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

SilverStone SFX 300W

Lab ID#: 403
Receipt Date: Jul 30, 2018
Test Date: Aug 3, 2018

Report:
Report Date: Aug 6, 2018

DUT INFORMATION

Brand	SilverStone
Manufacturer (OEM)	Sirfa
Series	SFX
Model Number	ST30SF
Serial Number	162991300BR31F02001073
DUT Notes	

DUT SPECIFICATIONS

Rated Voltage (Vrms)	100-240
Rated Current (Arms)	5.5
Rated Frequency (Hz)	50-60
Rated Power (W)	300
Type	SFX
Cooling	92mm Duro Bearing Fan (RL4Z S0921512M)
Semi-Passive Operation	✗
Cable Design	Fixed cables

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	16	16	25	3	0.3
	Watts	90		300	15	3.6
Total Max. Power (W)		300				

CABLES AND CONNECTORS

Captive Cables

Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 20+4 pin (300mm)	1	1	20-22AWG	No
4+4 pin EPS12V (400mm)	1	1	20AWG	No
6+2 pin PCIe (400mm)	1	1	20AWG	No
SATA (300mm+200mm+100mm)	1	3	20AWG	No
4 pin Molex (300mm+200mm) / FDD(+200mm)	1	2 / 1	20-22AWG	No
AC Power Cord (1400mm) - C13 coupler	1	1	18AWG	-

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RESULTS

Temperature Range (°C /°F)	30-32 / 86-89.6 (+-2°C / +- 3.6°F)
ErP Lot 3/6 Ready	ErP Lot 6 2010: ✓ ErP Lot 6 2013: ✓ ErP Lot 3 2014 & CEC: Partially
(EU) No 617/2013 Compliance	✓

115V

Average Efficiency	84.575%
Efficiency With 10W (≤500W) or 2% (>500W)	0.000
Average Efficiency 5VSB	77.178%
Standby Power Consumption (W)	0.0760431
Average PF	0.981
Avg Noise Output	16.28 dB(A)
Efficiency Rating (ETA)	BRONZE
Noise Rating (LAMBDA)	A+

230V

Average Efficiency	86.497%
Average Efficiency 5VSB	74.946%
Standby Power Consumption (W)	0.1840760
Average PF	0.922
Avg Noise Output	14.02 dB(A)
Efficiency Rating (ETA)	BRONZE
Noise Rating (LAMBDA)	A++

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 4955-A, Bruel & Kjaer Type 4189	
Data Loggers	Picoscope TC-08 x2, Labjack U3-HV x2	

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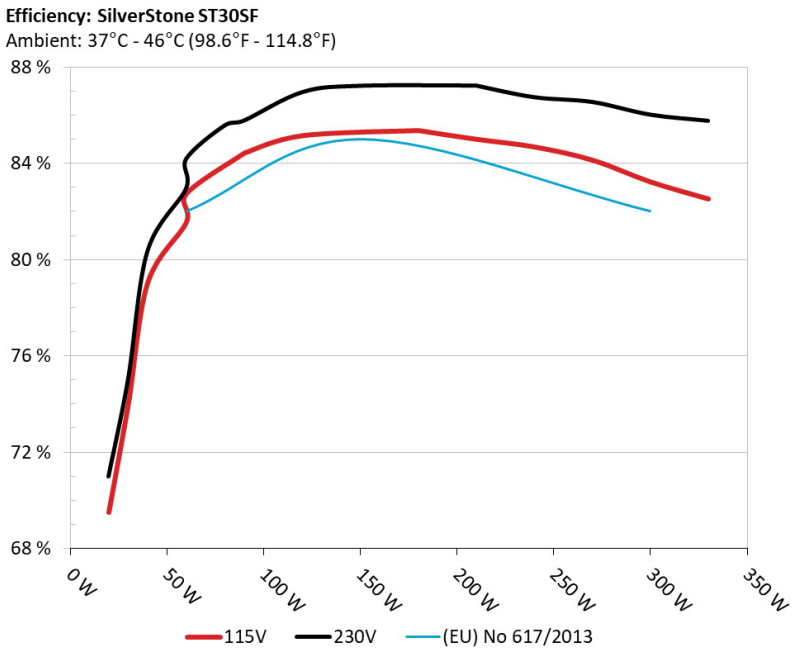
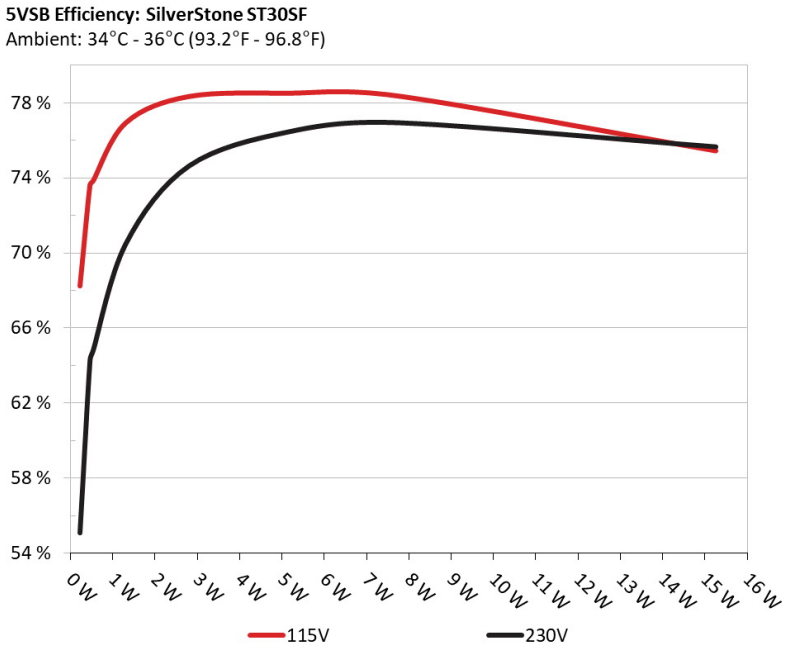
EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE



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	0.042A	0.217	68.239%	0.054
	5.172V	0.318		115.09V
2	0.087A	0.452	73.616%	0.099
	5.172V	0.614		115.09V
3	0.542A	2.798	78.353%	0.307
	5.159V	3.571		115.26V
4	1.002A	5.157	78.529%	0.359
	5.145V	6.567		115.29V
5	1.502A	7.705	78.390%	0.386
	5.130V	9.829		115.10V
6	3.001A	15.259	75.454%	0.425
	5.084V	20.223		115.30V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.042A	0.217	55.076%	0.020
	5.173V	0.394		230.23V
2	0.088A	0.453	64.255%	0.036
	5.172V	0.705		230.23V
3	0.543A	2.799	74.640%	0.162
	5.159V	3.750		230.23V
4	1.002A	5.158	76.460%	0.236
	5.146V	6.746		230.23V
5	1.502A	7.706	76.945%	0.282
	5.131V	10.015		230.23V
6	3.001A	15.265	75.659%	0.345
	5.086V	20.176		230.23V

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115V

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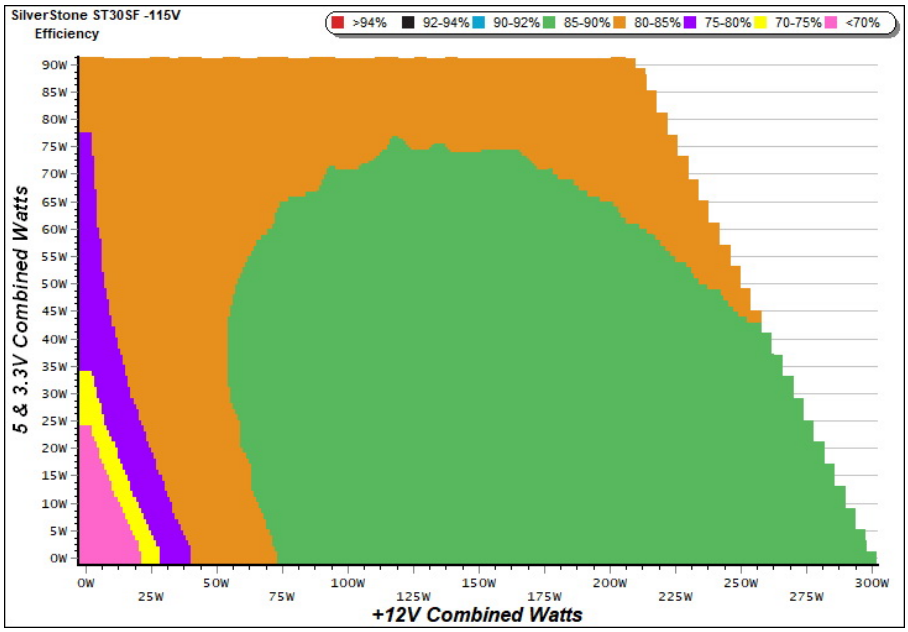
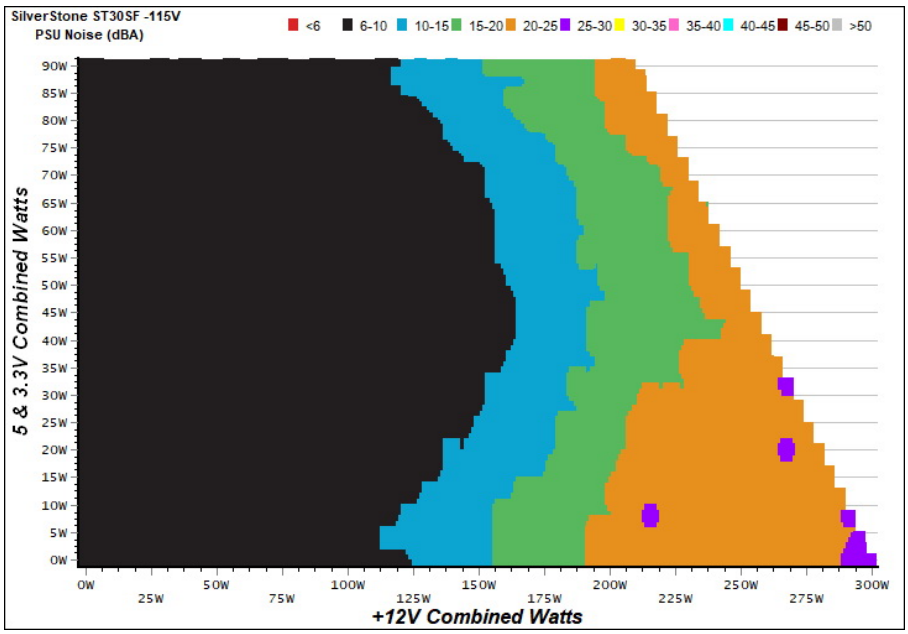
EFFICIENCY GRAPH 115V



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

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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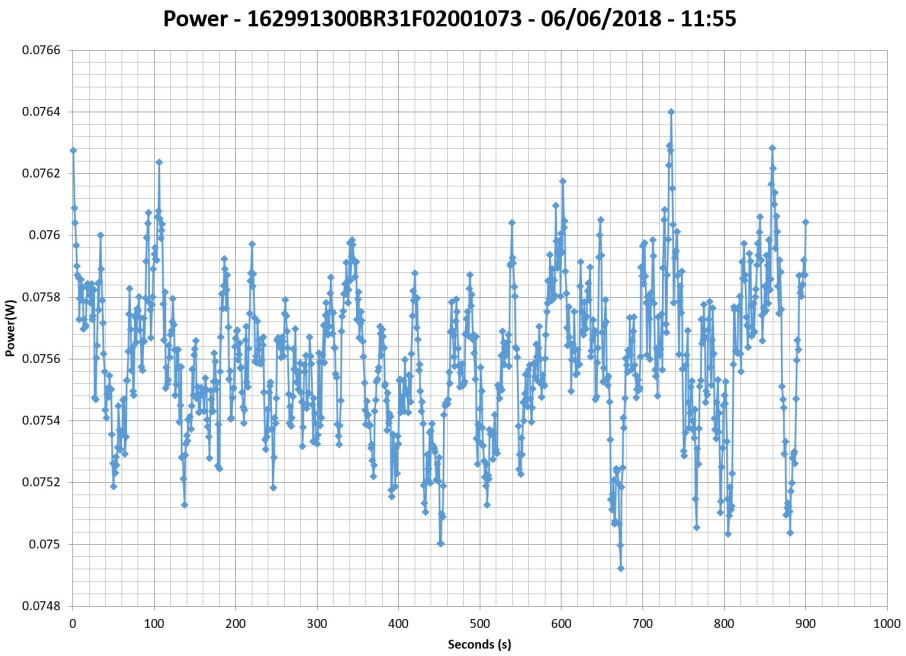
VAMPIRE POWER -115V



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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230V

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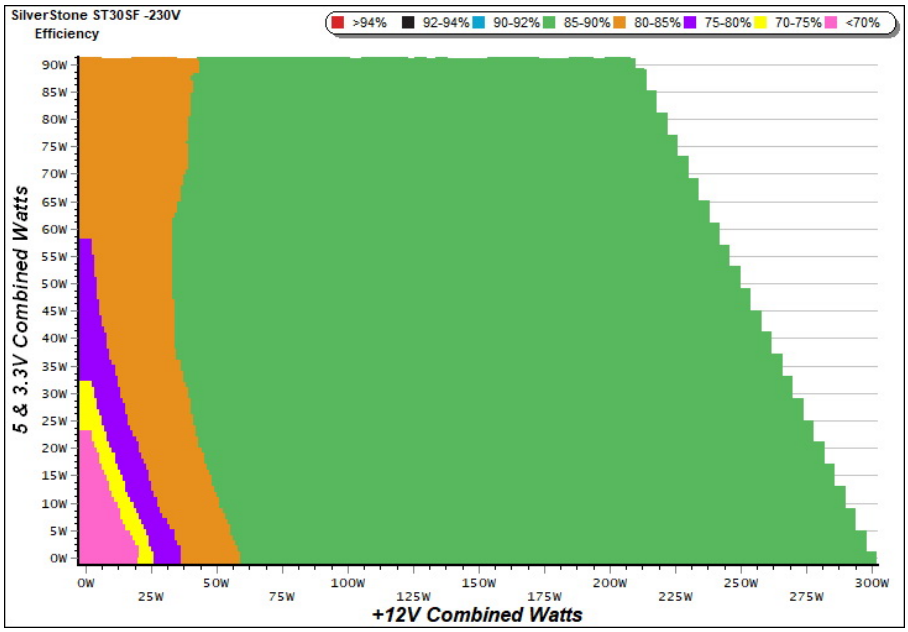
EFFICIENCY GRAPH 230V



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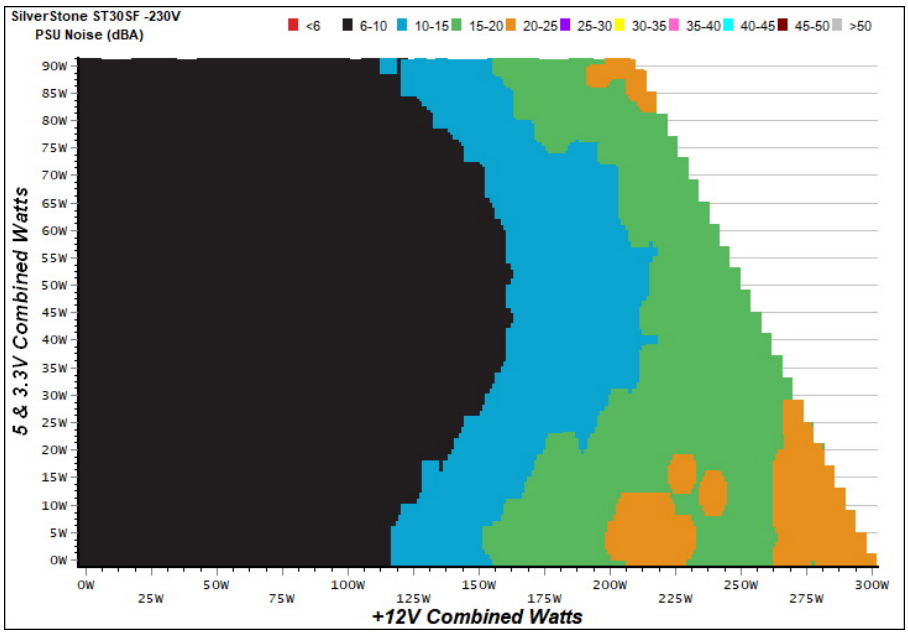

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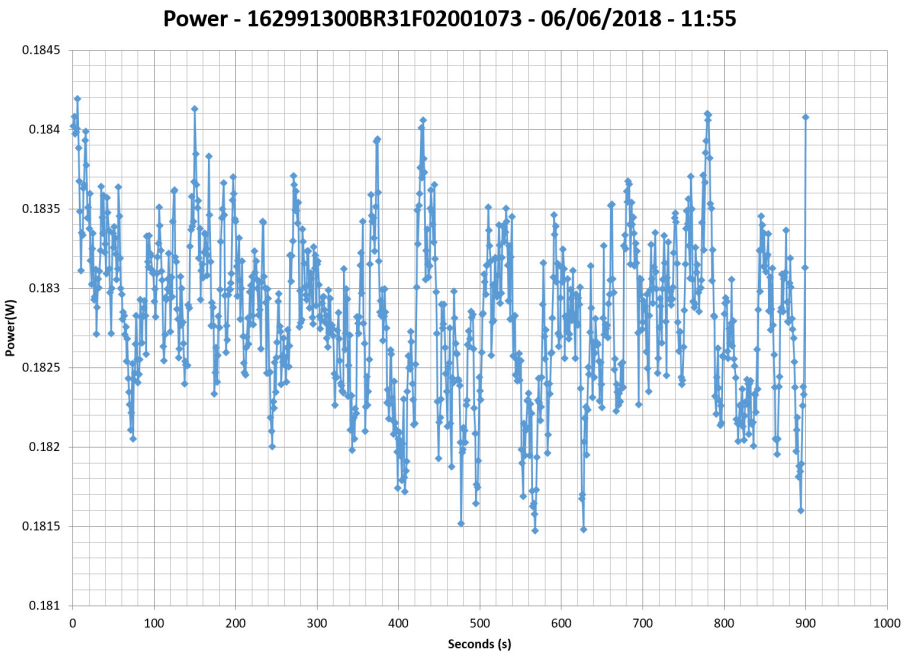
VAMPIRE POWER -230V



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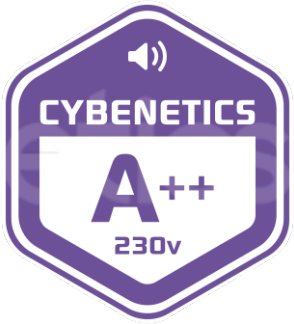
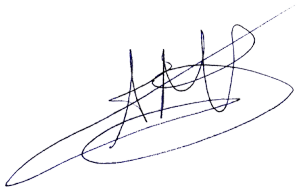
Top side

Power specifications label

CERTIFICATIONS 115V

CERTIFICATIONS 230V





Aris Mpitsiopoulos
Lab Director

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