

Lab ID#: SS70001872
Receipt Date: Jul 7, 2021
Test Date: Jul 16, 2021

Report: 21PS1872A
Report Date: Jul 20, 2021

DUT INFORMATION	
Brand	Seasonic
Manufacturer (OEM)	Seasonic
Series	Prime TX Fanless
Model Number	SSR-700TL
Serial Number	R2007AA150600197
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	91.629%
Efficiency With 10W (≤500W) or 2% (>500W)	71.651
Average Efficiency 5VSB	80.314%
Standby Power Consumption (W)	0.0538436
Average PF	0.989
Avg Noise Output	6.00 dB(A)
Efficiency Rating (ETA)	TITANIUM
Noise Rating (LAMBDA)	A++

230V

Average Efficiency	93.046%
Average Efficiency 5VSB	78.666%
Standby Power Consumption (W)	0.0835349
Average PF	0.943
Avg Noise Output	6.00 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 (600mm)	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 (1360mm) - C13 coupler	1	1	18AWG	-

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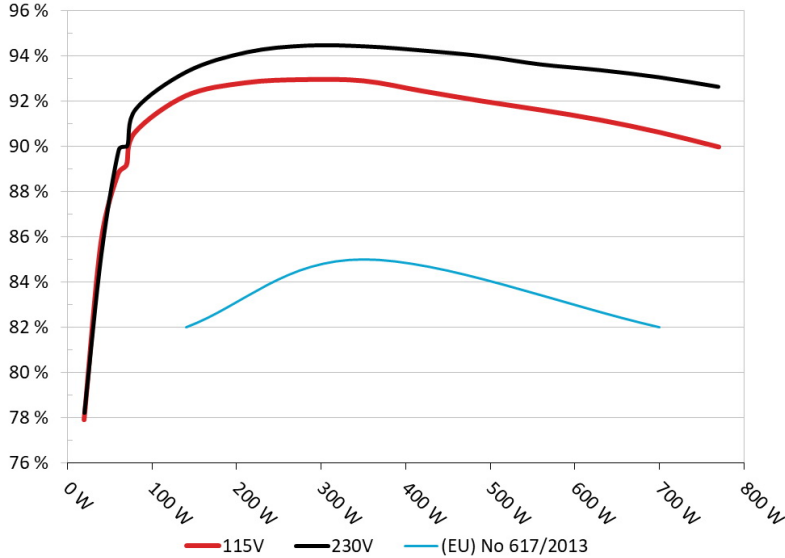
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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Seasonic Prime Fanless TX-700

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



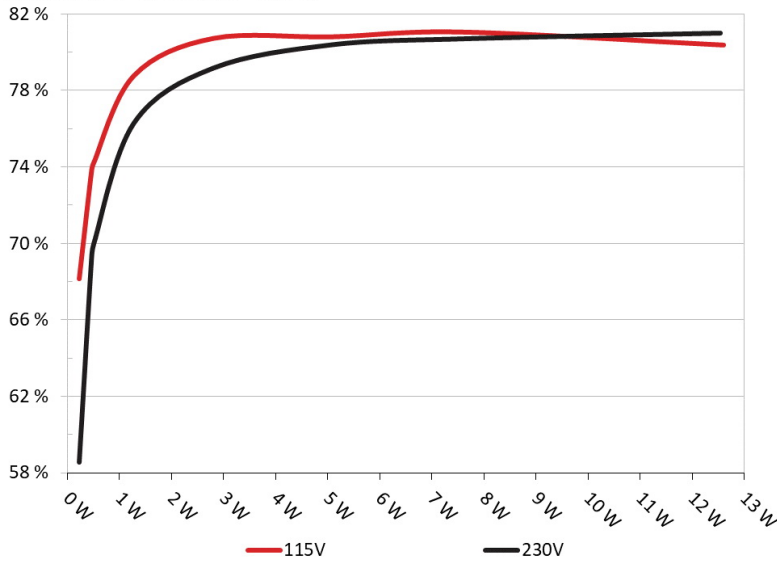
INFO

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	0.231W	68.145%	0.033
	5.122V	0.339W		115.16V
2	0.09A	0.461W	73.64%	0.061
	5.121V	0.626W		115.16V
3	0.55A	2.807W	80.719%	0.262
	5.103V	3.477W		115.17V
4	1A	5.087W	80.799%	0.358
	5.085V	6.295W		115.17V
5	1.5A	7.604W	81.047%	0.413
	5.068V	9.382W		115.17V
6	2.501A	12.599W	80.37%	0.467
	5.038V	15.676W		115.16V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.231W	58.552%	0.012
	5.12V	0.395W		230.37V
2	0.09A	0.461W	68.924%	0.02
	5.119V	0.669W		230.36V
3	0.55A	2.805W	79.146%	0.102
	5.098V	3.544W		230.34V
4	1A	5.079W	80.364%	0.171
	5.078V	6.32W		230.32V
5	1.5A	7.585W	80.675%	0.238
	5.056V	9.402W		230.27V
6	2.501A	12.54W	80.973%	0.319
	5.015V	15.486W		230.31V

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115V

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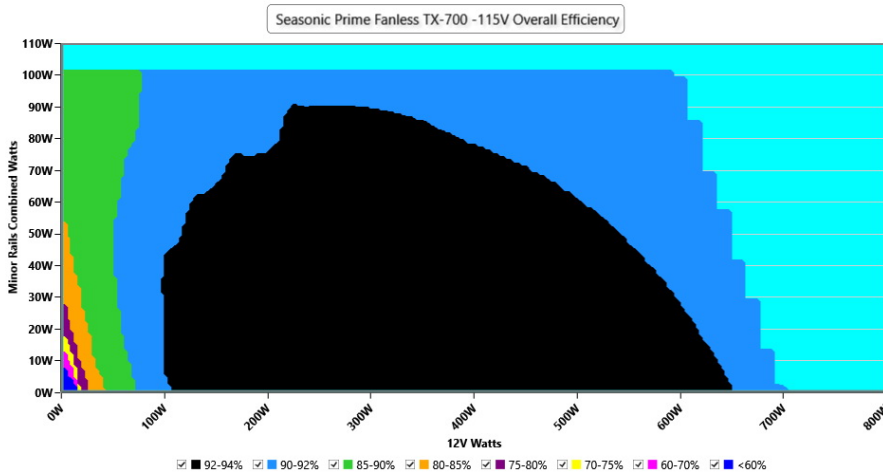
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EFFICIENCY GRAPH 115V

INFO

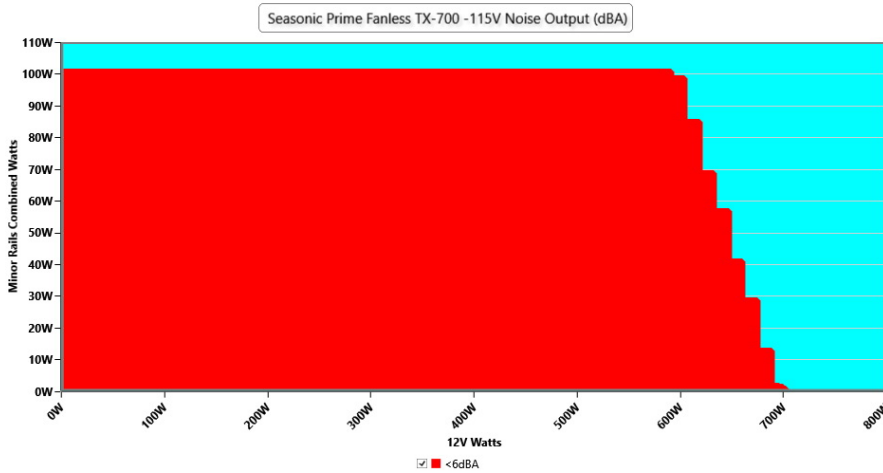
This graph depicts the PSU's efficiency throughout its entire operational range. For the generation of the efficiency and noise graphs we set our loaders to auto mode through our custom-made software before trying thousands of possible load combinations



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

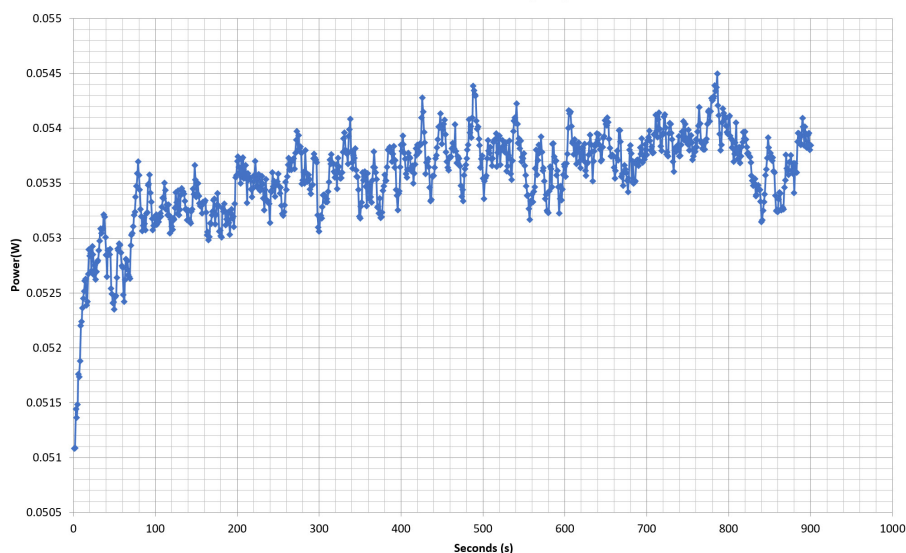


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VAMPIRE POWER -115V

Power - R2007AA150600197 - 12/07/2021 - 09:37



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%	3.988A	1.96A	1.973A	1.008A	70.006	89.185%	45.37°C	0.957
	12.137V	5.104V	3.346V	4.96V	78.495		40.36°C	115.2V
20%	8.990A	2.948A	2.976A	1.216A	139.962	92.251%	46.16°C	0.984
	12.131V	5.09V	3.327V	4.935V	151.718		40.57°C	115.19V
50%	24.730A	4.95A	5.031A	1.851A	350.02	92.916%	49.31°C	0.997
	12.111V	5.052V	3.28V	4.862V	376.703		42.35°C	115.17V
100%	50.748A	9.038A	9.312A	2.629A	700.4	90.633%	55.54°C	0.997
	12.083V	4.98V	3.19V	4.756V	772.786		45.6°C	115.18V

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230V

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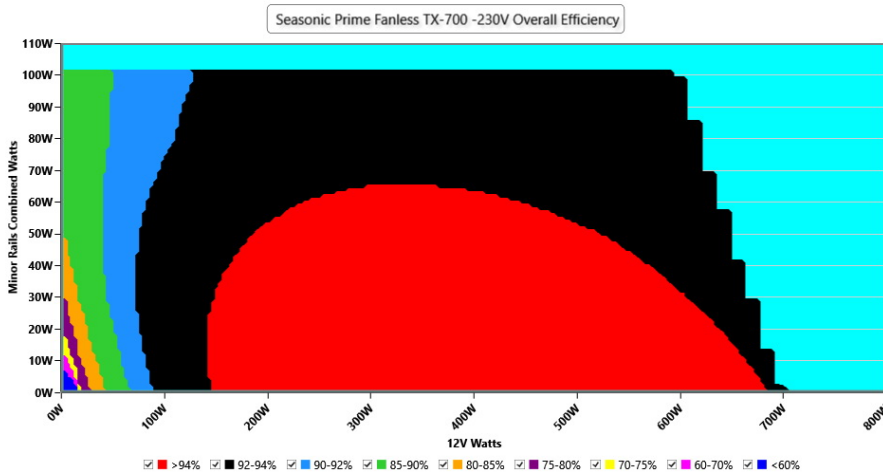
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EFFICIENCY GRAPH 230V

INFO

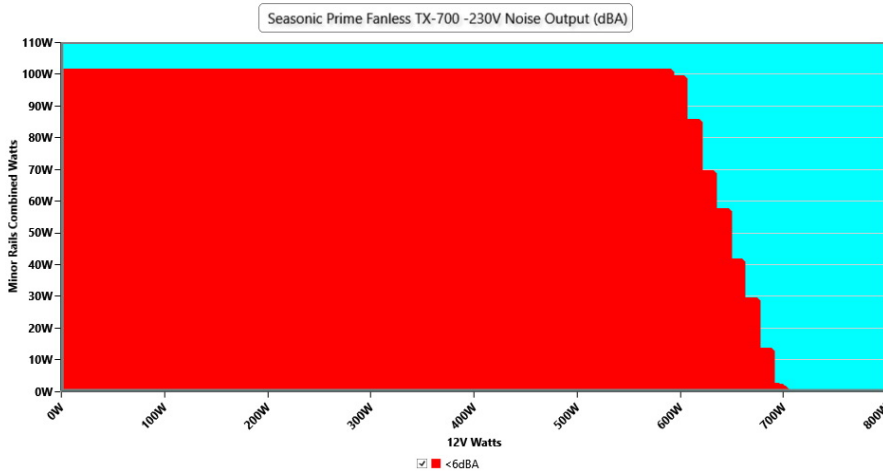
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NOISE GRAPH 230V

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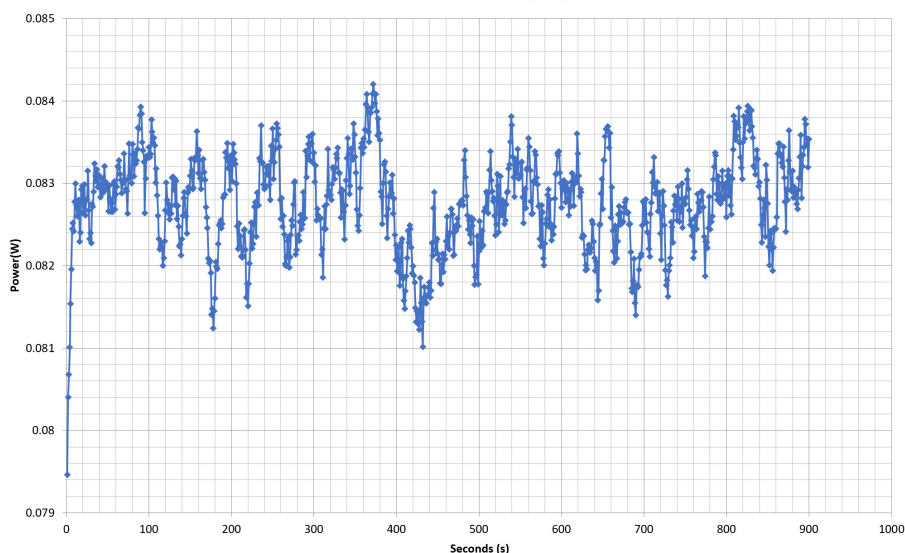


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VAMPIRE POWER -230V

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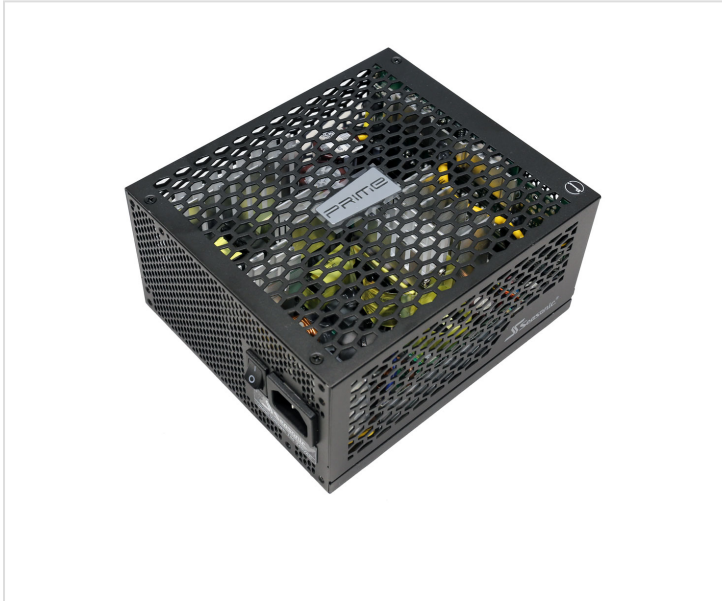
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COMMISSION REGULATION (EU) NO 617/2013 TESTING 230V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Temps (In/Out)	PF/AC Volts
10%	4.040A	2A	2A	1A	70.914	90.014%	45.38°C	0.756
	12.140V	5.103V	3.346V	4.961V	78.781		40.44°C	230.41V
20%	9.106A	3.001A	3A	1.2A	141.691	93.303%	46.03°C	0.891
	12.136V	5.089V	3.328V	4.936V	151.862		40.78°C	230.41V
50%	24.966A	5.001A	5.001A	1.8A	353.196	94.412%	49.23°C	0.971
	12.126V	5.052V	3.282V	4.866V	374.101		42.29°C	230.42V
100%	50.637A	9.039A	9.315A	2.627A	700.385	93.045%	55.63°C	0.988
	12.109V	4.979V	3.188V	4.759V	752.735		45.55°C	230.44V

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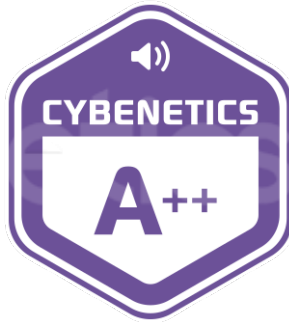
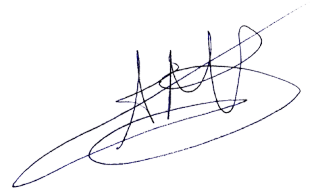


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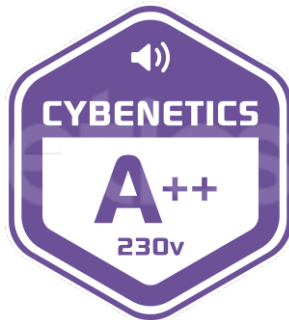
Power specifications label

CERTIFICATIONS 115V

Aristeidis Bitziopoulos
Lab Director

CERTIFICATIONS 230V



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