMBDA)	A-

230V

Average Efficiency	91.061%
Average Efficiency 5VSB	74.844%
Standby Power Consumption (W)	0.1598000
Average PF	0.941
Avg Noise Output	29.46 dB(A)
Efficiency Rating (ETA)	GOLD
Noise Rating (LAMBDA)	A-

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	25	25	83	3	0.3
	Watts	125		996	15	3.6
Total Max. Power (W)		1000				

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CABLES AND CONNECTORS

Modular Cables

Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 20+4 pin (620mm)	1	1	16-18AWG	No
4+4 pin EPS12V (610mm)	2	2	16AWG	No
6+2 pin PCIe (750mm)	3	3	16AWG	No
12+4 pin PCIe (750mm) (600W)	1	1	16-28AWG	No
SATA (510mm+155mm+155mm+155mm)	2	8	18AWG	No
SATA 3.3 (410mm+160mm)	1	2	18AWG	No
4-pin Molex (450mm+125mm+125mm)	1	3	18AWG	No
AC Power Cord (1400mm) - C13 coupler	1	1	18AWG	-

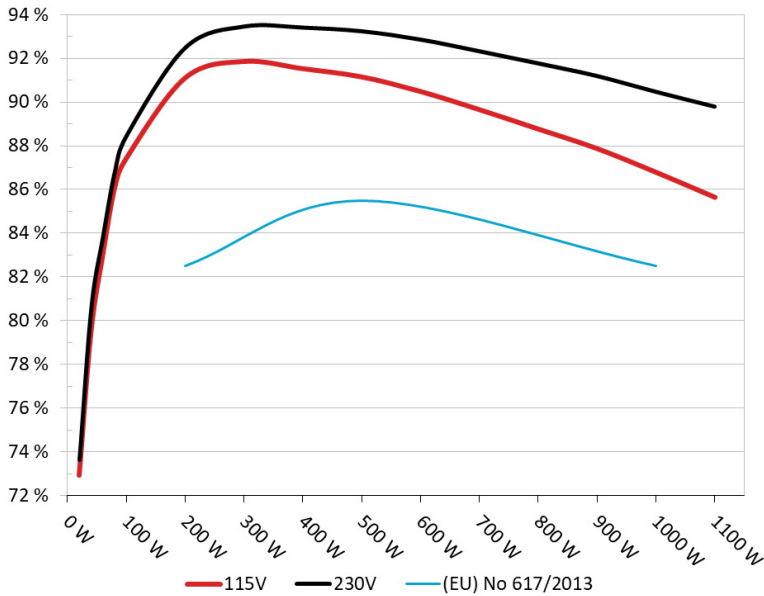
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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Seasonic Focus GX-1000 ATX3.0

Ambient: 37°C - 47°C (98.6°F - 116.6°F)



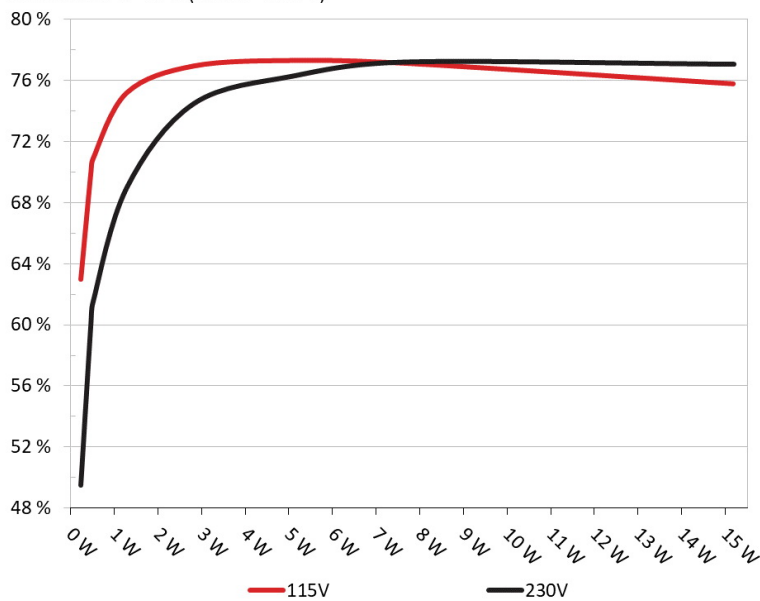
INFO

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 Focus GX-1000 ATX3.0

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	0.045A	0.231W	62.481%	0.035
	5.137V	0.37W		114.91V
2	0.09A	0.462W	69.493%	0.062
	5.136V	0.665W		114.92V
3	0.55A	2.819W	76.441%	0.27
	5.125V	3.688W		114.92V
4	1A	5.115W	76.803%	0.37
	5.114V	6.66W		114.91V
5	1.5A	7.653W	76.619%	0.42
	5.102V	9.989W		114.91V
6	3A	15.18W	75.279%	0.492
	5.06V	20.165W		114.91V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.231W	48.999%	0.013
	5.137V	0.473W		229.88V
2	0.09A	0.462W	59.602%	0.022
	5.135V	0.776W		229.88V
3	0.55A	2.818W	73.998%	0.103
	5.124V	3.807W		229.88V
4	1A	5.114W	75.815%	0.17
	5.114V	6.745W		229.88V
5	1.5A	7.653W	76.722%	0.223
	5.101V	9.976W		229.88V
6	3A	15.191W	76.582%	0.335
	5.064V	19.838W		229.88V

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115V

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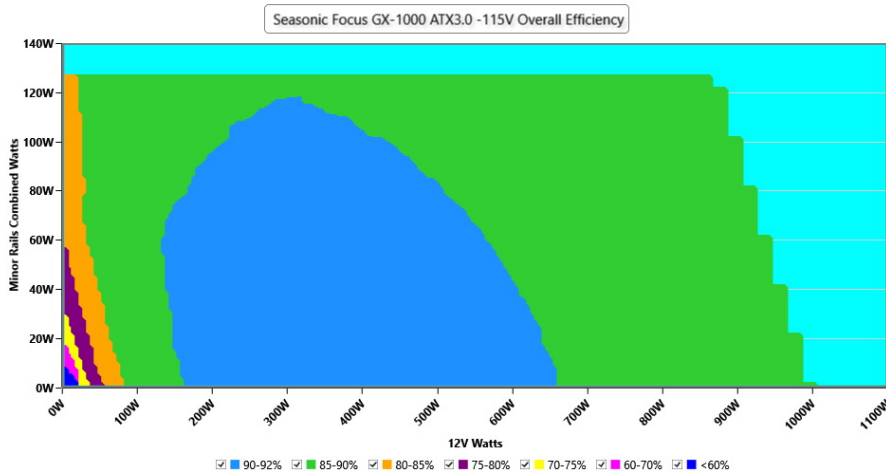
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EFFICIENCY GRAPH 115V

INFO

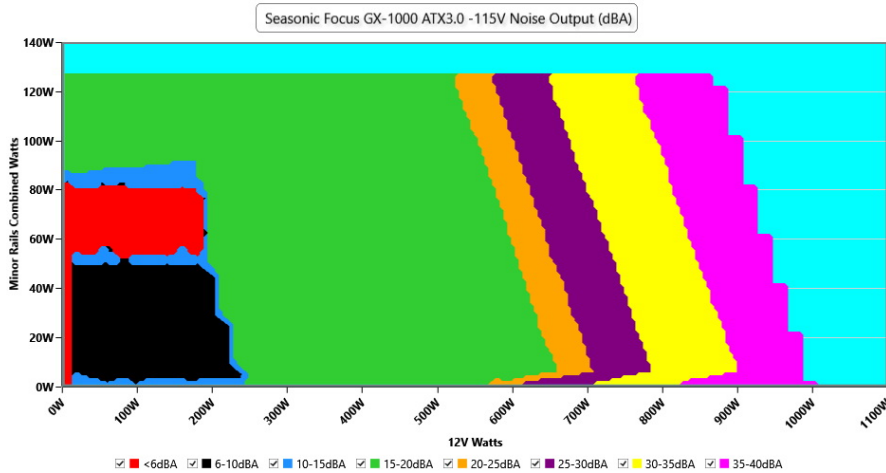
This graph depicts the PSU's efficiency throughout its entire operational range. For the generation of the efficiency and noise graphs we set our loaders to auto mode through our custom-made software before trying thousands of possible load combinations



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



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VAMPIRE POWER -115V

Detailed Results

	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	114.91 V	114.82 V	113.85 V	115.01 V	116.15 V	PASS
Mains Frequency:	60.00 Hz	59.95 Hz	59.40 Hz	60.06 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.421	1.419	1.340	1.424	1.490	PASS
Mains Voltage THD:	0.32 %	0.25 %	N/A	0.41 %	2.00 %	PASS
Real Power:	0.051 W	-0.003 W	N/A	0.092 W	N/A	N/A
Apparent Power:	10.810 W	10.782 W	N/A	10.844 W	N/A	N/A
Power Factor:	0.006	N/A	N/A	N/A	N/A	N/A

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

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
10%	6.462A	1.987A	1.982A	0.98A	99.989	86.931%	0	<6.0	44.69°C	0.945
	12.131V	5.033V	3.331V	5.103V	115.018				40.41°C	114.88V
20%	13.956A	2.982A	2.974A	1.179A	199.938	90.618%	0	<6.0	45.31°C	0.969
	12.112V	5.03V	3.328V	5.09V	220.639				40.59°C	114.85V
50%	37.037A	4.977A	4.966A	1.781A	499.256	90.668%	664	15.9	42.18°C	0.983
	12.117V	5.023V	3.323V	5.054V	550.645				48.26°C	114.75V
100%	74.989A	8.98A	8.967A	3.007A	999.278	86.304%	1536	41.8	45.54°C	0.991
	12.130V	5.01V	3.312V	4.987V	1157.853				55.57°C	114.55V

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230V

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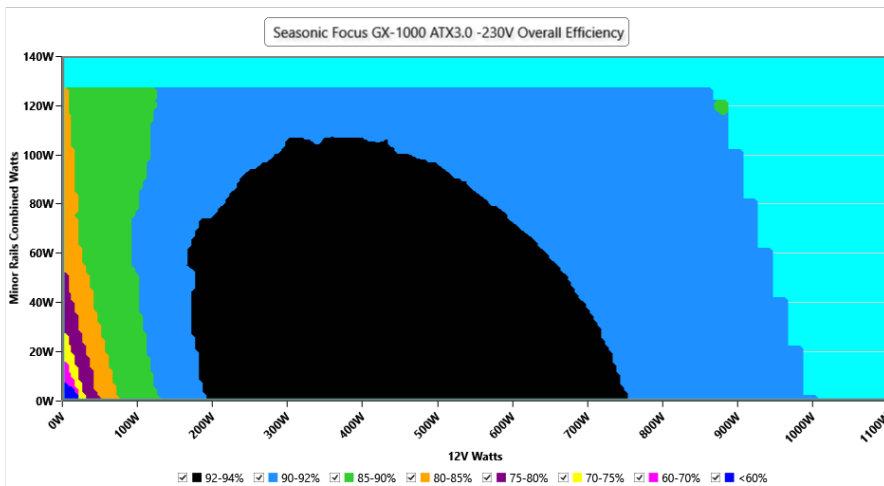
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EFFICIENCY GRAPH 230V

INFO

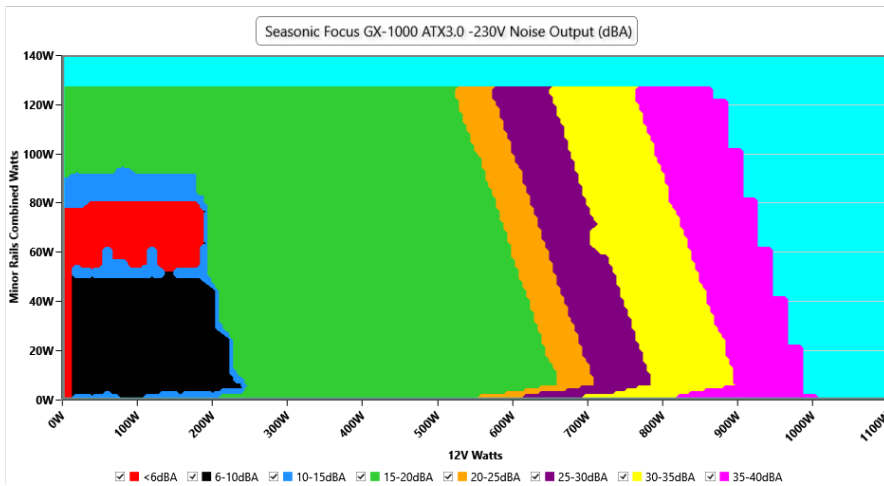
This graph depicts the PSU's efficiency throughout its entire operational range. For the generation of the efficiency and noise graphs we set our loaders to auto mode through our custom-made software before trying thousands of possible load combinations



NOISE GRAPH 230V

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



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VAMPIRE POWER -230V

Detailed Results

	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	229.90 V	229.80 V	227.70 V	230.00 V	232.30 V	PASS
Mains Frequency:	50.00 Hz	49.97 Hz	49.50 Hz	50.02 Hz	50.50 Hz	PASS
Mains Voltage CF:	1.417	1.415	1.340	1.419	1.490	PASS
Mains Voltage THD:	0.19 %	0.15 %	N/A	0.26 %	2.00 %	PASS
Real Power:	0.160 W	0.111 W	N/A	0.219 W	N/A	N/A
Apparent Power:	36.816 W	36.751 W	N/A	36.887 W	N/A	N/A
Power Factor:	0.004	N/A	N/A	N/A	N/A	N/A

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COMMISSION REGULATION (EU) NO 617/2013 TESTING 230V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
10%	6.460A	1.987A	1.982A	0.98A	99.991	87.954%	0	<6.0	44.72°C	0.816
	12.136V	5.032V	3.33V	5.102V	113.687				40.5°C	229.87V
20%	13.954A	2.982A	2.975A	1.179A	199.938	91.982%	0	<6.0	45.46°C	0.906
	12.114V	5.03V	3.328V	5.09V	217.361				40.92°C	229.85V
50%	37.047A	4.977A	4.967A	1.781A	499.233	92.733%	666	16.0	42.04°C	0.961
	12.112V	5.023V	3.322V	5.054V	538.36				48.12°C	229.8V
100%	74.981A	8.98A	8.967A	3.008A	999.304	89.97%	1518	41.4	45.04°C	0.978
	12.132V	5.01V	3.312V	4.987V	1110.706				55.08°C	229.71V

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

Seasonic Focus GX-1000 ATX3.0

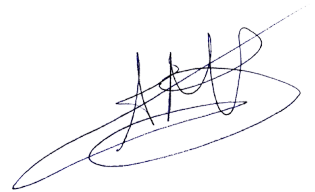


Top side

Model / 型號 / 型号: SSR-1000FX ³ (FOCUS GX-1000 ATX 3.0)					
AC INPUT 交流輸入 / 交流輸入	100-240 Vac 13-6.5 A 50-60 Hz 200-240 V - 6.5 A 50-60Hz. 适用于中国地区使用				
DC OUTPUT 直流輸出 / 直流輸出	+3.3 V	+5 V	+12 V	-12 V	+5 Vsb
	25 A	25 A	83 A	0.3 A	3 A
	125 W		996 W		15 W
	1000 W				
					
<small>Switching power supply / 交換式電源供應器 / 交換式電源供應器 Manufacturer: Sea Sonic Electronics Co., Ltd. 代理商: 海韻電子工業股份有限公司 / 製造商: 海韻電子工業股份有限公司 Made in China / Fabriqué en Chine / Hergeestelt in China / 中国制造</small>					

Power specifications label

CERTIFICATIONS 115V

Aristeidis Bitziopoulos
Lab Director

CERTIFICATIONS 230V



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