

Anex

SilverStone SX1000R Platinum

Lab ID#: SL10002140
Receipt Date: Dec 24, 2022
Test Date: Feb 22, 2023

Report: 23PS2140A
Report Date: Feb 22, 2023

DUT INFORMATION		DUT SPECIFICATIONS	
Brand	SilverStone	Rated Voltage (Vrms)	100-240
Manufacturer (OEM)	Enhance Electronics	Rated Current (Arms)	12-6
Series	SFX-L Series	Rated Frequency (Hz)	60-50
Model Number	SST-SX1000-LPT	Rated Power (W)	1000
Serial Number		Type	SFX-L
DUT Notes		Cooling	120mm Double Ball Bearing Fan (B1201512HB)
		Semi-Passive Operation	✓
		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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SilverStone SX1000R Platinum

RESULTS

Temperature Range (°C /°F)	30-32 / 86-89.6
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓
ALPM (Alternative Low Power Mode) compatible	✓
ATX 3.0 Ready	✓

115V

Average Efficiency	90.435%
Efficiency With 10W (≤500W) or 2% (>500W)	70.003
Average Efficiency 5VSB	84.669%
Standby Power Consumption (W)	0.0735000
Average PF	0.989
Avg Noise Output	33.91 dB(A)
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	Standard++

230V

Average Efficiency	92.553%
Average Efficiency 5VSB	84.208%
Standby Power Consumption (W)	0.1330000
Average PF	0.941
Avg Noise Output	35.52 dB(A)
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	Standard+

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	25	25	83.3	3	0.3
	Watts	125		999.6	15	3.6
Total Max. Power (W)		1000				

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

Hold-Up Time (ms)	18.3
AC Loss to PWR_OK Hold Up Time (ms)	16.9
PWR_OK Inactive to DC Loss Delay (ms)	1.4

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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	16-22AWG	No
4+4 pin EPS12V (410mm)	2	2	16AWG	No
6+2 pin PCIe (410mm+155mm)	2	4	16-18AWG	No
12+4 pin PCIe (400mm) (600W)	1	1	16-24AWG	No
SATA (300mm+195mm+95mm+95mm)	2	8	18AWG	No
4-pin Molex (300mm+200mm+200mm) / FDD (+100mm)	1	3 / 1	18-22AWG	No

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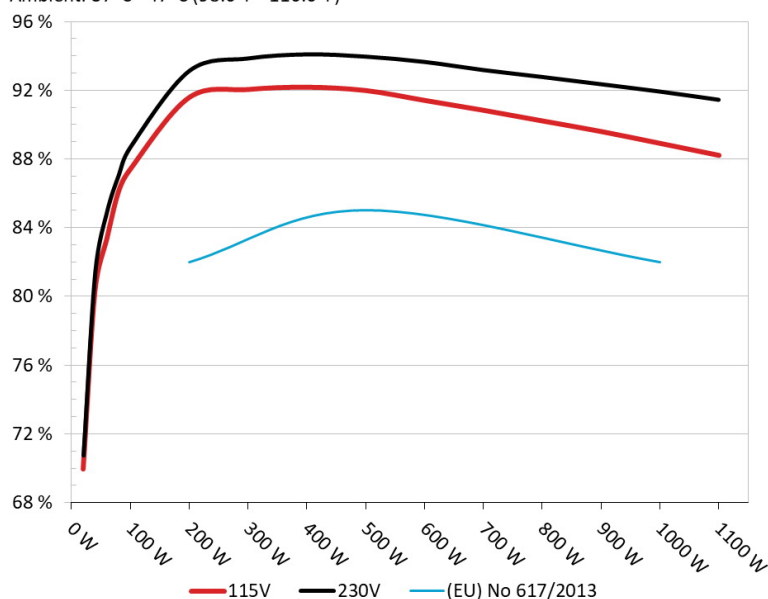
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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Silverstone SX1000R Platinum

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



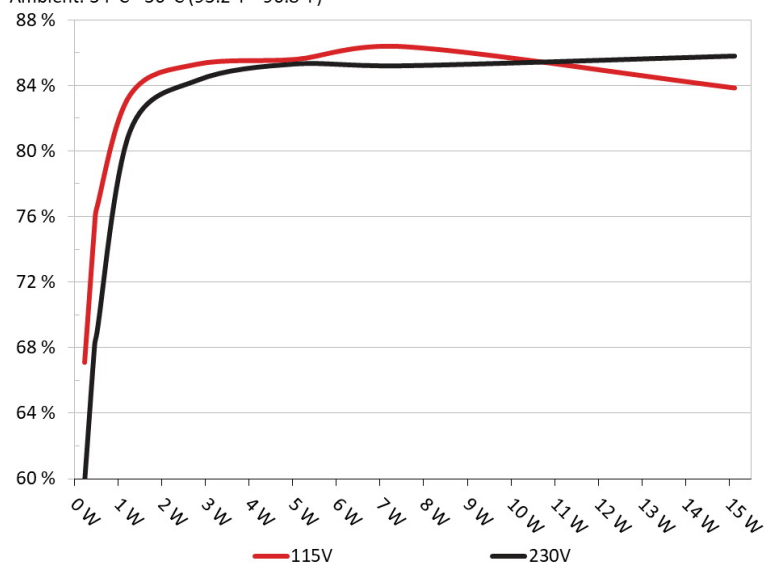
INFO

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 SX1000R 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	0.229W	67.116%	0.02
	5.099V	0.342W		115.13V
2	0.09A	0.459W	75.512%	0.035
	5.098V	0.608W		115.14V
3	0.55A	2.799W	85.275%	0.175
	5.089V	3.282W		115.14V
4	1A	5.08W	85.574%	0.277
	5.079V	5.937W		115.14V
5	1.5A	7.605W	86.336%	0.348
	5.069V	8.809W		115.14V
6	3A	15.115W	83.83%	0.456
	5.038V	18.032W		115.14V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.229W	59.825%	0.007
	5.099V	0.385W		230.36V
2	0.09A	0.459W	68.21%	0.012
	5.098V	0.673W		230.37V
3	0.55A	2.799W	84.327%	0.057
	5.088V	3.318W		230.36V
4	1A	5.08W	85.339%	0.101
	5.079V	5.952W		230.37V
5	1.5A	7.605W	85.227%	0.145
	5.069V	8.922W		230.37V
6	3A	15.115W	85.813%	0.249
	5.038V	17.614W		230.37V

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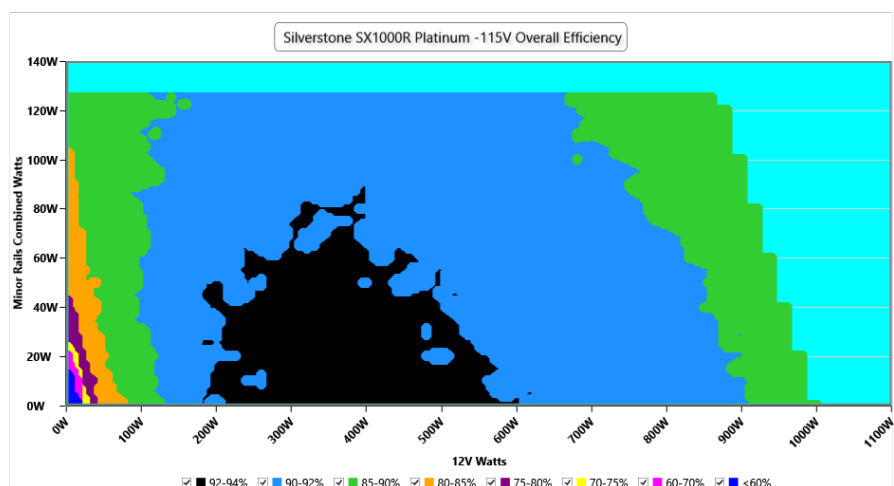
115V

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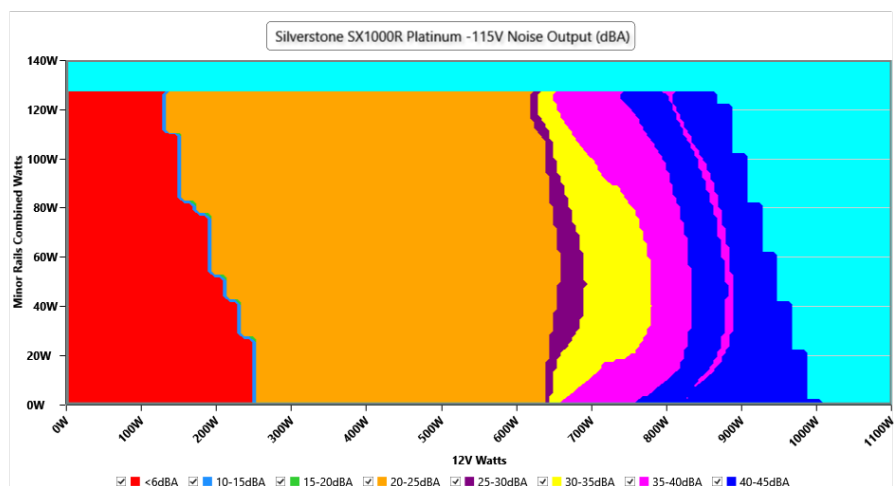
EFFICIENCY GRAPH 115V



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

Detailed Results

	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	115.15 V	115.14 V	113.85 V	115.17 V	116.15 V	PASS
Mains Frequency:	60.00 Hz	59.93 Hz	59.40 Hz	60.01 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.415	1.415	1.340	1.416	1.490	PASS
Mains Voltage THD:	0.13 %	0.11 %	N/A	0.15 %	2.00 %	PASS
Real Power:	0.073 W	0.066 W	N/A	0.082 W	N/A	N/A
Apparent Power:	17.063 W	17.059 W	N/A	17.067 W	N/A	N/A
Power Factor:	0.004	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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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%	6.494A	1.97A	1.971A	0.986A	99.998	87.426%	0	<6.0	44.35°C	0.979
	12.071V	5.076V	3.348V	5.072V	114.389				40.09°C	115.12V
20%	14.016A	2.961A	2.963A	1.186A	199.947	91.603%	0	<6.0	44.86°C	0.973
	12.061V	5.067V	3.341V	5.06V	218.284				40.34°C	115.1V
30%	21.858A	3.46A	3.464A	1.387A	299.995	92.073%	997	22.3	41.11°C	0.987
	12.076V	5.059V	3.335V	5.048V	325.824				46.05°C	115.1V
40%	29.710A	3.96A	3.965A	1.589A	399.593	92.205%	1002	22.5	41.65°C	0.994
	12.063V	5.051V	3.329V	5.036V	433.38				47.12°C	115.08V
50%	37.254A	4.959A	4.967A	1.792A	499.325	92.015%	1010	22.7	42.23°C	0.997
	12.048V	5.042V	3.322V	5.023V	542.619				48.16°C	115.06V
60%	44.891A	5.962A	5.974A	1.996A	599.872	91.439%	1604	38.1	42.7°C	0.998
	12.030V	5.033V	3.315V	5.01V	656.048				49.01°C	115.04V
70%	52.448A	6.968A	6.985A	2.201A	699.603	90.862%	1860	40.6	43.43°C	0.999
	12.021V	5.024V	3.308V	4.997V	769.945				50.52°C	115.02V
80%	60.103A	7.979A	7.998A	2.306A	799.644	90.244%	2122	46.0	43.98°C	0.999
	12.008V	5.014V	3.3V	4.986V	886.039				52.03°C	114.99V
90%	68.112A	8.49A	8.498A	2.412A	899.433	89.628%	2198	47.1	44.94°C	0.999
	11.994V	5.006V	3.294V	4.976V	1003.556				54.01°C	114.97V
100%	75.962A	9.005A	9.033A	3.028A	999.438	88.935%	2191	47.0	45.4°C	0.999
	11.977V	4.997V	3.287V	4.954V	1123.799				55.48°C	114.95V
110%	83.777A	10.025A	10.151A	3.034A	1100.055	88.236%	2190	47.0	47.11°C	0.999
	11.957V	4.987V	3.279V	4.944V	1246.756				57.99°C	114.92V
CL1	0.116A	14.905A	14.933A	0A	126.285	85.86%	0	<6.0	45.81°C	0.988
	12.053V	5.052V	3.321V	5.074V	147.072				40.28°C	115.12V
CL2	0.116A	24.718A	0A	0A	126.382	84.667%	0	<6.0	46.63°C	0.988
	12.055V	5.057V	3.327V	5.088V	149.203				39.55°C	115.12V
CL3	0.116A	0A	24.8A	0A	83.88	79.232%	0	<6.0	48.07°C	0.977
	12.043V	5.058V	3.326V	5.071V	105.886				39°C	115.13V
CL4	83.528A	0A	0A	0.001A	1000.194	89.229%	2182	46.9	44.98°C	0.999
	11.974V	5.016V	3.307V	5.033V	1120.854				55.88°C	114.95V

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SilverStone SX1000R Platinum

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	1.228A	0.492A	0.492A	0.196A	20	69.956%	0	<6.0	39.64°C	0.644
	12.087V	5.086V	3.356V	5.096V	28.615				36.59°C	115.15V
40W	2.705A	0.688A	0.689A	0.295A	39.996	80.362%	0	<6.0	41.02°C	0.689
	12.083V	5.084V	3.354V	5.092V	49.821				37.72°C	115.15V
60W	4.182A	0.886A	0.886A	0.393A	59.994	83.352%	0	<6.0	42.15°C	0.959
	12.080V	5.083V	3.353V	5.088V	71.964				38.42°C	115.13V
80W	5.658A	1.083A	1.083A	0.492A	79.948	86.116%	0	<6.0	43.11°C	0.977
	12.075V	5.081V	3.351V	5.085V	92.907				39.14°C	115.13V

RIPPLE MEASUREMENTS 115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	8.99mV	7.16mV	8.29mV	7.60mV	Pass
20% Load	14.56mV	8.49mV	9.11mV	9.18mV	Pass
30% Load	17.98mV	9.31mV	10.70mV	9.53mV	Pass
40% Load	22.83mV	10.23mV	10.95mV	10.60mV	Pass
50% Load	28.04mV	10.79mV	11.62mV	11.93mV	Pass
60% Load	33.10mV	11.25mV	13.00mV	12.13mV	Pass
70% Load	37.59mV	12.43mV	13.51mV	14.12mV	Pass
80% Load	43.36mV	13.04mV	15.81mV	14.89mV	Pass
90% Load	50.11mV	13.91mV	16.63mV	15.75mV	Pass
100% Load	62.18mV	15.44mV	19.27mV	18.99mV	Pass
110% Load	69.22mV	16.23mV	20.38mV	19.27mV	Pass
Crossload1	14.84mV	10.93mV	16.12mV	17.40mV	Pass
Crossload2	23.80mV	20.56mV	9.37mV	15.86mV	Pass
Crossload3	12.52mV	7.21mV	17.04mV	15.34mV	Pass
Crossload4	61.45mV	14.92mV	16.94mV	26.44mV	Pass

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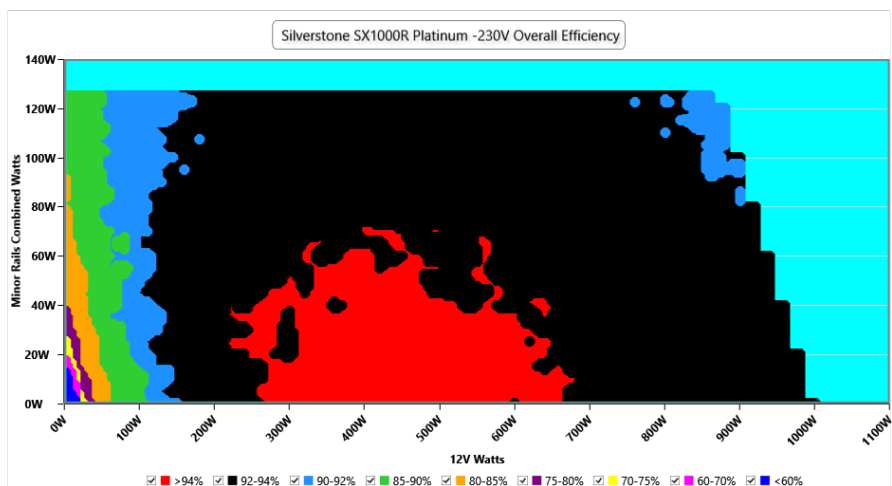
230V

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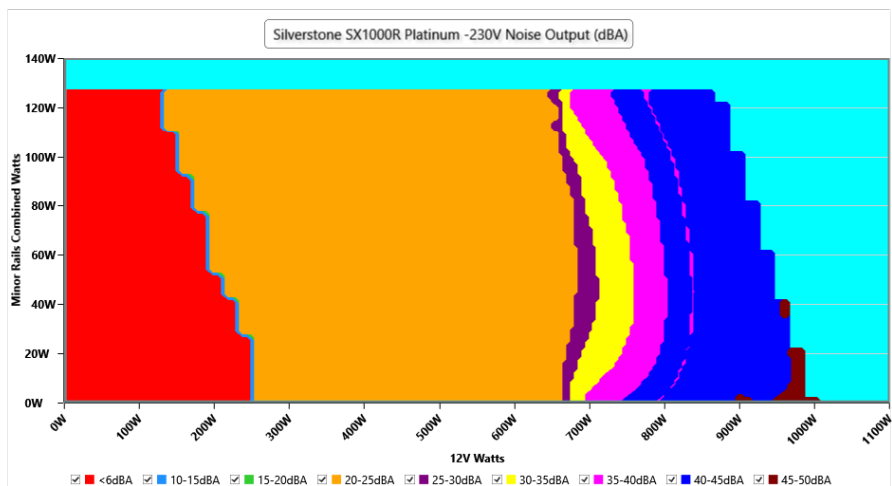
EFFICIENCY GRAPH 230V



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

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VAMPIRE POWER -230V

Detailed Results

	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	230.37 V	230.35 V	227.70 V	230.39 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:	0.15 %	0.13 %	N/A	0.16 %	2.00 %	PASS
Real Power:	0.133 W	0.120 W	N/A	0.147 W	N/A	N/A
Apparent Power:	56.961 W	56.948 W	N/A	56.967 W	N/A	N/A
Power Factor:	0.002	N/A	N/A	N/A	N/A	N/A

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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%	6.494A	1.97A	1.972A	0.986A	100.014	88.715%	0	<6.0	44.87°C	0.825
	12.075V	5.077V	3.348V	5.071V	112.766				40.55°C	230.38V
20%	14.010A	2.961A	2.964A	1.186A	199.966	93.143%	0	<6.0	45.86°C	0.913
	12.067V	5.068V	3.341V	5.059V	214.7				41.24°C	230.37V
30%	21.864A	3.46A	3.464A	1.387A	300.031	93.869%	997	22.3	41.35°C	0.935
	12.073V	5.06V	3.335V	5.047V	319.61				46.29°C	230.37V
40%	29.723A	3.96A	3.966A	1.589A	399.712	94.102%	1003	22.5	41.44°C	0.949
	12.061V	5.051V	3.329V	5.035V	424.745				46.88°C	230.36V
50%	37.261A	4.959A	4.968A	1.792A	499.449	93.975%	1010	22.7	42.26°C	0.959
	12.048V	5.043V	3.322V	5.023V	531.479				48.23°C	230.35V
60%	44.893A	5.962A	5.975A	1.997A	599.995	93.663%	1444	34.3	42.98°C	0.968
	12.033V	5.033V	3.314V	5.01V	640.589				49.39°C	230.34V
70%	52.453A	6.969A	6.986A	2.202A	699.734	93.194%	1846	40.4	43.33°C	0.971
	12.023V	5.024V	3.307V	4.997V	750.954				50.36°C	230.33V
80%	60.103A	7.98A	7.999A	2.307A	799.764	92.791%	2096	45.5	43.73°C	0.975
	12.010V	5.015V	3.3V	4.986V	861.958				52.01°C	230.32V
90%	68.112A	8.491A	8.5A	2.412A	899.541	92.37%	2200	47.2	44.56°C	0.979
	11.996V	5.006V	3.294V	4.975V	973.846				53.65°C	230.32V
100%	75.966A	9.007A	9.035A	3.029A	999.563	91.942%	2193	47.1	45.1°C	0.982
	11.978V	4.997V	3.287V	4.953V	1087.191				55.13°C	230.3V
110%	83.795A	10.028A	10.154A	3.035A	1100.203	91.463%	2193	47.1	47.16°C	0.986
	11.956V	4.986V	3.279V	4.943V	1202.855				57.99°C	230.3V
CL1	0.116A	14.909A	14.939A	0A	126.29	87.047%	0	<6.0	47.92°C	0.868
	12.044V	5.051V	3.32V	5.074V	145.055				42.42°C	230.38V
CL2	0.116A	24.713A	0A	0A	126.396	85.58%	0	<6.0	49.08°C	0.87
	12.064V	5.058V	3.327V	5.087V	147.689				42.05°C	230.38V
CL3	0.116A	0A	24.8A	0A	83.892	80.364%	0	<6.0	51.57°C	0.806
	12.044V	5.058V	3.326V	5.07V	104.396				42.48°C	230.39V
CL4	83.494A	0A	0A	0.001A	1000.331	92.311%	2187	47.0	44.38°C	0.982
	11.981V	5.015V	3.306V	5.032V	1083.748				55.29°C	230.3V

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Anex

SilverStone SX1000R Platinum

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	1.228A	0.492A	0.492A	0.196A	20.005	70.753%	0	<6.0	40.37°C	0.358
	12.094V	5.087V	3.356V	5.095V	28.275				37.29°C	230.4V
40W	2.704A	0.688A	0.689A	0.295A	40.001	81.447%	0	<6.0	41.02°C	0.483
	12.087V	5.085V	3.354V	5.092V	49.109				37.7°C	230.39V
60W	4.182A	0.886A	0.886A	0.393A	60	84.935%	0	<6.0	41.99°C	0.554
	12.082V	5.083V	3.353V	5.088V	70.661				38.51°C	230.39V
80W	5.658A	1.083A	1.083A	0.492A	79.964	87.075%	0	<6.0	43.01°C	0.774
	12.077V	5.081V	3.351V	5.084V	91.851				39.14°C	230.39V

RIPPLE MEASUREMENTS 230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	8.73mV	7.01mV	8.14mV	7.19mV	Pass
20% Load	14.15mV	8.59mV	9.26mV	8.72mV	Pass
30% Load	18.64mV	9.46mV	10.24mV	9.38mV	Pass
40% Load	23.65mV	10.07mV	10.75mV	10.96mV	Pass
50% Load	29.42mV	10.99mV	11.51mV	12.13mV	Pass
60% Load	33.71mV	11.71mV	12.49mV	12.08mV	Pass
70% Load	37.54mV	12.94mV	13.31mV	14.07mV	Pass
80% Load	43.16mV	13.60mV	15.71mV	14.78mV	Pass
90% Load	49.24mV	13.81mV	16.48mV	15.75mV	Pass
100% Load	59.79mV	15.42mV	18.73mV	19.62mV	Pass
110% Load	66.17mV	16.09mV	20.15mV	20.31mV	Pass
Crossload1	14.92mV	11.65mV	15.28mV	17.23mV	Pass
Crossload2	22.98mV	19.99mV	10.29mV	16.01mV	Pass
Crossload3	13.48mV	7.26mV	16.84mV	15.91mV	Pass
Crossload4	60.43mV	14.85mV	16.80mV	27.23mV	Pass

All data and graphs included in this test report can be used by any individual on the following conditions:

- > It should be mentioned that the test results are provided by Cybenetics
- > The link to the original test results document should be provided in any case

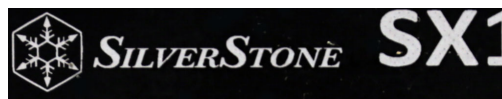
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Anex

SilverStone SX1000R Platinum



Top side

					
Product Number : SST-SX1000R-PL Model (型號)(型号) : SST-SX1000-LPT 1000W Active PFC SWITCH POWER SUPPLY (電源供應器 / 开关电源供应器)					
AC INPUT 100-240V~ / 12-6A / 60-50Hz (用于中国以外国家) (交流輸入) (交流輸入) 200-240V~ / 6A / 60-50Hz (仅用于中国)					
DC OUTPUT +3.3V +5V +12V -12V +5VSB (直流輸出) (直流輸出) 25A 25A 83.3A 0.3A 3A					
MAX. POWER 125W 999.6W 3.6W 15W (最大總功率) (最大總功率) 1000W					
製造商 銀欣科技股份有限公司			執行標準 : GB4943.1		
製造商 銀欣科技股份有限公司			仅适用于海拔2000米以下		

Power specifications label

CERTIFICATIONS 115V




Aristeidis Bitziopoulos
Lab Director

CERTIFICATIONS 230V



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