SILVERSTONE

SilverStone Strider Platinum 1000W

Serial Number DBSTK00PTS18480112

Lab ID SL19100005

Certification ID 25650

Test Result Report ID:

Certificate Issue Date: Jul 3, 2019

Scheme: ETA-EMI PSU

115V: CYBENETICS TITANIUM

230V: CYBENETICS PLATINUM 230v

Scheme: LAMBDA PSU

115V: CYBENETICS A

230V: CYBENETICS A 230v

Aristeidis Bitziopoulos, Certification Body General Manager

General Information

Test Equipment

Electronic Loads	Chroma 63601-5 x2 Chroma 63600-2 Chroma 63640-80-80 x10 Chroma 63610-80-20
AC Sources	Chroma 6530, APM SP300VAC4000W-P, GW Instek ASR-3500
Power Analyzers	Rohde & Schwarz HMC8015 & NPA701
Oscilloscopes	Picoscope 4444, Siglent SDS2104X PLUS
Sound Analyzer	Bruel & Kjaer 2270 G4
Microphone	Bruel & Kjaer Type 4955-A
Temperature Logger	Picoscope TC-08
Tachometer	UNI-T UT372
Multimeters	Keysight 34465A
EMI Analyzer	TekBox TBMR-110M-EU
Isolation Transformer	4kVA
UPS	FSP Champ Tower 3kVA, CyberPower OLS3000E 3kVA
Testing Methodology	Cybenetics PSU Test Protocol

DUT Information(Non-accredited measurements)

Product Identification Details	
Brand	SilverStone
Model	Strider Platinum 1000W
OEM/ODM	Enhance Electronics
Serial Number	DBSTK00PTS18480112
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	12-6
Rated Frequency (Hz)	50-60

Rated Power (W)	1000
Operating Temperature (Continuous Full Load) (°C)	
Type	ATX12V
Cable Design	Fully Modular
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
Cooling	120mm Rifle Bearing Fan (D12SH-12)
Semi-Passive Operation	✗
Cybenetics Testing Information	
Lab ID	SL19100005
Date of receipt	Feb 27, 2019
Testing Date	Jun 3, 2019
Report Issued Date	Jul 3, 2019
Engineer Name	-
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

Cables and Connectors(Non-accredited measurements)

Modular Cables				
Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 20+4 pin (600mm)	1	1	16-22AWG	No
4+4 pin EPS12V (750mm)	1	1	16AWG	No
4+4 pin EPS12V (550mm)	1	1	16AWG	No
6+2 pin PCIe (550mm+150mm)	4	8	16-18AWG	No
SATA (610mm+140mm+140mm+140mm)	2	8	18AWG	No
4 pin Molex (610mm+150mm+150mm) / FDD (+150mm)	2	6 / 2	18-22AWG	No
AC Power Cord (1400mm) - C13 coupler	1	1	16AWG	-

Power Specifications

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	25	22	83	3	0.3
	Watts	120		996	15	3.6
Total Max. Power (W)		1000				

Test Results

Temperature & Compliance Info

Temperature Range (°C /°F)	28-32 / 82.4-89.6
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓

Performance Summary

115V

Accredited	
Average Efficiency (>1450 load combinations)	91.038%
Average Noise Output (>1450 Load Combinations)	23.87dBA
Average PF (>1450 Load Combinations)	0.993
Efficiency With 10W (≤500W) or 2% (>500W) Load	68.462%
Standby Power Consumption	0.0730W
Non-Accredited	
12V Ripple (Full Load)	45.77mV
5V Ripple (Full Load)	16.35mV
3.3V Ripple (Full Load)	29.88mV
5VSB Ripple (Full Load)	23.11mV
12V Load Regulation	1.08%
5V Load Regulation	2.01%
3.3V Load Regulation	2.96%

5VSB Load Regulation	3.48%
Inrush Current	17.025A

230V

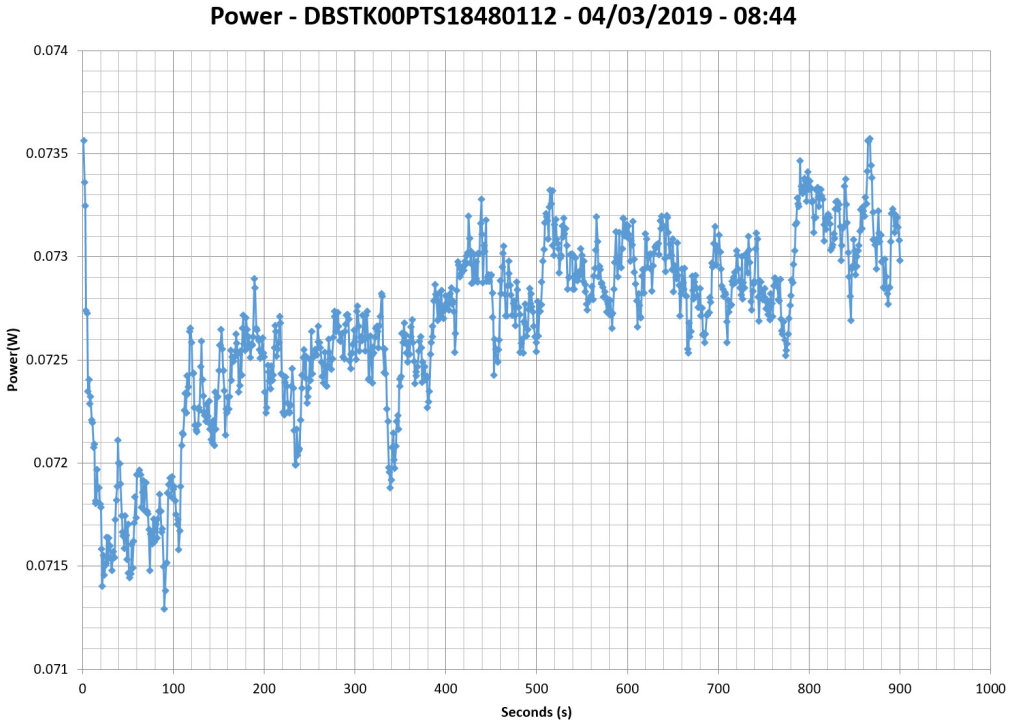
Accredited		
Average Efficiency (>1450 load combinations)	92.847%	
Average Noise Output (>1450 Load Combinations)	22.86dBA	
Average PF (>1450 Load Combinations)	0.959	
Efficiency With 10W (≤500W) or 2% (>500W) Load	-	
Standby Power Consumption	0.1090W	
Non-Accredited		
12V Ripple (Full Load)	47.13mV	
5V Ripple (Full Load)	15.70mV	
3.3V Ripple (Full Load)	30.22mV	
5VSB Ripple (Full Load)	20.94mV	
12V Load Regulation	1.11%	
5V Load Regulation	2.05%	
3.3V Load Regulation	3.14%	
5VSB Load Regulation	3.58%	
Inrush Current	8.064A	
Hold-Up Time & PWR_OK Signal	8.10ms	
AC Loss to PWR_OK Hold Up Time	29.10ms	
PWR_OK Inactive to DC Loss Delay	-21.00ms	
OPP (0.00°C / 0.00°C)	-	-

Hold-Up Time & PWR_OK Signal

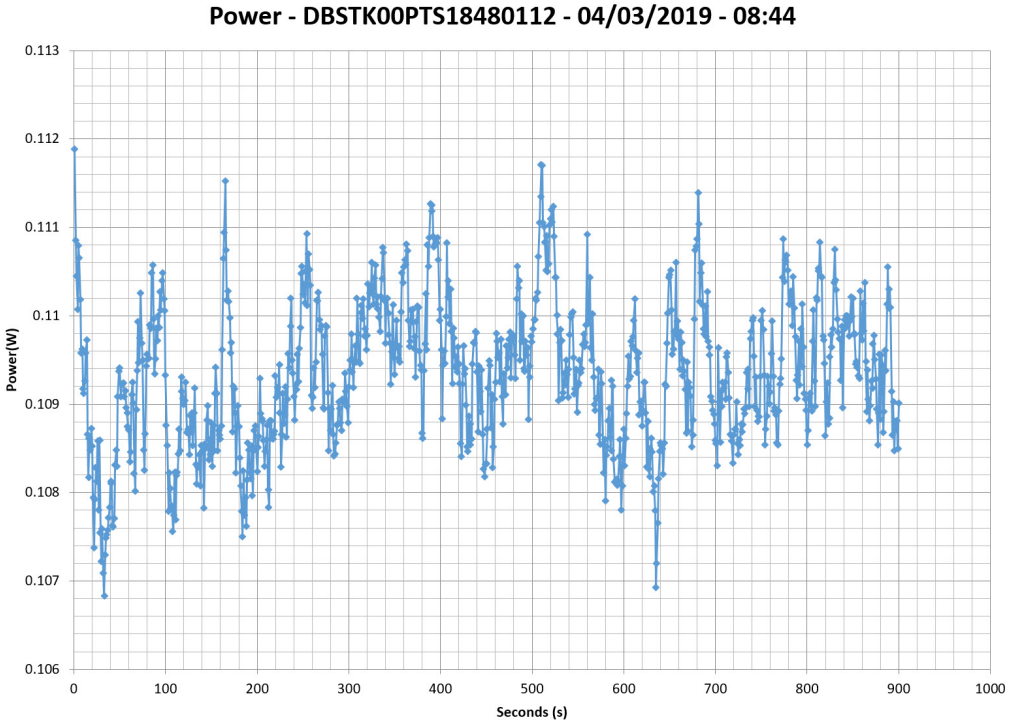
Hold-Up Time (ms)	8.1
AC Loss to PWR_OK Hold Up Time (ms)	29.1
PWR_OK Inactive to DC Loss Delay (ms)	-21

Graphs

115V

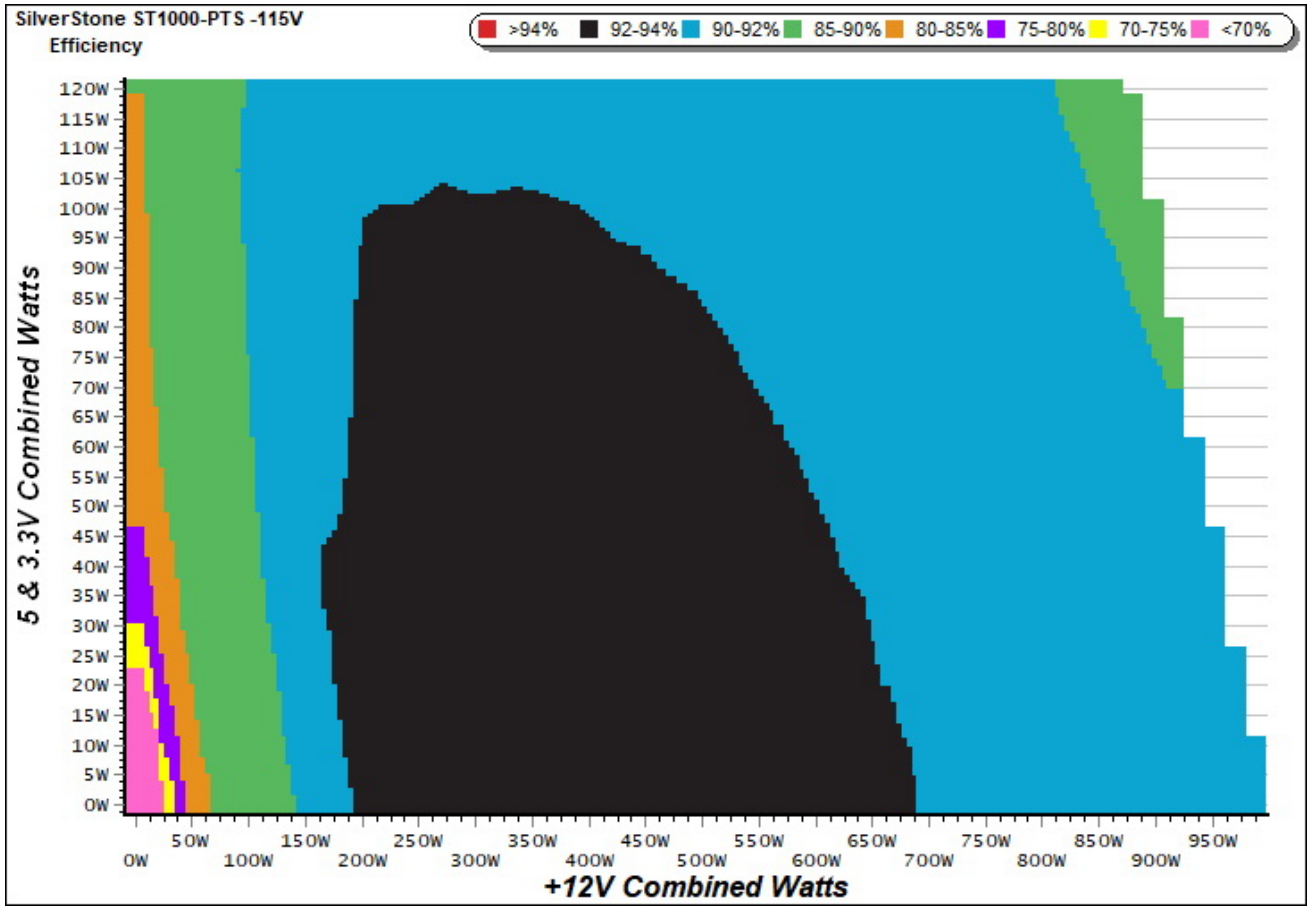


230V



Efficiency Graph

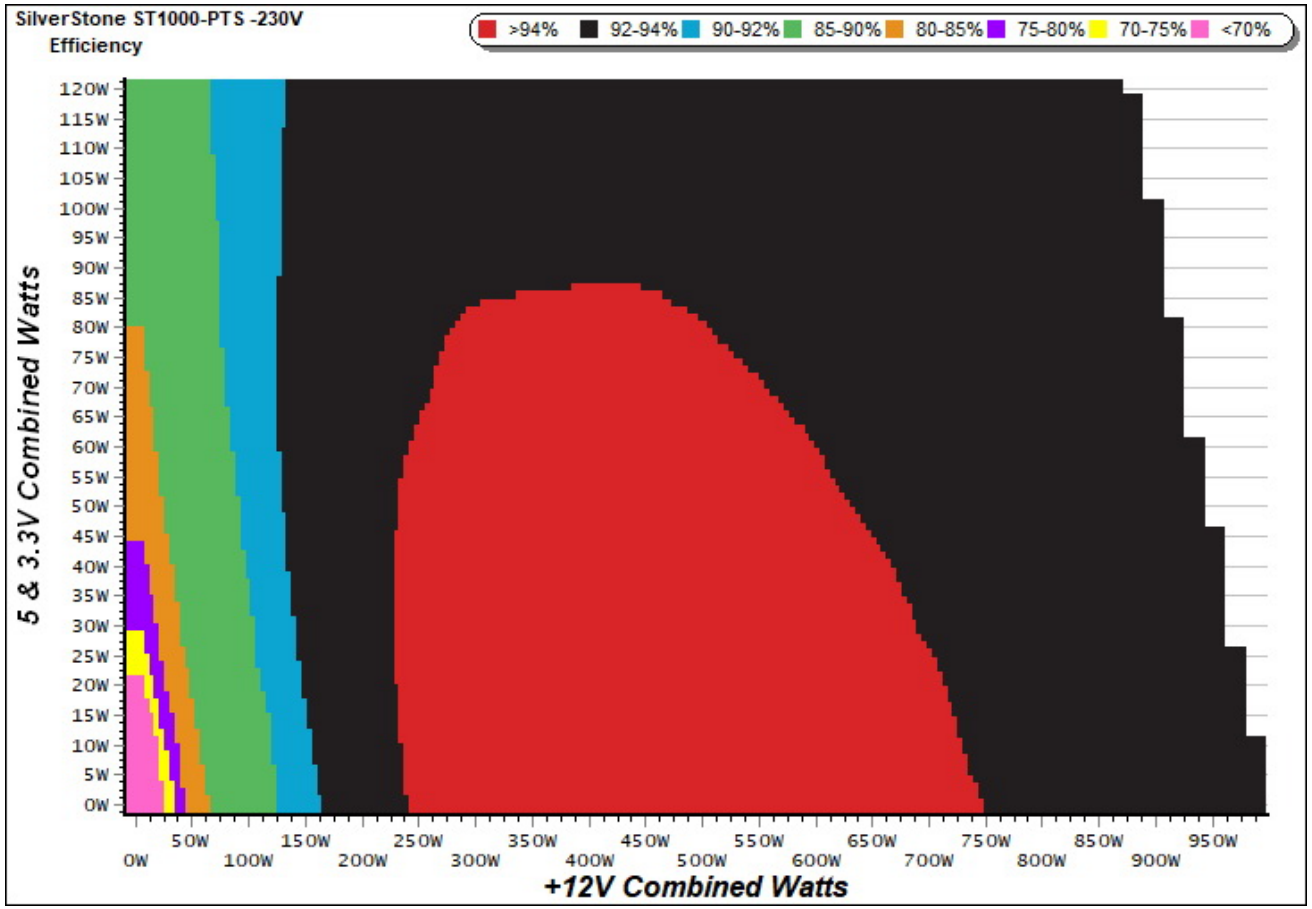
115V



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.

230V

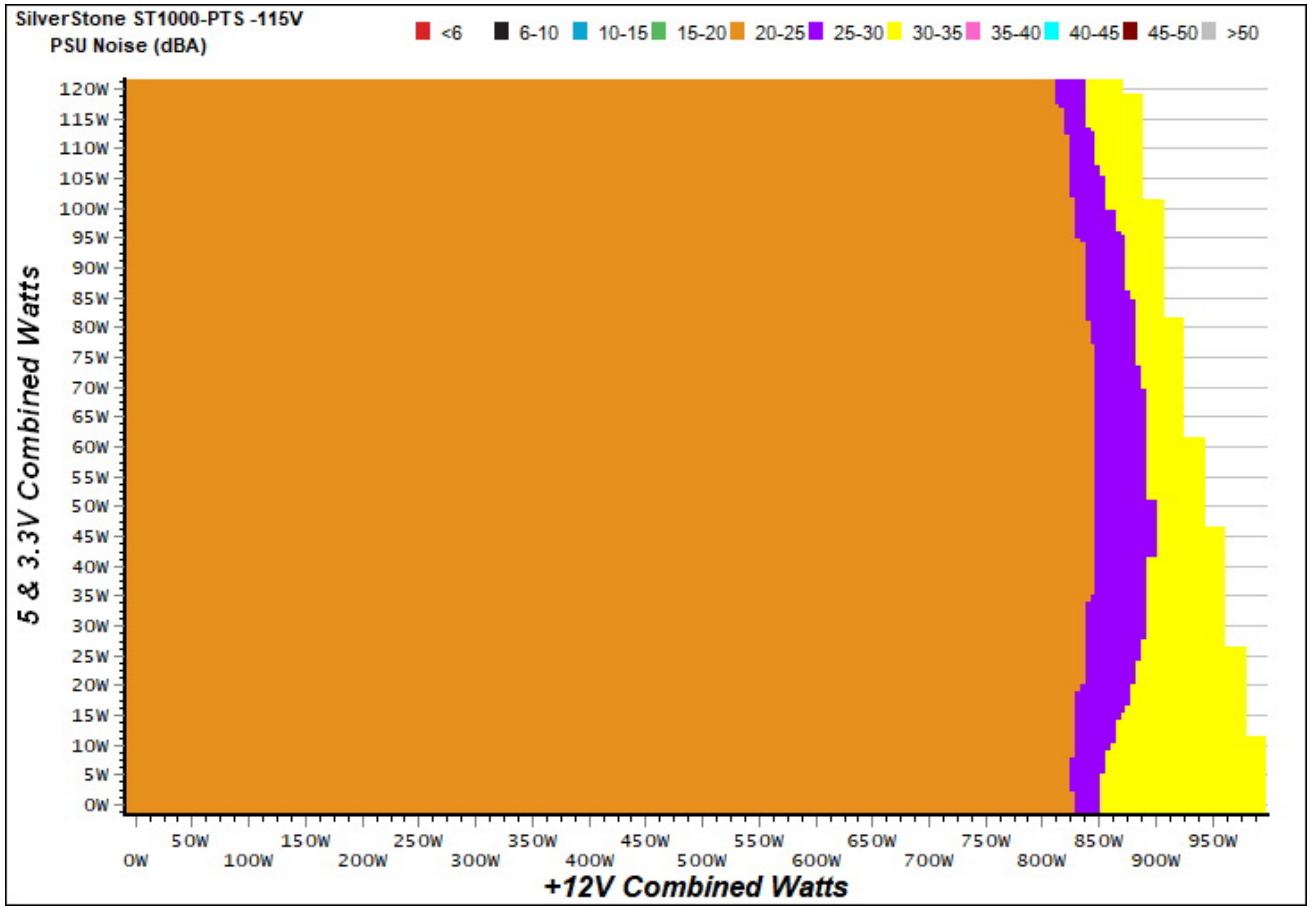


INFO

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Noise Graph

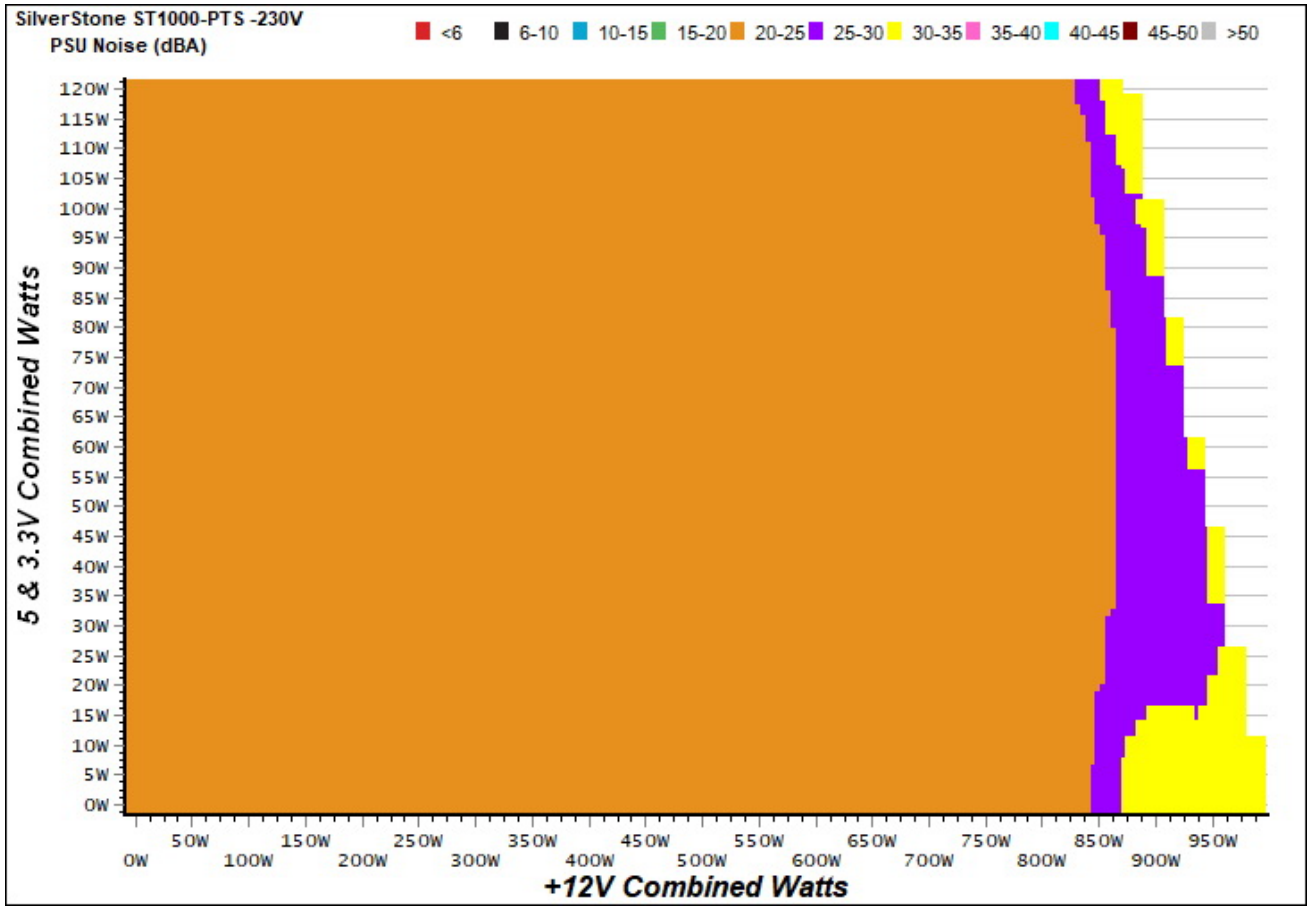
115V



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.

230V

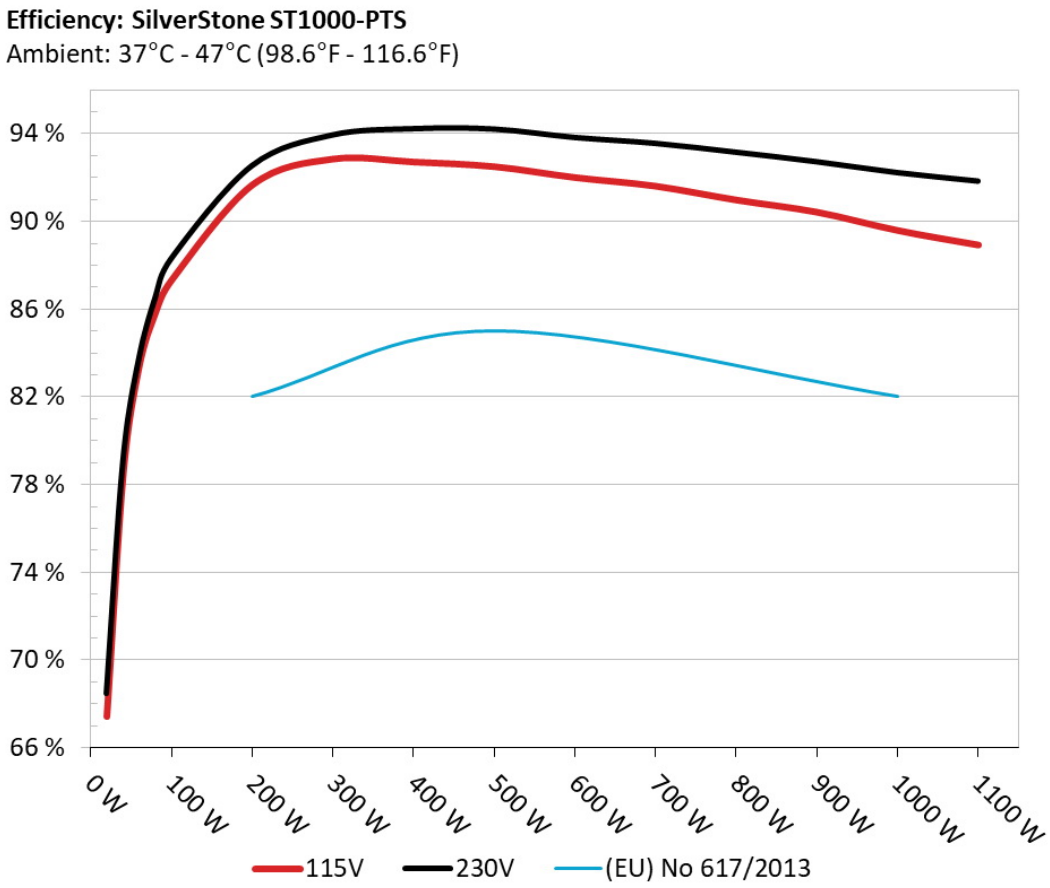


INFO

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.

Indicative Performance

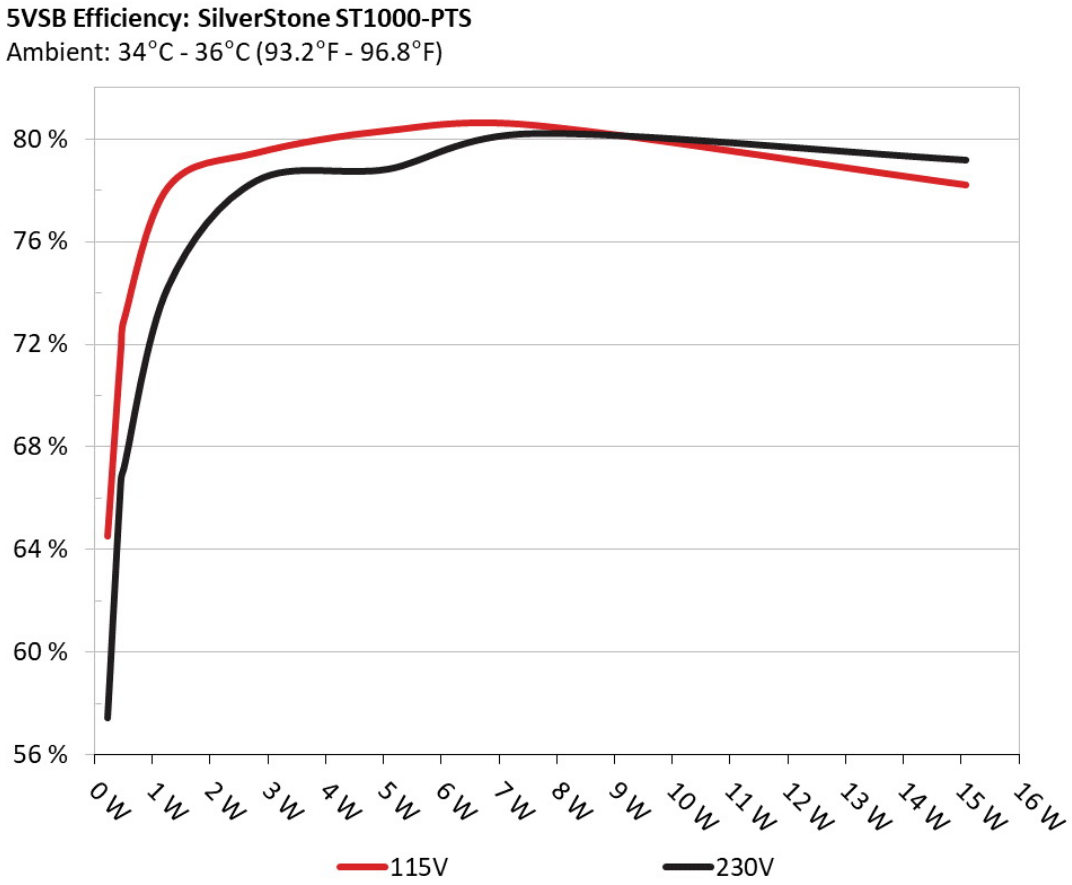
Efficiency under high ambient temperature



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.

5VSB Efficiency (ERP LOT 3/6 & CEC)

115V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.231	64.525%	0.017
	5.118V	0.358		115.11V
2	0.090A	0.461	71.807%	0.031
	5.117V	0.642		115.10V
3	0.550A	2.807	79.451%	0.158
	5.103V	3.533		115.11V
4	1.000A	5.090	80.322%	0.259
	5.089V	6.337		115.10V
5	1.500A	7.611	80.523%	0.342
	5.073V	9.452		115.10V
6	3.000A	15.079	78.202%	0.479
	5.027V	19.282		115.10V

230V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.231	57.463%	0.006
	5.118V	0.402		230.29V
2	0.090A	0.461	66.715%	0.010
	5.117V	0.691		230.26V
3	0.550A	2.807	78.386%	0.051
	5.103V	3.581		230.26V
4	1.000A	5.090	78.841%	0.090
	5.089V	6.456		230.28V
5	1.500A	7.611	80.226%	0.129
	5.074V	9.487		230.28V
6	3.000A	15.080	79.193%	0.234
	5.026V	19.042		230.28V

Supplementary Tests (For Reference)

Typical 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
1	6.519A	1.989A	1.994A	0.985A	100.026	87.331%	940	21.5	39.55°C	0.968
	12.031V	5.029V	3.306V	5.077V	114.537				43.04°C	115.10V
2	14.040A	2.990A	3.002A	1.185A	199.739	91.659%	938	21.5	40.84°C	0.990
	12.026V	5.018V	3.295V	5.063V	217.915				44.98°C	115.10V
3	21.915A	3.494A	3.499A	1.387A	299.240	92.839%	941	21.5	41.14°C	0.995
	12.012V	5.008V	3.286V	5.048V	322.323				45.83°C	115.10V
4	29.881A	4.001A	4.027A	1.590A	399.687	92.705%	944	21.6	41.56°C	0.997
	11.997V	4.999V	3.278V	5.033V	431.140				46.85°C	115.12V
5	37.493A	5.014A	5.050A	1.794A	499.792	92.493%	946	21.6	42.36°C	0.998
	11.983V	4.989V	3.267V	5.017V	540.359				48.56°C	115.12V
6	45.130A	6.028A	6.080A	2.000A	599.923	91.997%	952	21.8	42.73°C	0.999
	11.968V	4.978V	3.256V	5.002V	652.114				49.32°C	115.12V
7	52.748A	7.048A	7.120A	2.207A	699.613	91.604%	976	22.5	43.47°C	0.999
	11.953V	4.967V	3.245V	4.986V	763.733				51.11°C	115.12V
8	60.453A	8.073A	8.163A	2.416A	800.162	90.970%	1480	32.7	43.74°C	0.999
	11.939V	4.956V	3.234V	4.969V	879.592				52.36°C	115.12V
9	68.520A	8.595A	8.685A	2.419A	899.468	90.419%	1933	39.7	44.26°C	0.999
	11.923V	4.945V	3.224V	4.961V	994.782				53.91°C	115.12V
10	76.431A	9.121A	9.239A	3.042A	999.863	89.582%	2175	42.6	45.26°C	0.999
	11.908V	4.935V	3.215V	4.933V	1116.142				55.53°C	115.12V
11	84.947A	9.133A	9.256A	3.048A	1099.895	88.919%	2181	42.6	46.64°C	0.999
	11.892V	4.928V	3.208V	4.923V	1236.960				58.04°C	115.13V
CL1	0.146A	13.999A	13.999A	0.000A	117.137	84.516%	987	22.6	42.52°C	0.983
	12.035V	4.991V	3.251V	5.089V	138.597				48.63°C	115.10V

CL2	83.006A	1.002A	1.000A	1.000A	1002.007	89.943%	2175	42.6	45.39°C	0.999
	11.912V	4.964V	3.254V	5.011V	1114.042				55.85°C	115.13V

The results above are not used in the certification process

230V

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
1	6.523A	1.990A	1.998A	0.985A	100.073	88.339%	949	21.6	40.15°C	0.799
	12.030V	5.028V	3.301V	5.077V	113.283				43.84°C	230.30V
2	14.046A	2.990A	3.005A	1.186A	199.787	92.558%	950	21.7	40.97°C	0.929
	12.024V	5.017V	3.293V	5.061V	215.851				44.85°C	230.30V
3	21.926A	3.496A	3.503A	1.387A	299.317	93.960%	950	21.7	41.23°C	0.964
	12.009V	5.007V	3.284V	5.047V	318.558				45.52°C	230.30V
4	29.893A	4.003A	4.030A	1.590A	399.739	94.250%	950	21.7	41.58°C	0.978
	11.994V	4.997V	3.275V	5.032V	424.128				46.82°C	230.31V
5	37.514A	5.015A	5.056A	1.795A	499.886	94.232%	957	22.1	42.41°C	0.986
	11.979V	4.986V	3.263V	5.016V	530.485				48.13°C	230.31V
6	45.153A	6.032A	6.088A	2.001A	600.025	93.850%	961	22.2	42.51°C	0.990
	11.964V	4.976V	3.252V	4.998V	639.345				49.18°C	230.32V
7	52.777A	7.052A	7.129A	2.209A	699.739	93.584%	999	23.5	43.22°C	0.991
	11.949V	4.964V	3.240V	4.981V	747.715				51.04°C	230.32V
8	60.488A	8.081A	8.179A	2.417A	800.225	93.177%	1472	32.7	43.76°C	0.994
	11.933V	4.952V	3.228V	4.966V	858.824				52.29°C	230.32V
9	68.556A	8.602A	8.699A	2.421A	899.478	92.746%	1974	42.4	44.21°C	0.995
	11.917V	4.941V	3.218V	4.957V	969.826				53.38°C	230.30V
10	76.481A	9.127A	9.258A	3.045A	999.908	92.248%	2180	42.6	45.65°C	0.997
	11.901V	4.931V	3.208V	4.927V	1083.940				55.76°C	230.28V
11	84.992A	9.144A	9.277A	3.051A	1099.921	91.862%	2184	42.6	46.59°C	0.997
	11.886V	4.922V	3.201V	4.918V	1197.362				57.86°C	230.28V
CL1	0.146A	14.001A	13.998A	0.000A	117.017	85.165%	994	23.5	42.71°C	0.849
	12.032V	4.988V	3.245V	5.088V	137.401				48.48°C	230.28V

CL2	83.003A	1.002A	0.997A	1.000A	1001.536	92.657%	2181	42.6	45.24°C	0.997
	11.907V	4.960V	3.251V	5.008V	1080.903				55.23°C	230.27V

The results above are not used in the certification process

Light Load Tests

115V

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	PF/AC Volts
1	1.197A	0.496A	0.481A	0.196A	19.510	67.415%	934	21.4	0.779
	12.041V	5.039V	3.317V	5.111V	28.940				115.12V
2	2.465A	0.993A	0.994A	0.392A	39.968	78.574%	934	21.4	0.897
	12.038V	5.036V	3.313V	5.103V	50.867				115.11V
3	3.658A	1.490A	1.479A	0.589A	59.417	83.363%	933	21.4	0.935
	12.035V	5.032V	3.310V	5.094V	71.275				115.11V
4	4.919A	1.989A	1.996A	0.787A	79.799	85.832%	936	21.4	0.962
	12.033V	5.030V	3.307V	5.086V	92.971				115.10V

The results above are not used in the certification process

230V

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	PF/AC Volts
1	1.196A	0.496A	0.481A	0.196A	19.496	68.501%	943	21.5	0.356
	12.041V	5.038V	3.317V	5.111V	28.461				230.29V
2	2.465A	0.994A	0.994A	0.392A	39.972	79.090%	942	21.5	0.525
	12.038V	5.035V	3.313V	5.102V	50.540				230.29V
3	3.659A	1.491A	1.479A	0.589A	59.430	83.708%	943	21.5	0.652
	12.034V	5.032V	3.309V	5.094V	70.997				230.29V
4	4.923A	1.989A	1.994A	0.787A	79.831	86.523%	948	21.6	0.743
	12.032V	5.029V	3.306V	5.085V	92.266				230.29V

The results above are not used in the certification process

Ripple Measurements

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	7.4 mV	9.7 mV	20.3 mV	10.4 mV	Pass
20% Load	13.6 mV	10.0 mV	20.8 mV	10.9 mV	Pass
30% Load	13.5 mV	9.7 mV	22.6 mV	11.6 mV	Pass
40% Load	18.3 mV	10.3 mV	24.6 mV	12.4 mV	Pass
50% Load	22.2 mV	12.6 mV	23.6 mV	13.1 mV	Pass
60% Load	26.5 mV	13.5 mV	26.4 mV	13.9 mV	Pass
70% Load	31.3 mV	16.1 mV	31.6 mV	15.1 mV	Pass
80% Load	34.8 mV	16.6 mV	30.3 mV	16.7 mV	Pass
90% Load	39.8 mV	14.8 mV	29.3 mV	18.3 mV	Pass
100% Load	45.8 mV	16.4 mV	29.9 mV	23.1 mV	Pass
110% Load	52.3 mV	17.1 mV	32.0 mV	25.1 mV	Pass
Crossload 1	32.5 mV	12.7 mV	25.1 mV	35.0 mV	Pass
Crossload 2	47.3 mV	13.8 mV	26.7 mV	20.3 mV	Pass

The results above are not used in the certification process

230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	7.4 mV	8.4 mV	19.3 mV	10.3 mV	Pass
20% Load	13.6 mV	9.8 mV	22.7 mV	11.2 mV	Pass
30% Load	13.6 mV	10.3 mV	22.6 mV	11.2 mV	Pass
40% Load	17.6 mV	11.2 mV	24.4 mV	12.2 mV	Pass
50% Load	22.2 mV	11.6 mV	25.1 mV	13.0 mV	Pass
60% Load	26.5 mV	13.2 mV	27.9 mV	13.4 mV	Pass
70% Load	30.9 mV	14.8 mV	32.5 mV	14.2 mV	Pass
80% Load	34.8 mV	15.9 mV	31.0 mV	16.4 mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
90% Load	39.2 mV	15.6 mV	29.3 mV	17.2 mV	Pass
100% Load	47.1 mV	15.7 mV	30.2 mV	20.9 mV	Pass
110% Load	52.1 mV	17.1 mV	30.2 mV	22.1 mV	Pass
Crossload 1	34.1 mV	13.2 mV	26.8 mV	37.3 mV	Pass
Crossload 2	46.8 mV	12.6 mV	25.2 mV	17.9 mV	Pass

The results above are not used in the certification process

SilverStone Strider Platinum 1000W



Top side



Power specifications label