

Lab ID#: SS70001926
Receipt Date: Oct 8, 2021
Test Date: Oct 27, 2021

Report: 21PS1926A
Report Date: Oct 27, 2021

DUT INFORMATION

Brand	Seasonic
Manufacturer (OEM)	Seasonic
Series	Prime TX Fanless
Model Number	SSR-700TL
Serial Number	
DUT Notes	

DUT SPECIFICATIONS

Rated Voltage (Vrms)	100-240
Rated Current (Arms)	9.5-4.5
Rated Frequency (Hz)	50-60
Rated Power (W)	700
Type	ATX12V
Cooling	-
Semi-Passive Operation	X
Cable Design	Fully Modular

TEST EQUIPMENT

Electronic Loads	Chroma 63601-5 x4 Chroma 63600-2 x2 63640-80-80 x20 63610-80-20 x2
AC Sources	Chroma 6530, Keysight AC6804B
Power Analyzers	N4L PPA1530 x2
Sound Analyzer	Bruel & Kjaer 2270 G4
Microphone	Bruel & Kjaer Type 4955-A
Data Loggers	Picoscope TC-08 x2, Labjack U3-HV x2
Tachometer	UNI-T UT372 x2
Digital Multimeter	Keysight U1273AX, Fluke 289, Keithley 2015 - THD
UPS	CyberPower OLS3000E 3kVA x2
Transformer	3kVA x2

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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	91.974%
Efficiency With 10W (≤500W) or 2% (>500W)	72.508
Average Efficiency 5VSB	80.748%
Standby Power Consumption (W)	0.0564119
Average PF	0.989
Avg Noise Output	- dB(A)
Efficiency Rating (ETA)	TITANIUM
Noise Rating (LAMBDA)	A++

230V

Average Efficiency	93.511%
Average Efficiency 5VSB	80.232%
Standby Power Consumption (W)	0.0978163
Average PF	0.943
Avg Noise Output	- dB(A)
Efficiency Rating (ETA)	TITANIUM
Noise Rating (LAMBDA)	A++

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	20	20	58	2.5	0.3
	Watts	100		696	12.5	3.6
Total Max. Power (W)		700				

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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	18-22AWG	Yes
4+4 pin EPS12V (660mm)	2	2	18AWG	No
6+2 pin PCIe (760mm)	4	4	18AWG	No
SATA (410mm+150mm+150mm+150mm)	1	4	18AWG	No
SATA (450mm+120mm+120mm+120mm)	1	4	18AWG	No
SATA (300mm+160mm)	1	2	18AWG	No
4 pin Molex (450mm+125mm+125mm)	1	3	18AWG	No
4 pin Molex (360mm+125mm)	1	2	18AWG	No
4 pin Molex to SATA 3.3 Adapter (150mm+150mm)	1	2	18AWG	No
AC Power Cord (1420mm) - C13 coupler	1	1	16AWG	-

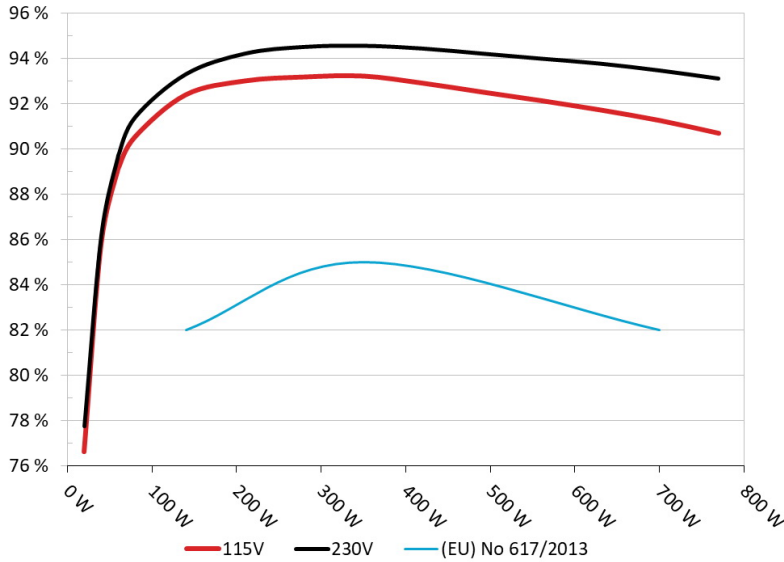
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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Seasonic Prime Fanless TX-700

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



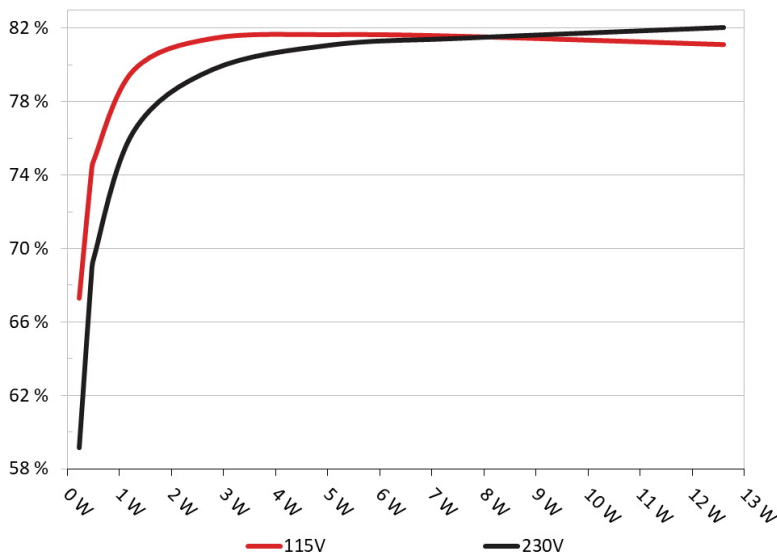
INFO

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 Prime Fanless TX-700

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	0.23W	67.286%	0.033
	5.103V	0.342W		115.17V
2	0.09A	0.459W	74.048%	0.059
	5.101V	0.62W		115.17V
3	0.55A	2.8W	81.46%	0.257
	5.09V	3.437W		115.17V
4	1A	5.079W	81.66%	0.355
	5.078V	6.22W		115.17V
5	1.5A	7.599W	81.566%	0.412
	5.065V	9.316W		115.17V
6	2.501A	12.602W	81.118%	0.468
	5.04V	15.535W		115.16V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.23W	59.144%	0.011
	5.103V	0.389W		230.36V
2	0.09A	0.459W	68.369%	0.02
	5.101V	0.671W		230.36V
3	0.55A	2.8W	79.758%	0.098
	5.089V	3.511W		230.36V
4	1A	5.079W	81.087%	0.163
	5.078V	6.264W		230.36V
5	1.5A	7.599W	81.457%	0.221
	5.065V	9.329W		230.36V
6	2.501A	12.6W	82.035%	0.299
	5.039V	15.359W		230.36V

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115V

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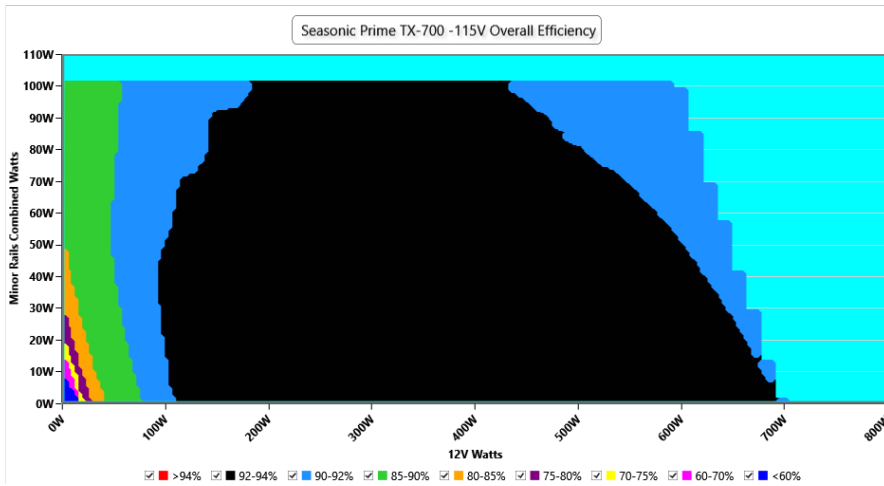
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EFFICIENCY GRAPH 115V

INFO

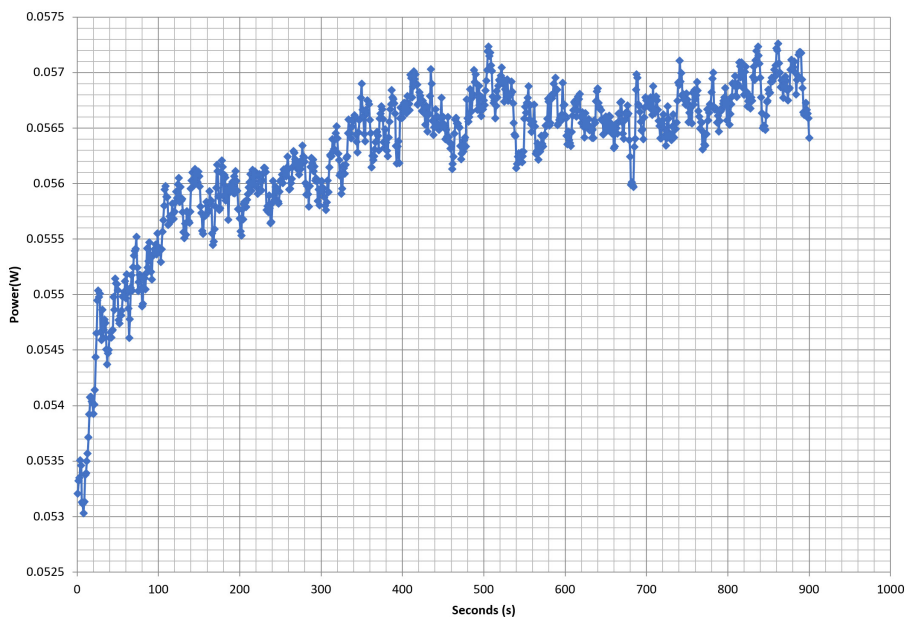
This graph depicts the PSU's efficiency throughout its entire operational range. For the generation of the efficiency and noise graphs we set our loaders to auto mode through our custom-made software before trying thousands of possible load combinations



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VAMPIRE POWER -115V

Power - 22/10/2021 - 15:16



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	Temps (In/Out)	PF/AC Volts
10%	3.976A	1.968A	1.966A	1.005A	69.999	89.1%	46.22°C	0.955
	12.174V	5.083V	3.357V	4.977V	78.562		40.84°C	115.15V
20%	8.951A	2.956A	2.955A	1.21A	139.946	92.382%	46.84°C	0.982
	12.183V	5.075V	3.35V	4.962V	151.486		41.16°C	115.16V
50%	24.595A	4.948A	4.957A	1.831A	349.999	93.211%	49.58°C	0.997
	12.177V	5.054V	3.329V	4.916V	375.492		42.3°C	115.16V
100%	50.405A	8.985A	9.041A	2.584A	700.314	91.244%	56.31°C	0.997
	12.163V	5.009V	3.285V	4.838V	767.516		45.72°C	115.18V

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230V

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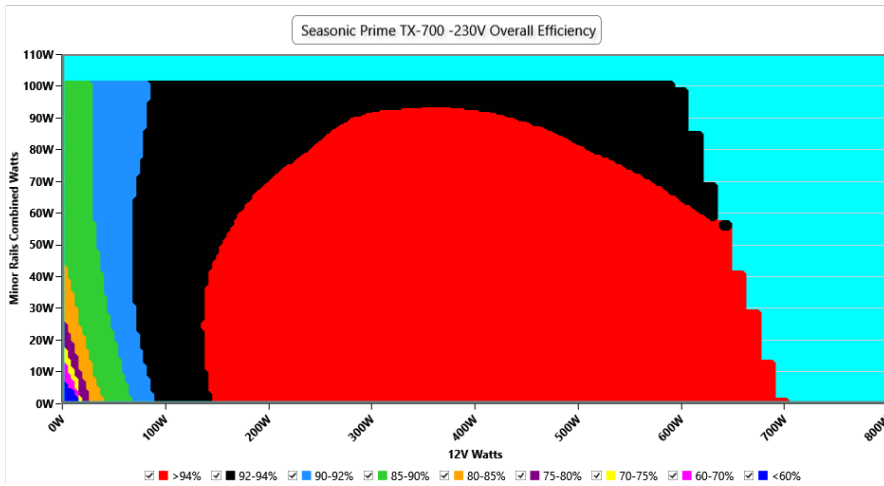
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EFFICIENCY GRAPH 230V

INFO

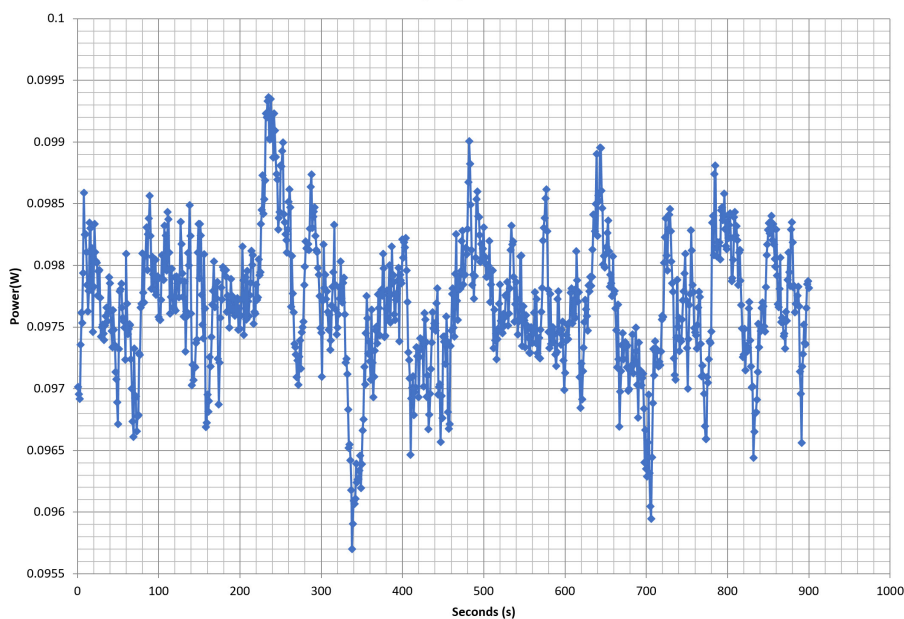
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VAMPIRE POWER -230V

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

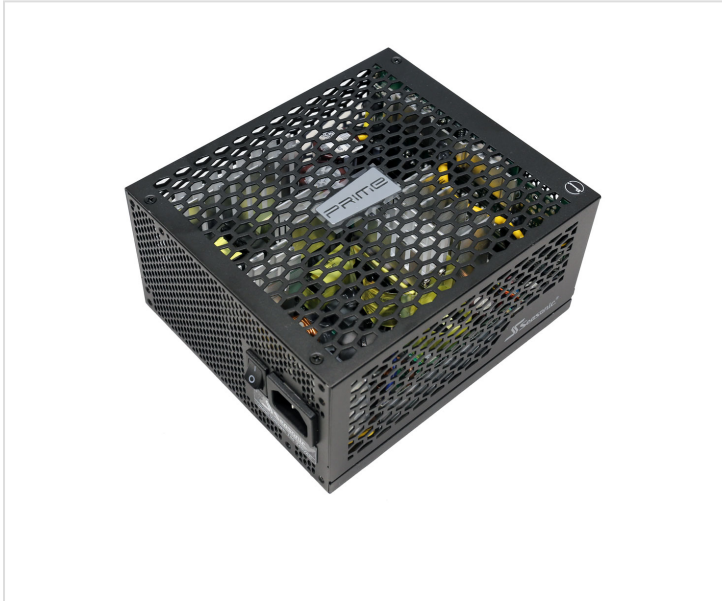
Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Temps (In/Out)	PF/AC Volts
10%	3.976A	1.968A	1.966A	1.005A	70.002	89.725%	45.62°C	0.748
	12.171V	5.082V	3.357V	4.975V	78.018		40.74°C	230.4V
20%	8.954A	2.957A	2.957A	1.21A	139.952	93.323%	46.28°C	0.887
	12.179V	5.073V	3.348V	4.96V	149.965		40.93°C	230.39V
50%	24.600A	4.952A	4.963A	1.832A	349.986	94.58%	49.75°C	0.97
	12.174V	5.05V	3.325V	4.913V	370.041		42.56°C	230.41V
100%	50.408A	8.989A	9.05A	2.585A	700.244	93.486%	56.41°C	0.988
	12.162V	5.006V	3.281V	4.835V	749.036		45.71°C	230.43V

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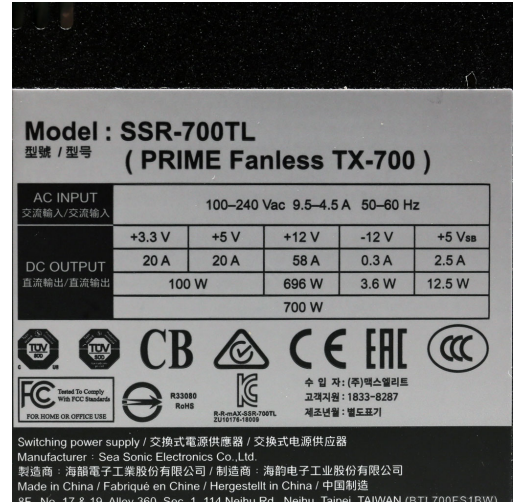
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EFFICIENCY AND NOISE REPORT IN ACCORDANCE WITH
CYBENETICS ETA AND CYBENETICS LAMBDA PROCEDURE

Seasonic Prime Fanless TX-700 (#2)

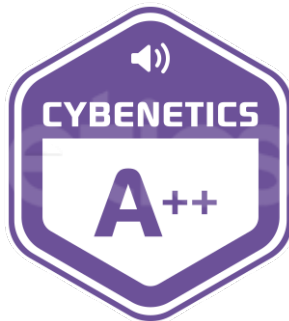
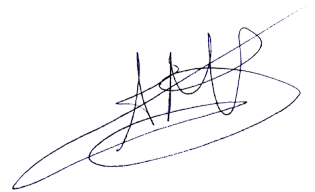


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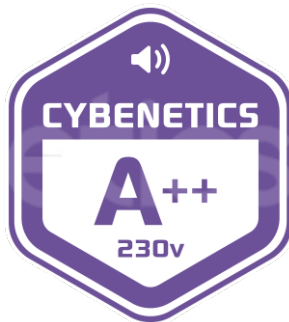
Power specifications label

CERTIFICATIONS 115V

Aris Mpitsiopoulos
Lab Director

CERTIFICATIONS 230V



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