SILVERSTONE

SilverStone Nightjar 520W

R1602AA1C241119

Lab ID 53

Certification ID 2553

Test Result Report ID:

Certificate Issue Date: Feb 26, 2018

115V

Scheme: ETA-EMI PSU



115V



Scheme: LAMBDA PSU



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	Nightjar 520W
OEM/ODM	Sea Sonic Electronics
Serial Number	R1602AA1C241119
Product Specifications	
Manufacturer-Provided Information	
□□□□ (Vrms)	100-240
□□□□ (Arms)	7-4
□□□□ (Hz)	50-60

□□□□ (W)	520
Operating Temperature (Continuous Full Load) (°C)	
□□	ATX12V
□□□□	Fully Modular
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
□□	Passive
□□□□□	
Cybenetics Testing Information	
Lab ID	53
Date of receipt	Feb 12, 2018
Testing Date	Feb 24, 2018
Report Issued Date	Feb 26, 2018
Engineer Name	-
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

□□□□□ (Non-accredited measurements)

□□□□□			
□□	□□□□	□□□□□□	Gauge
ATX □□ 20+4 pin (600mm)	1	1	18-22AWG
4+4 pin EPS 12V □□ (650mm)	1	1	18AWG
6+2pin PCIe□□ (550mm+100mm)	2	4	18AWG
SATA□□ (400mm+110mm+110mm+110mm)	1	4	18AWG
SATA□□ (300mm+120mm)	1	2	18AWG
□ 4pin Molex□□ (400mm+120mm+120mm)	1	3	18AWG
□ 4pin Molex□□ (300mm+120mm)	1	2	18AWG
□ 4pin □□ (+105mm)	1	1	22AWG

□□□□

□		3.3V	5V	12V	5VSB	-12V
□□□□	□□	20	20	43	2.5	0.5
	□	100		516	12.5	6
□□□□□ (W)		520				

Test Results

Temperature & Compliance Info

□□□□ (°C /°F)	28-32 / 82.4-89.6
□□ ErP Lot3/6□□	✓
□□ (EU) No 617/2013□□	✓

Performance Summary 115V

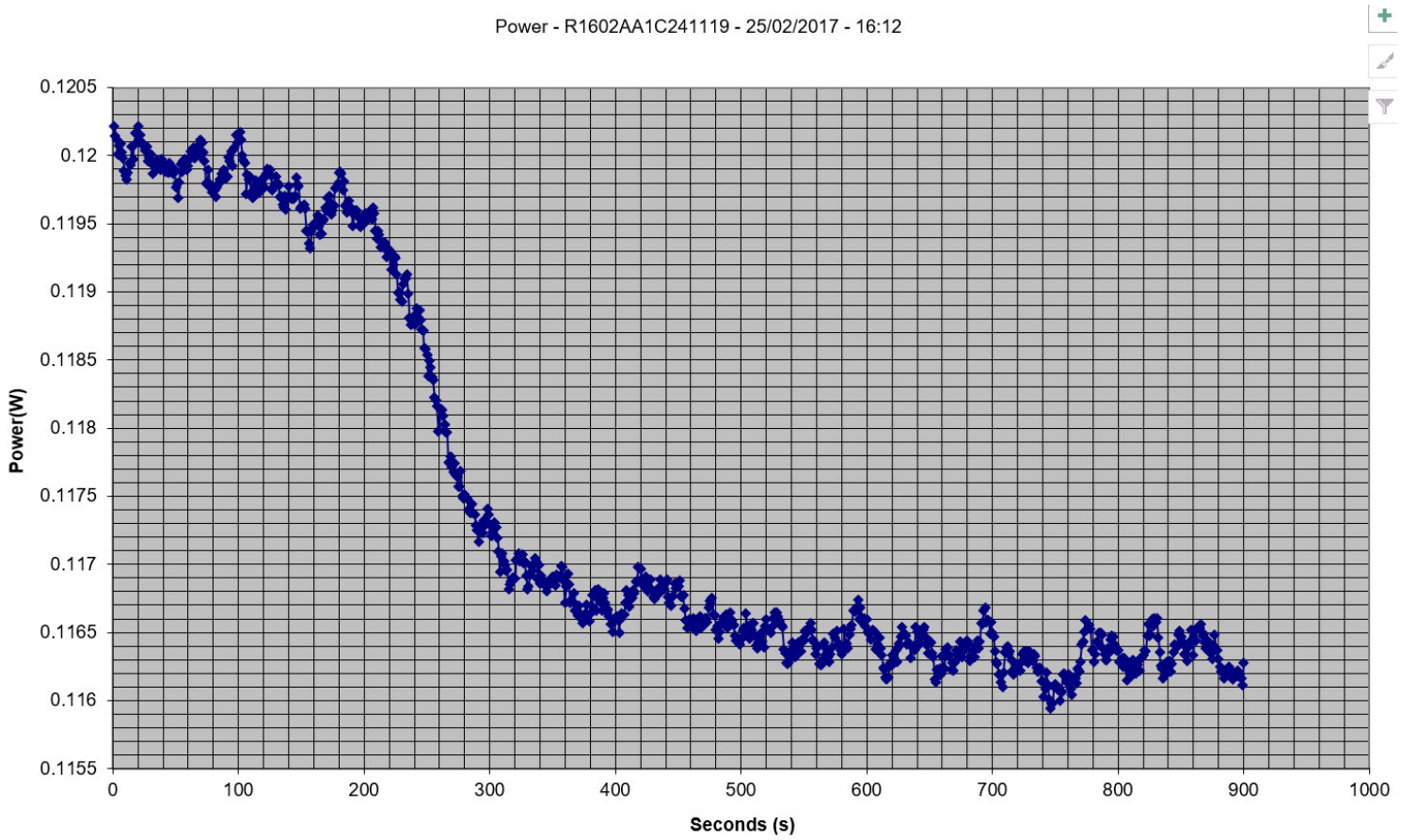
Accredited	
□□□□ (>1450 load combinations)	90.772%
Average Noise Output (>1450 Load Combinations)	6.00dBA
PF□□□ (>1450 Load Combinations)	0.987
Efficiency With 10W (≤500W) or 2% (>500W) Load	-
□□□□□□	0.1163W
Non-Accredited	
12V Ripple (Full Load)	28.74mV
5V Ripple (Full Load)	16.49mV
3.3V Ripple (Full Load)	11.58mV
5VSB Ripple (Full Load)	7.40mV
12V Load Regulation	1.07%
5V Load Regulation	0.42%
3.3V Load Regulation	0.80%
5VSB Load Regulation	2.53%
Inrush Current	19.030A

□□□□ & PG□□

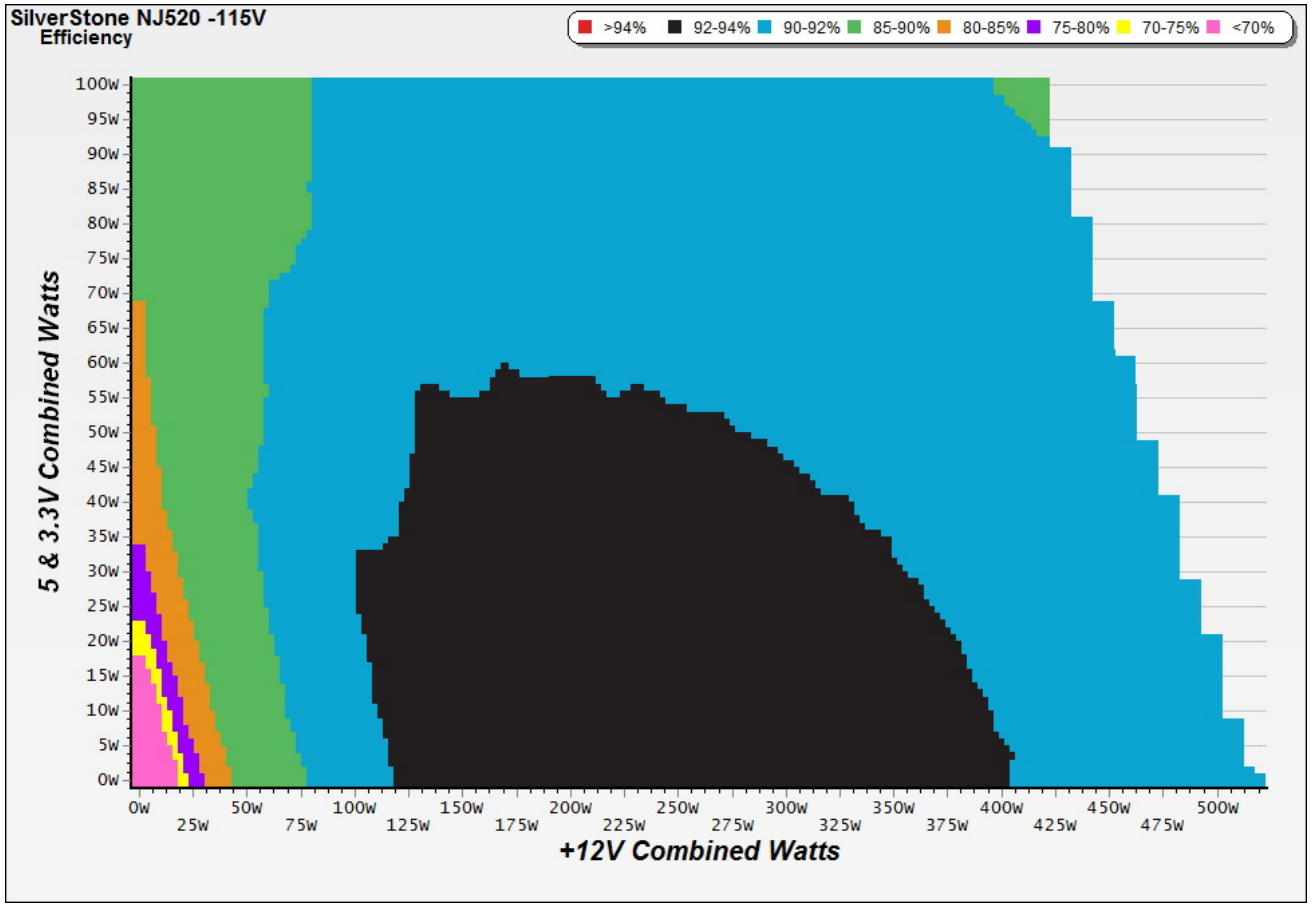
Hold-Up Time (ms)	19.8
AC Loss to PWR_OK Hold Up Time (ms)	16.6
PWR_OK Inactive to DC Loss Delay (ms)	3.2

□□□□

Graphs 115V



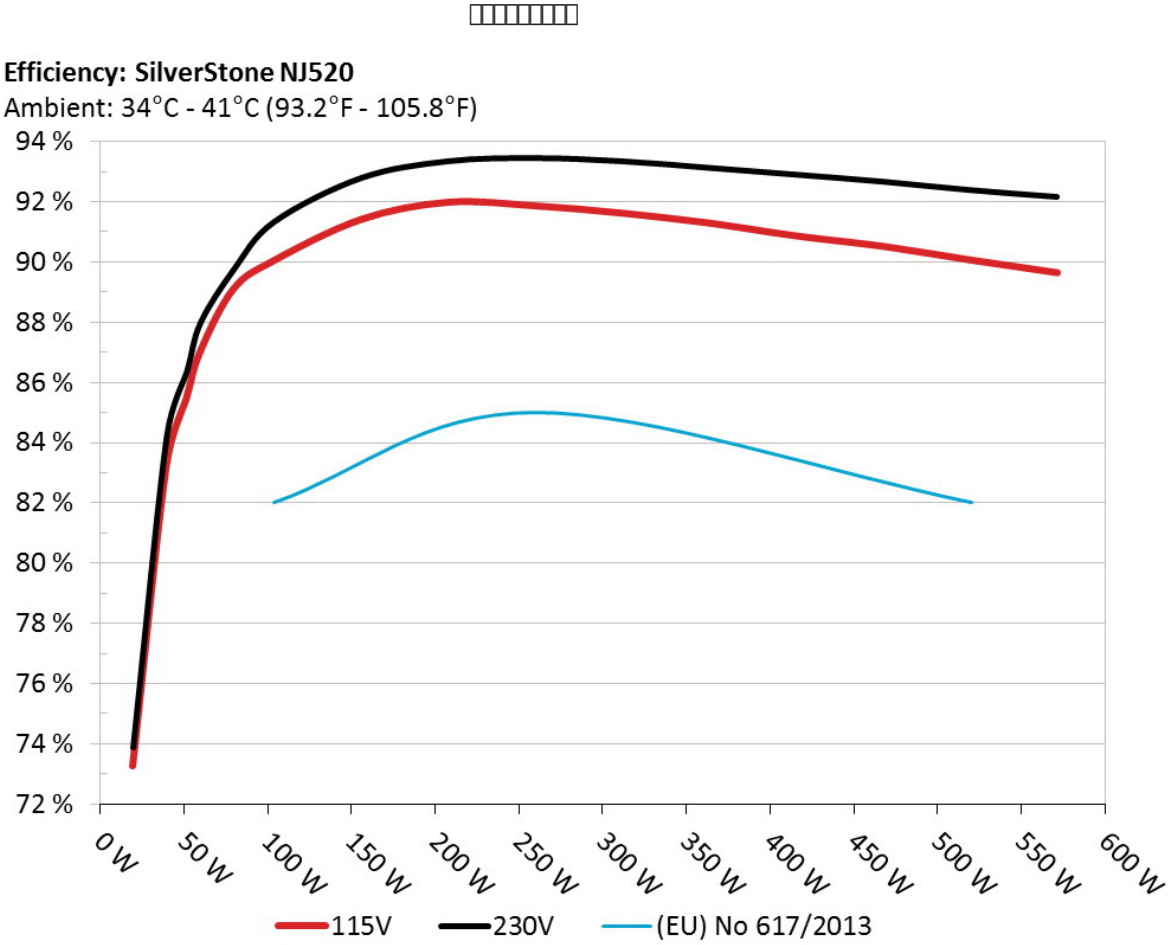
115V



□□

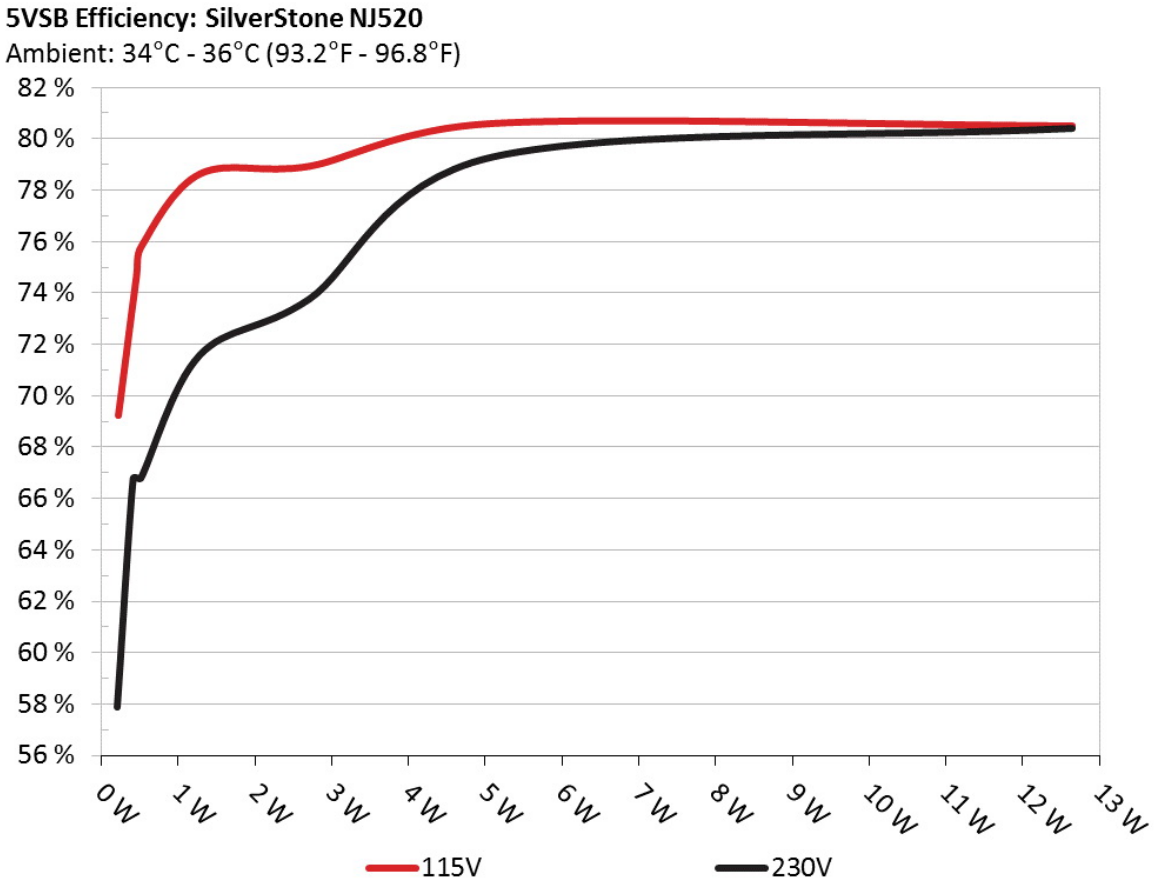
This graph depicts the PSU`s efficiency throughout its entire operational range. For the generation of the efficiency and noise graphs we set our loaders to auto mode through our custom-made software before trying thousands of possible load combinations.

Indicative Performance



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□□□□



□□

This graph depicts the efficiency levels of the 5VSB rail with 115V and 230V input.

□□□□ □□ 5Vsb □□ (ErP Lot3/6 & CEC) 115V

□□ #	5VSB	DC/AC (□)	□□	PF/AC □□
1	0.042A	0.214	69.256%	0.049
	5.110V	0.309		115.11V

2	0.087A	0.446	74.582%	0.093
	5.109V	0.598		115.11V
3	0.532A	2.712	78.929%	0.330
	5.098V	3.436		115.11V
4	2.502A	12.638	80.272%	0.493
	5.052V	15.744		115.11V

Supplementary Tests (For Reference)

10-110%□□□□ 115V

Load Regulation & □□ □□ s
Nidus 500 PG-5001-BR -115V

□□ #	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
1	2.497A	1.985A	1.965A	0.981A	51.771	85.477%	0000	<6.0	41.62°C	0.946
	12.100V	5.030V	3.355V	5.076V	60.567				36.11°C	115.13V
2	6.030A	2.981A	2.953A	1.181A	103.754	90.035%	0000	<6.0	42.51°C	0.976
	12.087V	5.028V	3.352V	5.065V	115.238				36.68°C	115.12V
3	9.921A	3.489A	3.462A	1.385A	155.909	91.408%	0000	<6.0	43.39°C	0.986
	12.074V	5.025V	3.348V	5.053V	170.563				36.83°C	115.12V
4	13.811A	3.986A	3.944A	1.585A	207.779	91.979%	0000	<6.0	44.10°C	0.995
	12.061V	5.023V	3.345V	5.041V	225.898				36.98°C	115.11V
5	17.367A	4.977A	4.932A	1.788A	259.690	91.863%	0000	<6.0	45.24°C	0.990
	12.047V	5.021V	3.343V	5.029V	282.693				37.71°C	115.11V
6	20.936A	5.975A	5.927A	1.992A	311.698	91.619%	0000	<6.0	48.77°C	0.990
	12.033V	5.020V	3.339V	5.015V	340.212				38.99°C	115.11V
7	24.513A	6.980A	6.921A	2.198A	363.729	91.288%	0000	<6.0	49.35°C	0.992
	12.019V	5.018V	3.336V	5.001V	398.443				39.30°C	115.11V
8	28.095A	7.976A	7.918A	2.404A	415.679	90.861%	0000	<6.0	50.36°C	0.994
	12.005V	5.016V	3.334V	4.988V	457.487				39.72°C	115.11V
9	32.115A	8.475A	8.436A	2.407A	467.680	90.515%	0000	<6.0	51.07°C	0.994
	11.991V	5.014V	3.332V	4.980V	516.686				39.89°C	115.11V

10	36.103A	8.983A	8.920A	2.513A	519.543	90.064%	0000	<6.0	52.60°C	0.995
	11.975V	5.012V	3.329V	4.971V	576.859				40.09°C	115.16V
11	40.495A	8.987A	8.924A	2.516A	571.526	89.639%	0000	<6.0	55.13°C	0.995
	11.960V	5.010V	3.327V	4.964V	637.586				40.87°C	115.11V
CL1	0.099A	12.012A	12.005A	0.005A	101.667	86.347%	0000	<6.0	53.96°C	0.978
	12.074V	5.025V	3.339V	5.073V	117.743				40.50°C	115.12V
CL2	42.962A	1.003A	1.003A	1.002A	527.935	90.857%	0000	<6.0	54.67°C	0.995
	11.976V	5.019V	3.346V	5.021V	581.061				41.26°C	115.11V

The results above are not used in the certification process

20-80□□□□ 115V

□□ at Low Loads Nidus 500 PG-5001-BR -115V									
□□ #	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	PF/AC □□
1	1.206A	0.492A	0.474A	0.196A	19.670	73.259%	0000	<6.0	0.851
	12.109V	5.031V	3.358V	5.100V	26.850				115.12V
2	2.436A	0.991A	0.980A	0.392A	39.759	83.225%	0000	<6.0	0.923
	12.104V	5.033V	3.356V	5.093V	47.773				115.12V
3	3.671A	1.488A	1.488A	0.586A	59.874	87.011%	0000	<6.0	0.949
	12.099V	5.031V	3.355V	5.085V	68.812				115.12V
4	4.893A	1.986A	1.965A	0.786A	79.745	89.094%	0000	<6.0	0.969
	12.094V	5.029V	3.354V	5.078V	89.507				115.12V

The results above are not used in the certification process

□□□□ 115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	10.6 mV	10.6 mV	6.1 mV	4.8 mV	Pass
20% Load	14.3 mV	11.8 mV	6.2 mV	5.1 mV	Pass
30% Load	19.0 mV	11.4 mV	6.8 mV	5.0 mV	Pass
40% Load	20.5 mV	11.7 mV	7.0 mV	5.4 mV	Pass





Test	12V	5V	3.3V	5VSB	Pass/Fail
50% Load	22.6 mV	12.0 mV	8.8 mV	5.5 mV	Pass
60% Load	23.4 mV	12.8 mV	8.5 mV	6.0 mV	Pass
70% Load	25.1 mV	13.0 mV	9.4 mV	6.3 mV	Pass
80% Load	25.9 mV	13.5 mV	9.5 mV	6.9 mV	Pass
90% Load	27.8 mV	14.5 mV	10.2 mV	7.1 mV	Pass
100% Load	28.7 mV	16.5 mV	11.6 mV	7.4 mV	Pass
110% Load	30.2 mV	16.7 mV	12.9 mV	7.7 mV	Pass
Crossload 1	15.1 mV	13.5 mV	8.3 mV	19.5 mV	Pass
Crossload 2	27.8 mV	14.6 mV	11.4 mV	7.1 mV	Pass

The results above are not used in the certification process

SilverStone Nightjar 520W

Top side

Power specifications label

本测试报告中包含的所有数据和图表均可在以下条件下由任何人使用：使用过程需提及测试结果由 Cybenetics提供。
在任何情况下都应提供原始测试结果文档的网站链接

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