

Lab ID#: SL12002326
Receipt Date: Dec 12, 2023
Test Date: Jan 15, 2024

Report: 24PS2326A
Report Date: Jan 19, 2024

DUT INFORMATION	
Brand	SilverStone
Manufacturer (OEM)	High Power
Series	Extreme R Platinum
Model Number	SST-SL1200MCPT-A
Serial Number	SST-EX1200R-PL
DUT Notes	

DUT SPECIFICATIONS	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	14-7
Rated Frequency (Hz)	60-50
Rated Power (W)	1200
Type	SFX-L
Cooling	120mm Fluid Dynamic Bearing Fan (HA1215H12SF-Z)
Semi-Passive Operation	✓ (selectable)
Cable Design	Fully Modular

TEST EQUIPMENT	
Electronic Loads	Chroma 63601-5 x2 Chroma 63600-2 63640-80-80 x10 63610-80-20
AC Sources	Chroma 6530, APM SP300VAC4000W-P
Power Analyzers	RS HMC8015, N4L PPA1530, N4L PPA5530
Oscilloscopes	Picoscope 4444, Rigol DS7014, 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, Keithley 2015 - THD
UPS	FSP Champ Tower 3kVA, CyberPower OLS3000E 3kVA
Isolation Transformer	4kVA

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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	✓
ALPM (Alternative Low Power Mode) compatible	✓
ATX v3.1 PSU Power Excursion	✓

115V

Average Efficiency	89.434%
Efficiency With 10W (≤500W) or 2% (>500W)	60.894
Average Efficiency 5VSB	83.593%
Standby Power Consumption (W)	0.1218000
Average PF	0.991
Avg Noise Output	28.18 dB(A)
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	A-

230V

Average Efficiency	91.734%
Average Efficiency 5VSB	82.399%
Standby Power Consumption (W)	0.1746000
Average PF	0.947
Avg Noise Output	26.72 dB(A)
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	A-

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	20	20	100	3	0.3
	Watts	100		1200	15	3.6
Total Max. Power (W)		1200				

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CABLES AND CONNECTORS

Modular Cables

Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 20+4 pin (300mm)	1	1	16-18AWG	No
4+4 pin EPS12V (410mm)	2	2	16AWG	No
6+2 pin PCIe (400mm+150mm)	2	4	16AWG	No
12+4 pin PCIe (410mm) (600W)	1	1	16-24AWG	No
SATA (300mm+95mm+95mm+95mm)	2	8	16AWG	No
4-pin Molex (300mm+200mm+200mm) / FDD (+100mm)	1	3 / 1	16-24AWG	No

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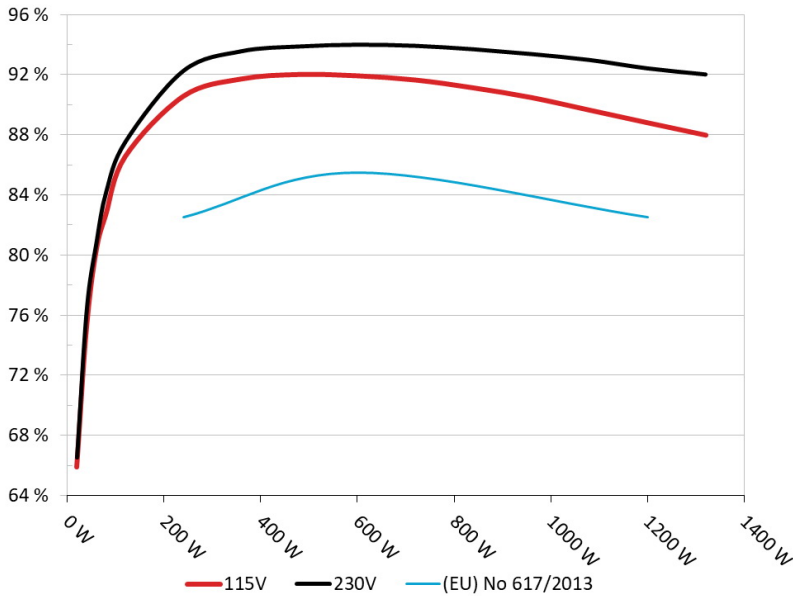
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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: SilverStone Extreme 1200R Platinum

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



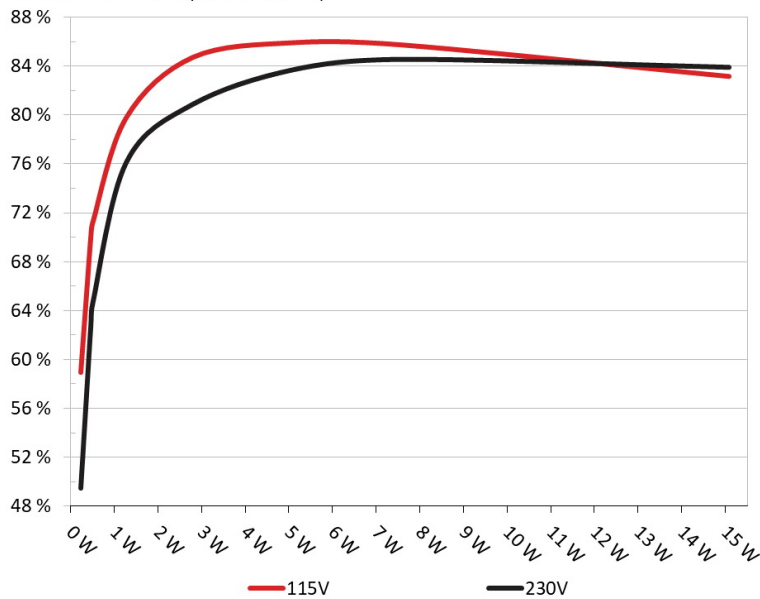
INFO

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: SilverStone Extreme 1200R Platinum

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	0.23W	58.964%	0.023
	5.103V	0.39W		115.17V
2	0.09A	0.459W	70.058%	0.038
	5.102V	0.655W		115.16V
3	0.55A	2.801W	84.736%	0.176
	5.091V	3.306W		115.17V
4	1A	5.081W	85.928%	0.275
	5.079V	5.914W		115.16V
5	1.5A	7.602W	85.744%	0.347
	5.067V	8.866W		115.16V
6	3A	15.091W	83.174%	0.456
	5.03V	18.142W		115.15V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.23W	49.493%	0.008
	5.103V	0.466W		230.4V
2	0.09A	0.459W	62.784%	0.013
	5.102V	0.731W		230.4V
3	0.55A	2.801W	80.917%	0.06
	5.091V	3.461W		230.4V
4	1A	5.081W	83.726%	0.103
	5.08V	6.07W		230.39V
5	1.5A	7.603W	84.588%	0.146
	5.067V	8.989W		230.39V
6	3A	15.092W	83.937%	0.253
	5.03V	17.981W		230.39V

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115V

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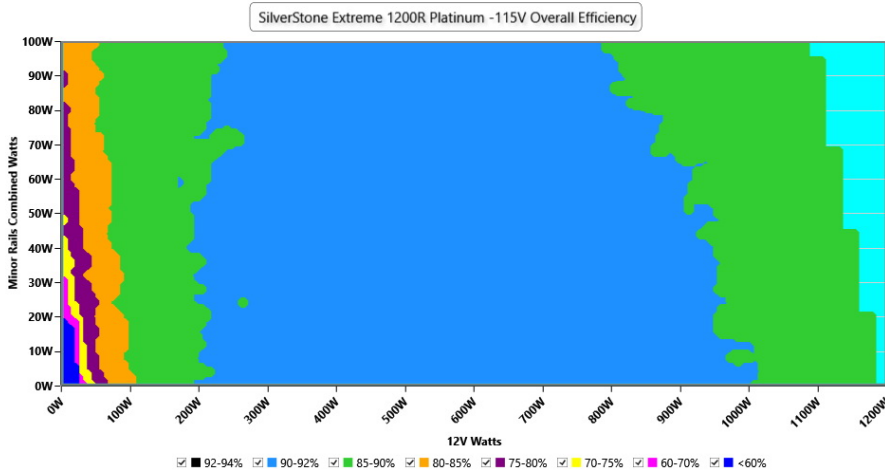
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EFFICIENCY GRAPH 115V

INFO

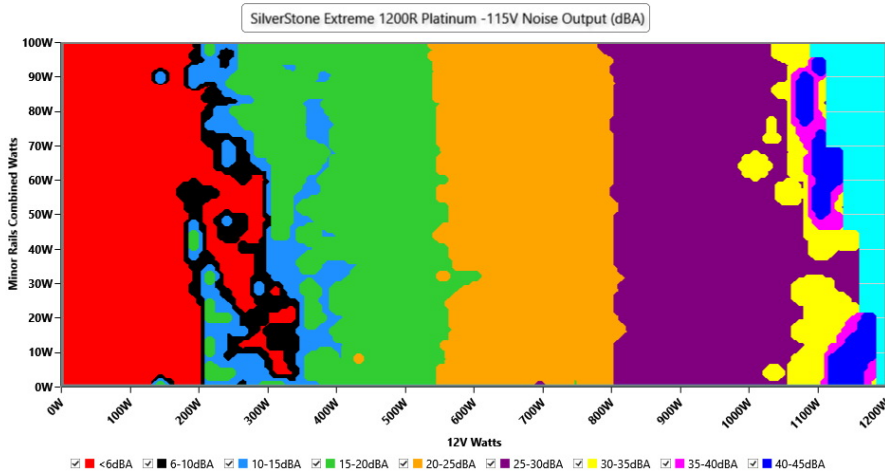
This graph depicts the PSU's efficiency throughout its entire operational range. For the generation of the efficiency and noise graphs we set our loaders to auto mode through our custom-made software before trying thousands of possible load combinations



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

Detailed Results

	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	114.92 V	114.83 V	113.85 V	115.01 V	116.15 V	PASS
Mains Frequency:	60.00 Hz	59.98 Hz	59.40 Hz	60.02 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.421	1.419	1.340	1.424	1.490	PASS
Mains Voltage THD:	0.32 %	0.20 %	N/A	0.41 %	2.00 %	PASS
Real Power:	0.122 W	0.098 W	N/A	0.147 W	N/A	N/A
Apparent Power:	17.178 W	17.159 W	N/A	17.200 W	N/A	N/A
Power Factor:	0.007	N/A	N/A	N/A	N/A	N/A

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	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
10%	8.162A	1.975A	1.981A	0.987A	119.997	86.057%	422	<6.0	40.02°C	0.986
	12.055V	5.063V	3.332V	5.069V	139.493				44.3°C	115.11V
20%	17.349A	2.971A	2.983A	1.187A	239.959	90.073%	1022	19.3	40.88°C	0.98
	12.050V	5.05V	3.319V	5.054V	266.428				45.4°C	115.09V
50%	45.710A	4.975A	5.015A	1.798A	599.426	91.441%	1173	23.6	42.36°C	0.998
	12.008V	5.026V	3.29V	5.007V	655.533				48.36°C	115.03V
100%	93.119A	9.04A	9.175A	3.051A	1199.625	88.319%	2320	43.7	45.74°C	0.999
	11.919V	4.978V	3.237V	4.917V	1358.313				55.75°C	114.89V

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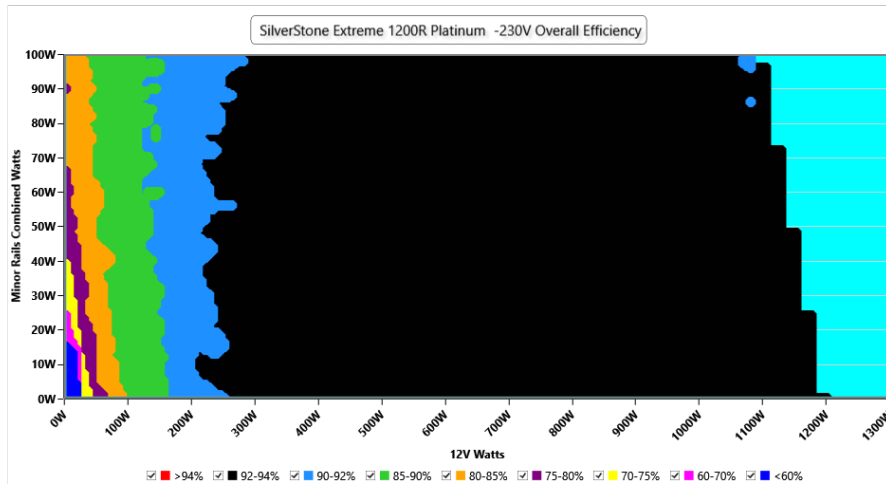
230V

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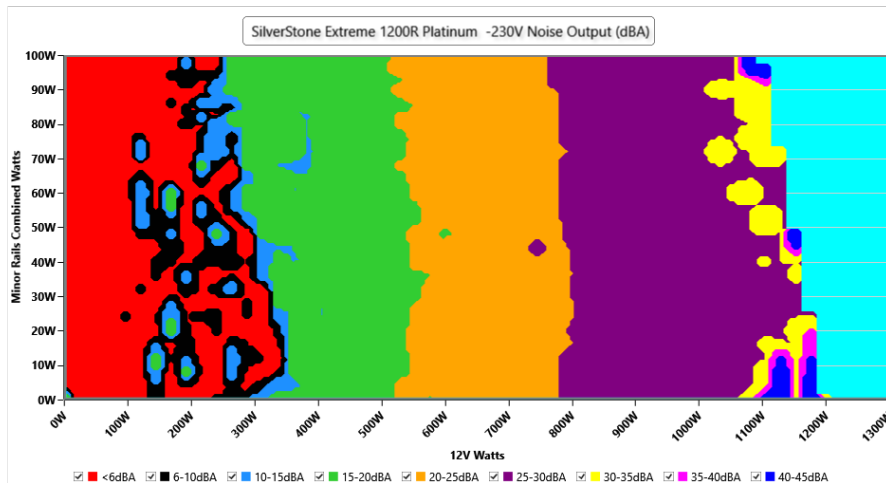
EFFICIENCY GRAPH 230V



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 230V



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 -230V

Detailed Results

	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	230.38 V	230.37 V	227.70 V	230.41 V	232.30 V	PASS
Mains Frequency:	50.00 Hz	50.00 Hz	49.50 Hz	50.00 Hz	50.50 Hz	PASS
Mains Voltage CF:	1.415	1.415	1.340	1.416	1.490	PASS
Mains Voltage THD:	0.14 %	0.13 %	N/A	0.16 %	2.00 %	PASS
Real Power:	0.175 W	0.155 W	N/A	0.195 W	N/A	N/A
Apparent Power:	56.847 W	56.841 W	N/A	56.861 W	N/A	N/A
Power Factor:	0.003	N/A	N/A	N/A	N/A	N/A

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COMMISSION REGULATION (EU) NO 617/2013 TESTING 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%	8.158A	1.976A	1.981A	0.987A	120.018	87.036%	472	<6.0	40.24°C	0.87
	12.065V	5.063V	3.332V	5.068V	137.969				44.49°C	230.38V
20%	17.347A	2.971A	2.983A	1.188A	239.983	91.755%	819	13.5	40.8°C	0.923
	12.052V	5.05V	3.319V	5.053V	261.541				45.38°C	230.37V
50%	45.707A	4.976A	5.015A	1.798A	599.475	93.495%	1083	21.1	42.35°C	0.966
	12.010V	5.026V	3.29V	5.007V	641.171				48.37°C	230.34V
100%	93.073A	9.039A	9.175A	3.051A	1199.621	91.923%	2329	43.8	45.78°C	0.987
	11.925V	4.978V	3.237V	4.916V	1305.012				55.85°C	230.3V

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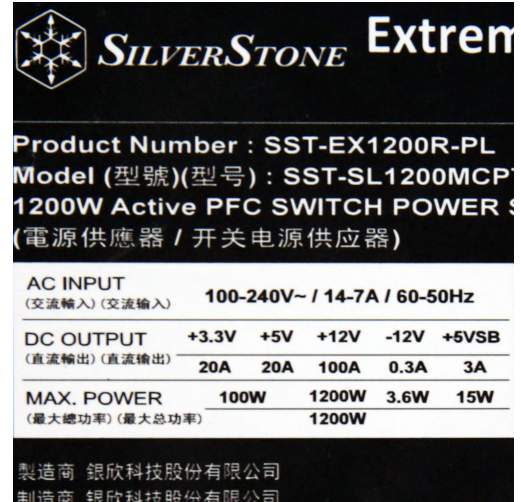
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EFFICIENCY AND NOISE REPORT IN ACCORDANCE WITH
CYBENETICS ETA AND CYBENETICS LAMBDA PROCEDURE

SilverStone Extreme 1200R Platinum

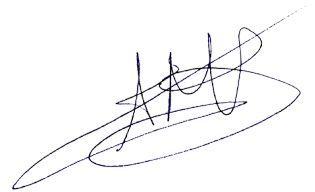


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Power specifications label

CERTIFICATIONS 115V

Aristeidis Bitziopoulos
Lab Director

CERTIFICATIONS 230V



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