EFFICIENCY AND NOISE LEVEL CERTIFICATIONS

Anex

SilverStone Strider Platinum 550W

Lab ID#: SL55001972
Receipt Date: Oct 8, 2021
Test Date: Feb 3, 2022

Report: 22PS1972A
Report Date: Feb 4, 2022

DUT INFORMATION

Brand	SilverStone
Manufacturer (OEM)	Sirfa / High Power
Series	Strider Platinum
Model Number	SST-ST55F-PT
Serial Number	154591550PT11F02000591
DUT Notes	

DUT SPECIFICATIONS

Rated Voltage (Vrms)	100-240
Rated Current (Arms)	8
Rated Frequency (Hz)	50-60
Rated Power (W)	550
Type	ATX12V
Cooling	120mm Sleeve Bearing Fan (S1202512L)
Semi-Passive Operation	✓
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
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓

115V

Average Efficiency	89.387%
Efficiency With 10W (≤500W) or 2% (>500W)	61.750
Average Efficiency 5VSB	79.209%
Standby Power Consumption (W)	0.0765196
Average PF	0.989
Avg Noise Output	22.49 dB(A)
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	A

230V

Average Efficiency	90.907%
Average Efficiency 5VSB	77.634%
Standby Power Consumption (W)	0.1415350
Average PF	0.944
Avg Noise Output	21.12 dB(A)
Efficiency Rating (ETA)	GOLD
Noise Rating (LAMBDA)	A

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	20	20	45.9	3	0.3
	Watts	105		550	15	3.6
Total Max. Power (W)		550				

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

Hold-Up Time (ms)	13.8
AC Loss to PWR_OK Hold Up Time (ms)	11.8
PWR_OK Inactive to DC Loss Delay (ms)	2

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CABLES AND CONNECTORS

Modular Cables

Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 20+4 pin (550mm)	1	1	18-22AWG	No
4+4 pin EPS12V (750mm)	1	1	18AWG	No
6+2 pin PCIe (550mm)	2	2	18AWG	No
SATA (600mm+150mm+150mm+150mm)	2	8	18AWG	No
4-pin Molex (600mm+150mm+150mm) / FDD (+150mm)	2	6 / 2	18-22AWG	No
AC Power Cord (1400mm) - C13 coupler	1	1	18AWG	-

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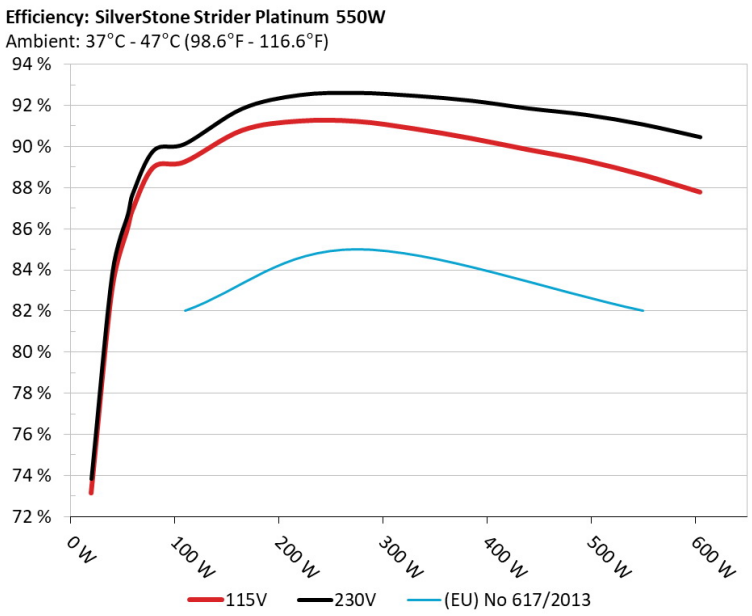
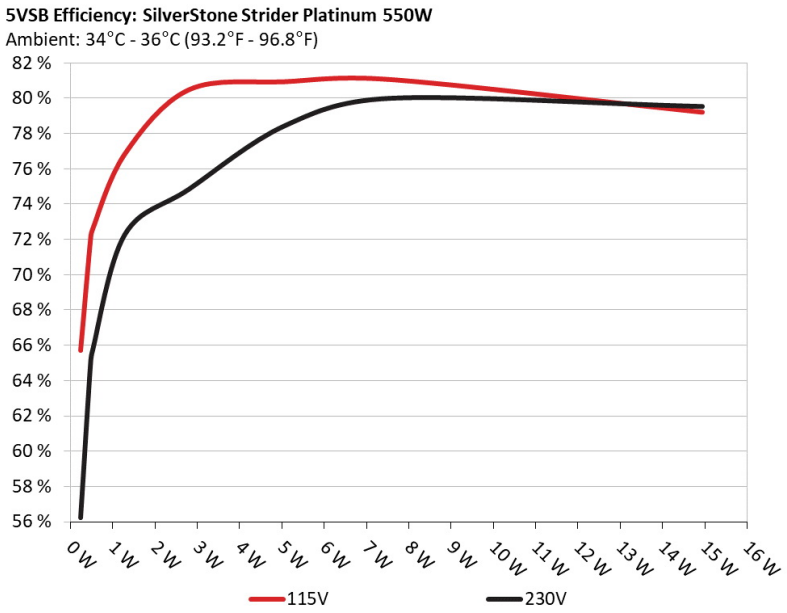
EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE



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	0.23W	65.714%	0.047
	5.1V	0.35W		115.12V
2	0.09A	0.459W	71.87%	0.083
	5.098V	0.639W		115.12V
3	0.55A	2.794W	80.476%	0.259
	5.078V	3.472W		115.13V
4	1A	5.061W	80.927%	0.306
	5.06V	6.254W		115.13V
5	1.5A	7.563W	81.05%	0.33
	5.041V	9.331W		115.13V
6	3.001A	14.932W	79.199%	0.368
	4.976V	18.854W		115.13V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.23W	56.224%	0.018
	5.1V	0.409W		230.27V
2	0.09A	0.459W	64.778%	0.03
	5.097V	0.709W		230.27V
3	0.55A	2.791W	74.857%	0.137
	5.074V	3.728W		230.27V
4	1A	5.058W	78.457%	0.196
	5.057V	6.447W		230.27V
5	1.5A	7.559W	80.016%	0.234
	5.038V	9.447W		230.27V
6	3.001A	14.936W	79.549%	0.288
	4.978V	18.776W		230.27V

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115V

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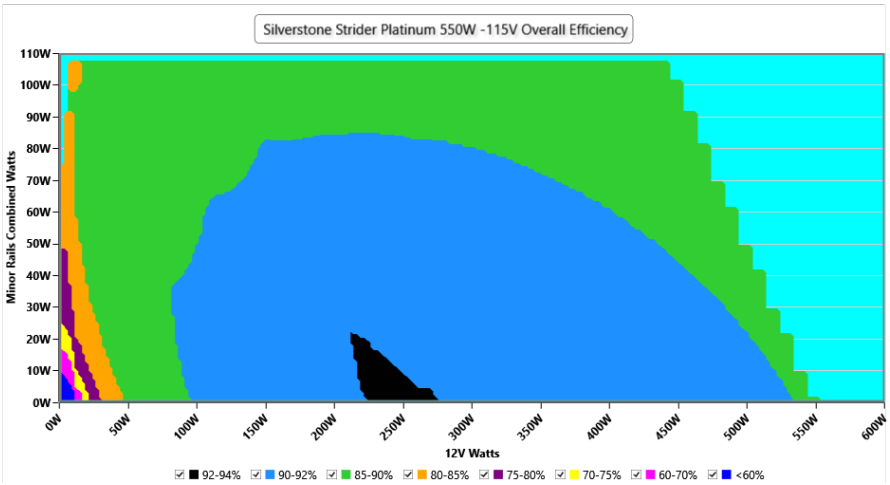
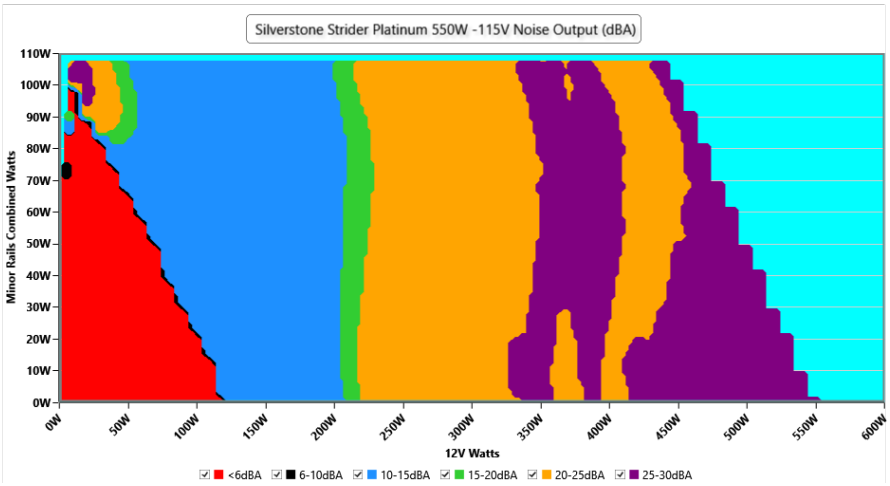
EFFICIENCY GRAPH 115V



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 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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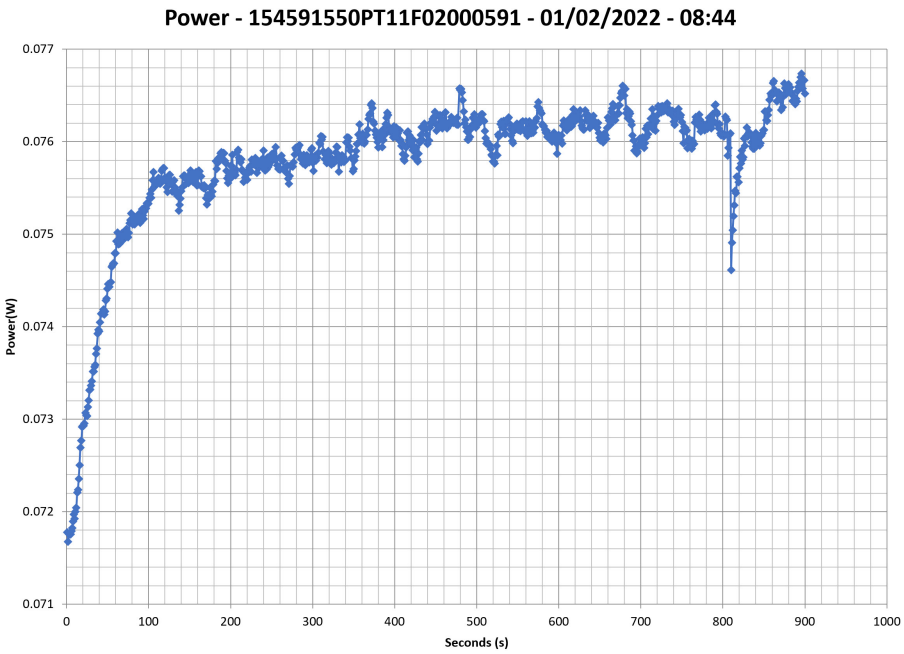
VAMPIRE POWER -115V



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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10-110% LOAD TESTS 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%	2.732A	1.963A	1.961A	0.987A	54.995	86.018%	0	<6.0	45.27°C	0.947
	12.225V	5.092V	3.366V	5.064V	63.935				40.36°C	115.1V
20%	6.477A	2.954A	2.954A	1.189A	109.929	89.255%	1233	39.3	40.63°C	0.977
	12.202V	5.077V	3.35V	5.045V	123.162				45.87°C	115.1V
30%	10.577A	3.453A	3.458A	1.392A	164.927	90.785%	1413	36.6	41.22°C	0.99
	12.186V	5.067V	3.34V	5.029V	181.668				47°C	115.1V
40%	14.695A	3.955A	3.964A	1.596A	220.007	91.236%	1472	34.9	41.68°C	0.993
	12.168V	5.057V	3.329V	5.013V	241.141				48.04°C	115.1V
50%	18.479A	4.955A	4.974A	1.801A	274.998	91.222%	1482	35.2	42.24°C	0.997
	12.148V	5.045V	3.317V	4.998V	301.461				49.25°C	115.09V
60%	22.275A	5.961A	5.991A	2A	329.959	90.866%	1541	36.3	42.79°C	0.996
	12.130V	5.033V	3.305V	4.983V	363.127				50.36°C	115.09V
70%	26.085A	6.971A	7.016A	2.215A	385.008	90.393%	1600	36.9	43.35°C	0.996
	12.110V	5.021V	3.293V	4.968V	425.929				51.42°C	115.09V
80%	29.914A	7.988A	8.046A	2.321A	439.591	89.849%	1620	37.1	43.93°C	0.995
	12.091V	5.009V	3.28V	4.956V	489.255				52.71°C	115.09V
90%	34.138A	8.505A	8.564A	2.428A	494.6	89.316%	1626	37.3	44.09°C	0.996
	12.072V	4.998V	3.269V	4.943V	553.766				53.29°C	115.09V
100%	38.174A	9.026A	9.118A	3.056A	549.812	88.619%	1638	37.6	45.22°C	0.996
	12.053V	4.987V	3.257V	4.909V	620.425				55.18°C	115.09V
110%	42.097A	10.053A	10.262A	3.061A	604.832	87.783%	1640	37.7	46.65°C	0.996
	12.033V	4.974V	3.244V	4.901V	689.011				57.45°C	115.09V
CL1	0.115A	12.506A	12.514A	0A	106.305	83.553%	1611	37.1	42.55°C	0.98
	12.193V	5.055V	3.332V	5.119V	127.23				49.24°C	115.11V
CL2	0.114A	19.773A	0A	0A	101.413	82.385%	1518	36.0	43.24°C	0.978
	12.202V	5.059V	3.318V	5.164V	123.098				51.18°C	115.11V
CL3	0.114A	0A	19.59A	0A	67.382	76.768%	1133	28.0	44.4°C	0.965
	12.201V	5.074V	3.368V	5.07V	87.774				54.22°C	115.11V
CL4	45.556A	0A	0A	0A	549.664	89.801%	1621	37.1	45.92°C	0.996
	12.066V	5.016V	3.289V	5.013V	612.089				56.16°C	115.09V

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SilverStone Strider Platinum 550W

20-80W LOAD TESTS 115V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
20W	1.214A	0.49A	0.489A	0.196A	19.994	73.156%	0	<6.0	40.18°C	0.848
	12.233V	5.1V	3.374V	5.094V	27.331				37.07°C	115.09V
40W	2.673A	0.687A	0.685A	0.295A	39.994	83.041%	0	<6.0	41.31°C	0.92
	12.228V	5.097V	3.371V	5.089V	48.162				37.78°C	115.09V
60W	4.134A	0.883A	0.882A	0.393A	59.993	86.956%	0	<6.0	42.39°C	0.95
	12.223V	5.094V	3.368V	5.083V	68.993				38.32°C	115.09V
80W	5.591A	1.08A	1.079A	0.492A	79.937	88.994%	0	<6.0	43.76°C	0.968
	12.218V	5.091V	3.365V	5.077V	89.823				39.3°C	115.09V

RIPPLE MEASUREMENTS 115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	8.19mV	9.81mV	15.96mV	5.32mV	Pass
20% Load	9.98mV	10.68mV	18.77mV	6.65mV	Pass
30% Load	9.67mV	12.36mV	17.23mV	6.55mV	Pass
40% Load	10.64mV	12.97mV	18.71mV	6.86mV	Pass
50% Load	10.59mV	14.51mV	18.61mV	8.14mV	Pass
60% Load	12.13mV	15.42mV	20.76mV	8.95mV	Pass
70% Load	13.41mV	19.31mV	22.96mV	11.82mV	Pass
80% Load	15.45mV	20.12mV	24.85mV	14.48mV	Pass
90% Load	16.12mV	20.27mV	23.78mV	14.28mV	Pass
100% Load	23.51mV	23.92mV	27.48mV	15.58mV	Pass
110% Load	26.19mV	24.14mV	29.62mV	15.30mV	Pass
Crossload1	11.40mV	12.40mV	20.80mV	5.90mV	Pass
Crossload2	8.85mV	10.93mV	17.08mV	5.17mV	Pass
Crossload3	8.60mV	9.45mV	17.03mV	4.76mV	Pass
Crossload4	23.72mV	22.00mV	26.59mV	13.64mV	Pass

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SilverStone Strider Platinum 550W

230V

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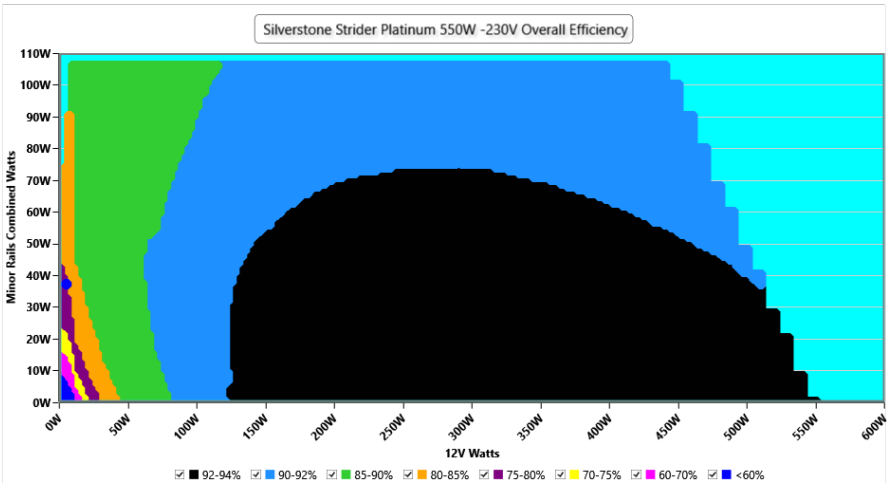
EFFICIENCY GRAPH 230V



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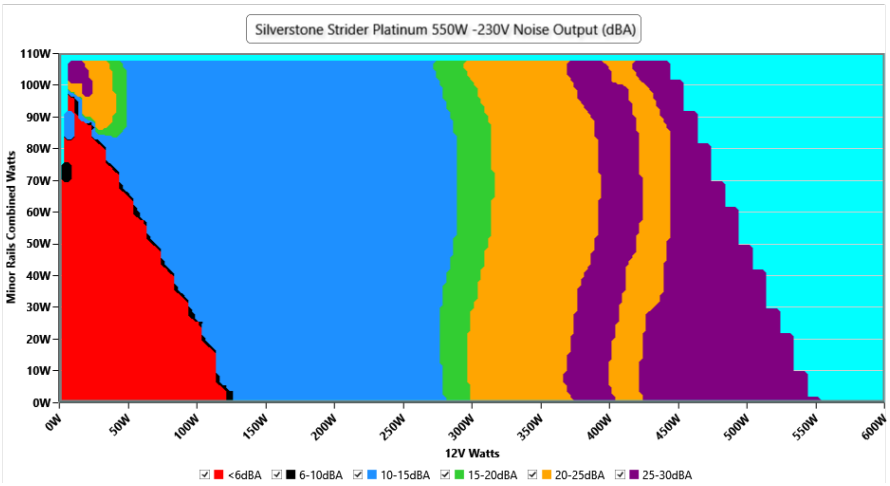
NOISE GRAPH 230V



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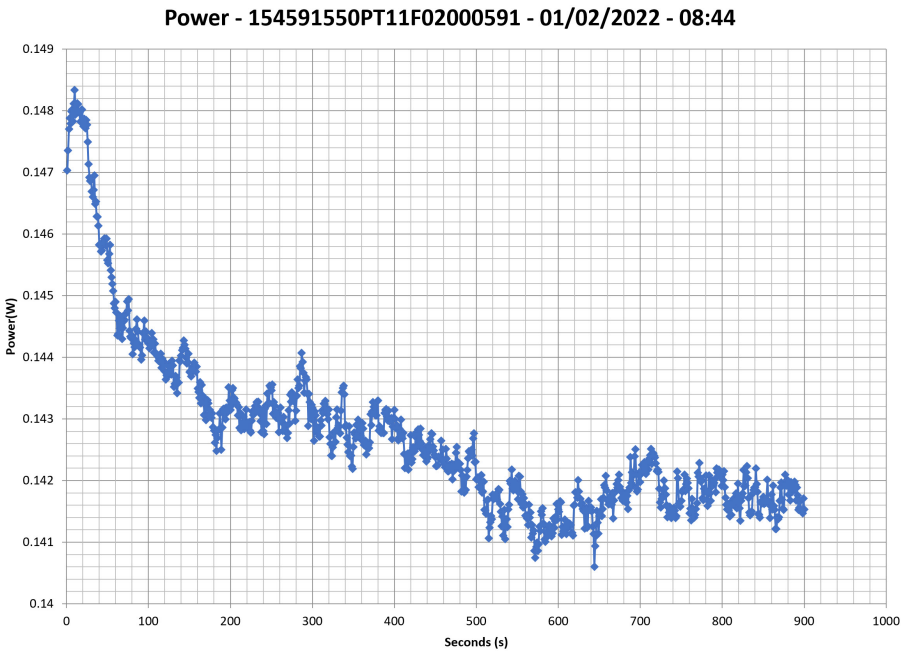
VAMPIRE POWER -230V



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10-110% LOAD TESTS 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%	2.732A	1.963A	1.96A	0.987A	54.991	86.701%	0	<6.0	45.27°C	0.753
	12.224V	5.092V	3.366V	5.064V	63.427				40.02°C	230.2V
20%	6.475A	2.954A	2.953A	1.189A	109.916	90.121%	1399	37.4	40.8°C	0.892
	12.204V	5.078V	3.352V	5.046V	121.966				46.53°C	230.2V
30%	10.576A	3.453A	3.457A	1.392A	164.912	91.826%	1405	37.1	41.06°C	0.934
	12.184V	5.066V	3.34V	5.029V	179.592				47.34°C	230.21V
40%	14.695A	3.955A	3.964A	1.596A	219.987	92.485%	1450	34.2	41.8°C	0.959
	12.167V	5.056V	3.329V	5.013V	237.863				48.79°C	230.21V
50%	18.477A	4.955A	4.973A	1.801A	274.976	92.591%	1511	35.9	42.42°C	0.966
	12.149V	5.045V	3.317V	4.998V	296.981				49.78°C	230.2V
60%	22.274A	5.961A	5.99A	2A	329.945	92.452%	1555	36.5	42.77°C	0.973
	12.130V	5.033V	3.305V	4.983V	356.883				50.68°C	230.21V
70%	26.082A	6.972A	7.016A	2.215A	384.981	92.212%	1588	36.8	43.39°C	0.98
	12.110V	5.021V	3.293V	4.967V	417.497				51.95°C	230.21V
80%	29.908A	7.988A	8.046A	2.321A	439.53	91.838%	1612	37.2	43.8°C	0.984
	12.091V	5.009V	3.28V	4.956V	478.596				52.68°C	230.21V
90%	34.131A	8.505A	8.563A	2.428A	494.545	91.529%	1620	37.3	44.09°C	0.987
	12.073V	4.998V	3.269V	4.943V	540.317				53.48°C	230.21V
100%	38.169A	9.026A	9.117A	3.056A	549.76	91.059%	1638	37.7	45.88°C	0.991
	12.053V	4.986V	3.257V	4.909V	603.739				55.86°C	230.21V
110%	42.090A	10.054A	10.261A	3.061A	604.785	90.444%	1640	37.8	46.55°C	0.993
	12.033V	4.974V	3.245V	4.901V	668.685				57.37°C	230.21V
CL1	0.115A	12.506A	12.513A	0A	106.299	84.439%	1594	36.8	42.81°C	0.889
	12.193V	5.054V	3.332V	5.119V	125.887				49.74°C	230.22V
CL2	0.114A	19.773A	0A	0A	101.41	83.319%	1494	35.5	43.74°C	0.883
	12.202V	5.058V	3.318V	5.163V	121.713				51.51°C	230.22V
CL3	0.114A	0A	19.59A	0A	67.379	77.502%	1063	24.6	44.38°C	0.825
	12.201V	5.073V	3.368V	5.07V	86.938				52.85°C	230.22V
CL4	45.554A	0A	0A	0A	549.682	92.21%	1625	37.3	45.96°C	0.99
	12.067V	5.015V	3.288V	5.012V	596.118				55.6°C	230.22V

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Anex

SilverStone Strider Platinum 550W

20-80W LOAD TESTS 230V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
20W	1.214A	0.49A	0.489A	0.196A	19.989	73.854%	0	<6.0	40.23°C	0.53
	12.233V	5.1V	3.375V	5.094V	27.065				37.06°C	230.18V
40W	2.672A	0.687A	0.685A	0.295A	39.989	83.827%	0	<6.0	41.05°C	0.67
	12.228V	5.097V	3.371V	5.089V	47.705				37.52°C	230.19V
60W	4.134A	0.883A	0.881A	0.393A	59.988	87.747%	0	<6.0	43.02°C	0.765
	12.222V	5.094V	3.368V	5.083V	68.364				38.82°C	230.19V
80W	5.591A	1.08A	1.078A	0.492A	79.926	89.805%	0	<6.0	43.76°C	0.835
	12.218V	5.091V	3.365V	5.077V	89				39.21°C	230.2V

RIPPLE MEASUREMENTS 230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	8.65mV	9.09mV	17.69mV	5.07mV	Pass
20% Load	8.85mV	10.26mV	18.46mV	5.89mV	Pass
30% Load	9.31mV	10.98mV	18.56mV	6.14mV	Pass
40% Load	8.91mV	11.80mV	19.02mV	6.45mV	Pass
50% Load	10.64mV	12.82mV	18.67mV	7.62mV	Pass
60% Load	11.26mV	14.20mV	21.68mV	8.39mV	Pass
70% Load	11.10mV	17.62mV	23.32mV	11.98mV	Pass
80% Load	14.02mV	18.85mV	23.01mV	13.87mV	Pass
90% Load	14.02mV	20.53mV	24.04mV	14.79mV	Pass
100% Load	21.38mV	20.88mV	29.59mV	15.06mV	Pass
110% Load	24.57mV	23.72mV	30.11mV	15.01mV	Pass
Crossload1	11.86mV	11.25mV	21.03mV	5.59mV	Pass
Crossload2	8.19mV	10.93mV	18.15mV	5.12mV	Pass
Crossload3	8.09mV	9.24mV	16.77mV	5.22mV	Pass
Crossload4	20.39mV	20.48mV	28.30mV	13.54mV	Pass

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Cybenetics offers the ETA and Lambda voluntary certification programs, through which the efficient and silent power supplies are promoted

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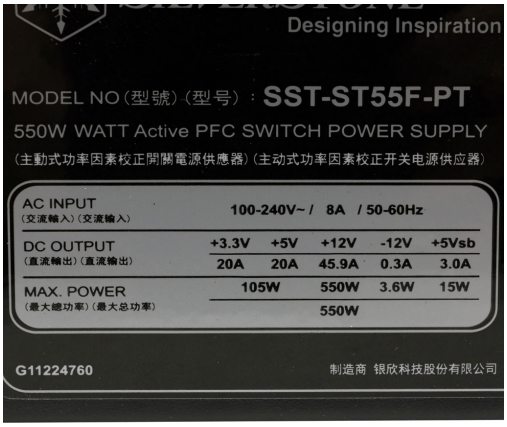
Anex

SilverStone Strider Platinum 550W

Top side



Power specifications label

CERTIFICATIONS 115V

Aristeidis Bitziopoulos
Lab Director

CERTIFICATIONS 230V

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