Anex

SilverStone FX600-PT

Lab ID#: SL60001921
Receipt Date: Sep 17, 2021
Test Date: Oct 15, 2021

Report: 21PS1921A
Report Date: Oct 15, 2021

DUT INFORMATION

Brand	SilverStone
Manufacturer (OEM)	Enhance Electronics
Series	
Model Number	SST-FX0600FCPT-A
Serial Number	
DUT Notes	

DUT SPECIFICATIONS

Rated Voltage (Vrms)	100-240
Rated Current (Arms)	8-4
Rated Frequency (Hz)	60-50
Rated Power (W)	600
Type	FLEX ATX
Cooling	40mm Sleeve Bearing Fan (D12BM-12C)
Semi-Passive Operation	✗
Cable Design	Fixed cables

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
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓

115V

Average Efficiency	90.864%
Efficiency With 10W (≤500W) or 2% (>500W)	63.637
Average Efficiency 5VSB	81.542%
Standby Power Consumption (W)	0.0425591
Average PF	0.988
Avg Noise Output	- dB(A)
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	None

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	15	15	50	2.5	0.3
	Watts	80		600	12.5	3.6
Total Max. Power (W)		600				

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

Hold-Up Time (ms)	7.9
AC Loss to PWR_OK Hold Up Time (ms)	10.6
PWR_OK Inactive to DC Loss Delay (ms)	-2.7

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CABLES AND CONNECTORS

Captive Cables

Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 20+4 pin (370mm)	1	1	18-22AWG	No
8 pin EPS12V (370mm) / 4+4 pin EPS12V (+150mm)	1	1 / 1	18AWG	No
6+2 pin PCIe (370mm+150mm)	1	2	18AWG	No
SATA (300mm+150mm)	2	4	18AWG	No
4-pin Molex (300mm+150mm+150mm) / FDD (+150mm)	1	3 / 1	18-22AWG	No

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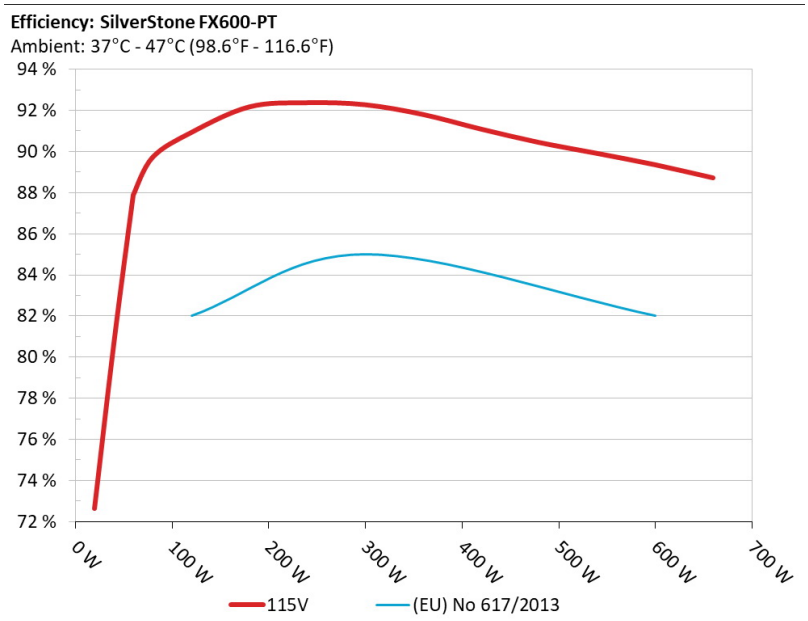
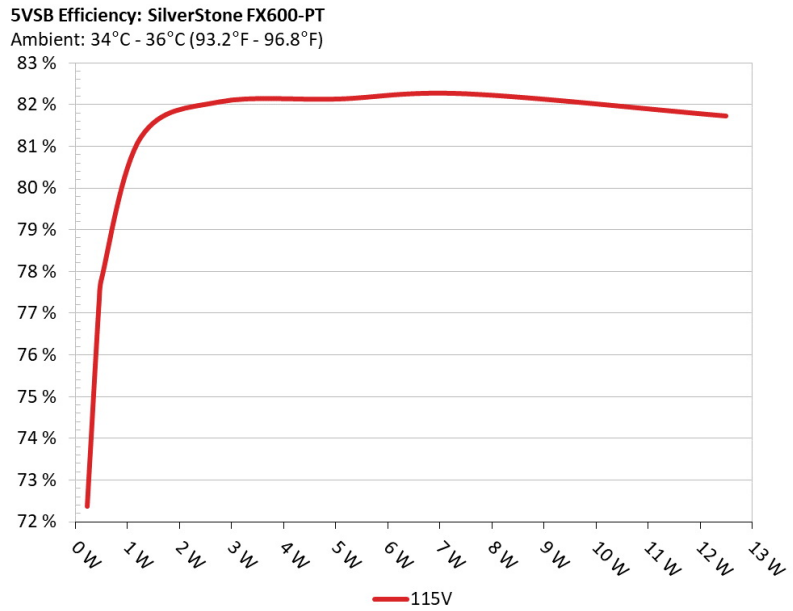
EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE



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



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	0.227W	72.37%	0.025
	5.041V	0.314W		115.18V
2	0.09A	0.453W	77.249%	0.047
	5.039V	0.586W		115.18V
3	0.55A	2.767W	82.068%	0.214
	5.031V	3.372W		115.19V
4	1A	5.024W	82.136%	0.295
	5.024V	6.116W		115.19V
5	1.5A	7.524W	82.26%	0.341
	5.016V	9.146W		115.19V
6	2.5A	12.489W	81.73%	0.387
	4.996V	15.28W		115.19V

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

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115V

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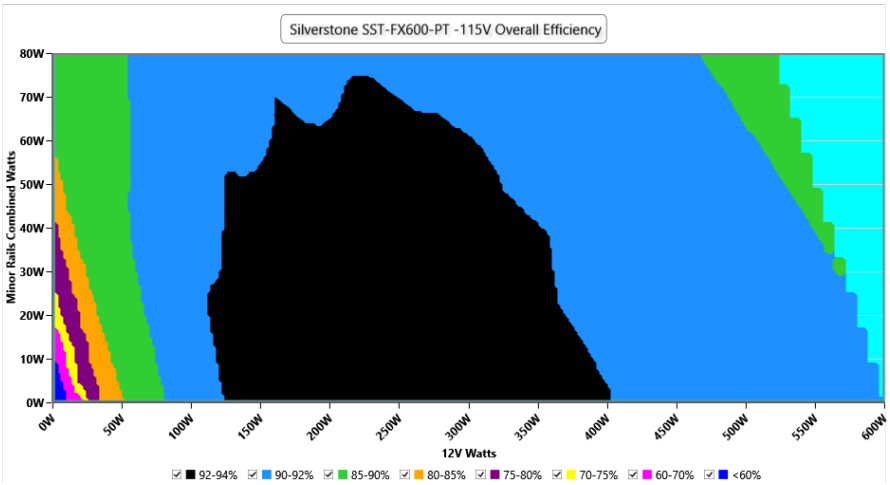
EFFICIENCY GRAPH 115V



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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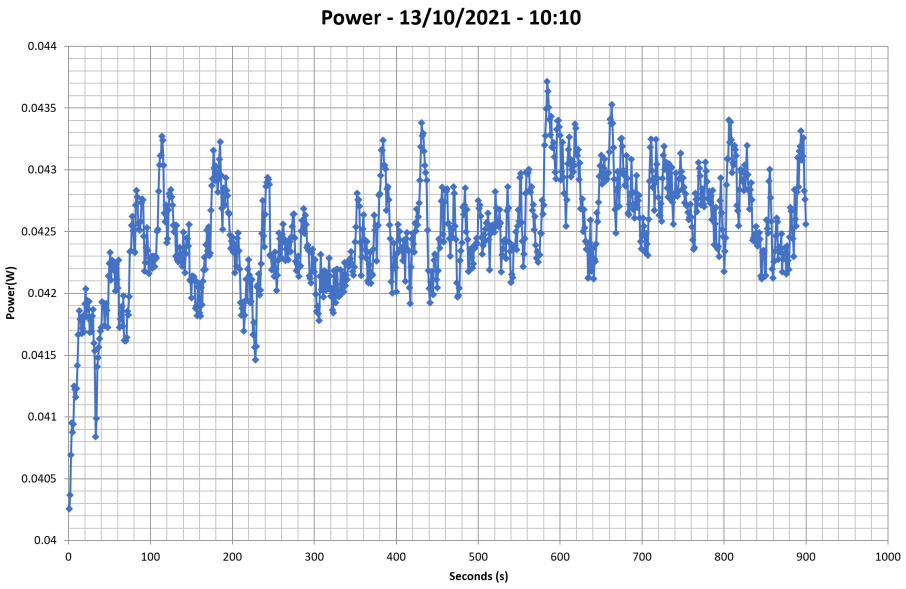
VAMPIRE POWER -115V



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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10-110% LOAD TESTS 115V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Temps (In/Out)	PF/AC Volts
10%	3.190A	1.99A	1.995A	0.996A	59.989	86.939%	45.17°C	0.94
	12.033V	5.026V	3.308V	5.018V	69.001		40.41°C	115.17V
20%	7.400A	2.99A	3A	1.198A	119.917	90.934%	46.27°C	0.98
	12.029V	5.016V	3.299V	5.007V	131.872		40.86°C	115.17V
30%	11.967A	3.494A	3.509A	1.401A	179.947	92.183%	47.57°C	0.99
	12.024V	5.009V	3.292V	4.997V	195.206		41.58°C	115.17V
40%	16.536A	3.999A	4.02A	1.604A	239.982	92.386%	48.13°C	0.994
	12.021V	5.001V	3.284V	4.987V	259.762		41.71°C	115.16V
50%	20.758A	5.009A	5.039A	1.809A	299.931	92.288%	49.71°C	0.996
	12.016V	4.992V	3.274V	4.975V	324.993		42.71°C	115.16V
60%	24.986A	6.022A	6.065A	2A	359.886	91.811%	50.96°C	0.997
	12.013V	4.982V	3.265V	4.963V	391.985		43.23°C	115.16V
70%	29.183A	7.045A	7.099A	2.222A	419.372	91.107%	52.32°C	0.998
	12.003V	4.969V	3.254V	4.949V	460.307		43.95°C	115.16V
80%	33.474A	8.002A	8.136A	2.328A	479.04	90.461%	53.93°C	0.998
	11.994V	4.958V	3.244V	4.938V	529.555		44.92°C	115.16V
90%	38.098A	8.588A	8.651A	2.434A	539.159	89.926%	55.31°C	0.999
	11.987V	4.948V	3.235V	4.928V	599.559		45.52°C	115.15V
100%	42.796A	9.109A	9.201A	2.54A	599.796	89.368%	56.11°C	0.999
	11.978V	4.939V	3.227V	4.919V	671.154		45.86°C	115.14V
110%	47.106A	10.144A	10.349A	2.546A	659.659	88.732%	57.74°C	0.999
	11.971V	4.928V	3.216V	4.908V	743.426		46.77°C	115.14V
CL1	0.114A	9.62A	9.675A	0.001A	81.263	87.267%	49.87°C	0.963
	12.030V	4.999V	3.286V	5.014V	93.12		42.85°C	115.17V
CL2	0.114A	14.981A	0A	0.001A	76.379	86.452%	51.79°C	0.96
	12.035V	5.006V	3.296V	5.025V	88.349		43.29°C	115.17V
CL3	0.114A	0A	15.017A	0A	50.866	82.491%	53.21°C	0.929
	12.033V	5.024V	3.296V	5.021V	61.663		44.01°C	115.17V
CL4	49.996A	0.003A	0.004A	0.006A	599.865	90.112%	56.27°C	0.999
	11.997V	4.978V	3.259V	4.982V	665.691		45.97°C	115.14V

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20-80W LOAD TESTS 115V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Temps (In/Out)	PF/AC Volts
20W	1.233A	0.496A	0.497A	0.198A	19.99	72.645%	39.84°C	0.708
	12.033V	5.038V	3.319V	5.039V	27.52		37.4°C	115.18V
40W	2.716A	0.695A	0.697A	0.298A	39.989	80.678%	41.44°C	0.9
	12.032V	5.035V	3.316V	5.035V	49.566		38.35°C	115.18V
60W	4.200A	0.895A	0.897A	0.398A	59.988	87.894%	42.82°C	0.939
	12.030V	5.028V	3.311V	5.028V	68.25		39.14°C	115.17V
80W	5.677A	1.094A	1.097A	0.497A	79.93	89.724%	43.87°C	0.961
	12.032V	5.027V	3.309V	5.025V	89.084		39.78°C	115.17V

RIPPLE MEASUREMENTS 115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	24.12mV	18.75mV	23.81mV	32.03mV	Pass
20% Load	13.21mV	23.22mV	28.92mV	36.74mV	Pass
30% Load	15.74mV	25.00mV	32.56mV	40.63mV	Pass
40% Load	17.67mV	28.15mV	36.00mV	44.22mV	Pass
50% Load	19.85mV	31.30mV	39.69mV	46.86mV	Pass
60% Load	21.82mV	34.81mV	43.83mV	50.35mV	Fail
70% Load	25.67mV	40.96mV	51.37mV	56.57mV	Fail
80% Load	26.78mV	43.55mV	52.48mV	60.42mV	Fail
90% Load	28.10mV	45.79mV	56.27mV	64.51mV	Fail
100% Load	34.16mV	52.46mV	62.28mV	69.28mV	Fail
110% Load	36.63mV	57.57mV	65.27mV	73.15mV	Fail
Crossload1	19.89mV	27.28mV	30.63mV	19.11mV	Pass
Crossload2	12.96mV	26.88mV	23.36mV	17.81mV	Pass
Crossload3	23.21mV	18.19mV	31.50mV	16.09mV	Pass
Crossload4	32.69mV	45.42mV	51.09mV	47.72mV	Fail

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Top side

Power specifications label

CERTIFICATIONS 115V

Aristeidis Bitziopoulos
Lab Director

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