SILVERSTONE

SilverStone Strider Platinum 750W

Serial Number 1966391750PT11F02001293

Lab ID 55

Certification ID 2555

Test Result Report ID:

Certificate Issue Date: Feb 28, 2018

115V

Scheme: ETA-EMI PSU

CYBENETICS PLATINUM

115V

CYBENETICS A

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	Strider Platinum 750W
OEM/ODM	Sirfa / High Power
Serial Number	1966391750PT11F02001293
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	10
Rated Frequency (Hz)	50-60

Rated Power (W)	750
Operating Temperature (Continuous Full Load) (°C)	
Type	ATX12V
Cable Design	Fully Modular
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
Cooling	120mm Fluid Dynamic Bearing Fan (S1202512L)
Semi-Passive Operation	✓
Cybenetics Testing Information	
Lab ID	55
Date of receipt	Feb 14, 2018
Testing Date	Feb 24, 2018
Report Issued Date	Feb 28, 2018
DUT Notes	Retested on 6/23/17
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
ATX connector 20+4 pin (550mm)	1	1	18-22AWG
4+4 pin EPS12V (750mm)	1	1	16AWG
6+2 pin PCIe (550mm+150mm)	2	4	16-18AWG
SATA (600mm+150mm+150mm+150mm)	2	8	18AWG
4 pin Molex (600mm+150mm+150mm) / FDD Adapter (+150mm)	2	6 / 2	18 / 22AWG

Power Specifications

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	22	22	62.5	3	0.3
	Watts	120		750	15	3.6
Total Max. Power (W)		750				

Parts Description

Primary Side	
Transient Filter	4x Y caps, 2x X caps, 2x CM chokes, 1x MOV
Inrush Protection	NTC Thermistor & Relay
Bridge Rectifier(s)	1x GBJ1506 (600V, 15A @ 100°C)
APFC MOSFETS	2x Infineon IPA50R140CP (550V, 15A @ 100°C, 0.14 Ohm)
APFC Boost Diode	1x CREE C3D08060A (600V, 8A @ 152°C)
Hold-up Cap(s)	1x Rubycon (400V, 560uF, 3000h @ 105°C, MXG)
Main Switchers	2x Infineon IPA50R140CP (550V, 15A @ 100°C, 0.14 Ohm)
APFC Controller	Infineon ICE3PCS01
Switching Controller	Infineon ICE2HS01G
Topology	Primary side:Half-Bridge & LLC Resonant Converter Secondary side: Synchronous Rectification & DC-DC converters
Secondary Side	
+12V MOSFETS	4x Infineon IPP015N04N (40V, 120A @ 100°C, 1.5 mOhm)
5V & 3.3V	DC-DC Converters: 8x Infineon IPD060N03L (30V, 50A @ 100°C, 6 mOhm) PWM Controller: APW7159
Filtering Capacitors	Electrolytics: Nippon Chemi-Con (105°C, KY, KZE) Polymers: Teapo, Nippon Chemi-Con
Supervisor IC	SITI PS223 (OVP, UVP, OCP, SCP, OTP)
Fan Model	Globe Fan S1202512L (120mm, 12V, 0.18A, Fluid Dynamic Bearing)
5VSB Circuit	
Rectifier	2x IPD060N03L
Standby PWM Controller	Sanken STR-A6069H

-12V Circuit	
PWM Controller	KIA7912PI

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

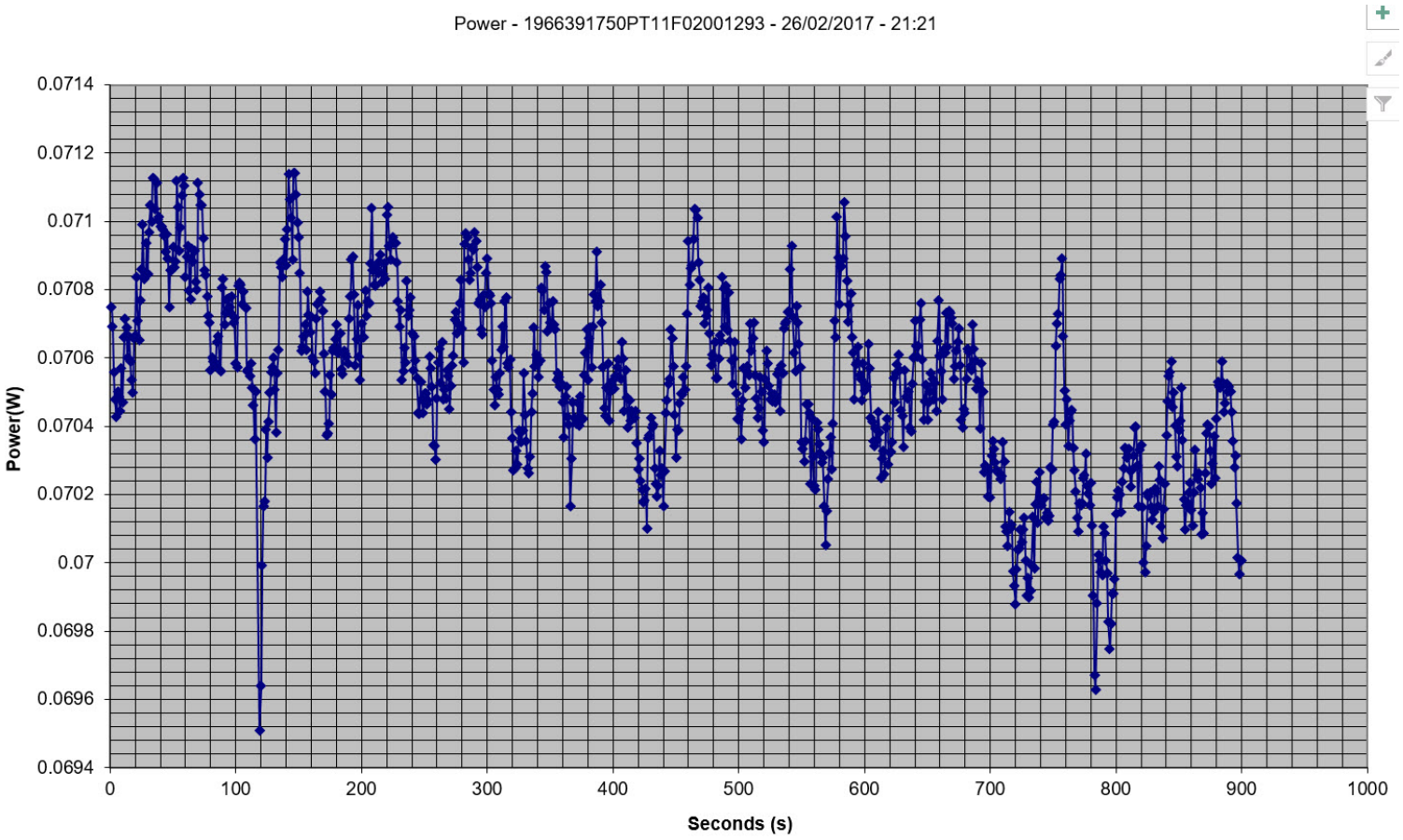
Accredited	
Average Efficiency (>1450 load combinations)	89.583%
Average Noise Output (>1450 Load Combinations)	24.10dBA
Average PF (>1450 Load Combinations)	0.993
Efficiency With 10W (≤500W) or 2% (>500W) Load	-
Standby Power Consumption	0.0700W
Non-Accredited	
12V Ripple (Full Load)	33.86mV
5V Ripple (Full Load)	15.96mV
3.3V Ripple (Full Load)	16.95mV
5VSB Ripple (Full Load)	11.86mV
12V Load Regulation	1.98%
5V Load Regulation	3.48%
3.3V Load Regulation	3.89%
5VSB Load Regulation	4.60%
Inrush Current	-

Hold-Up Time & PWR_OK Signal

Hold-Up Time (ms)	10
AC Loss to PWR_OK Hold Up Time (ms)	13.3
PWR_OK Inactive to DC Loss Delay (ms)	-3.3

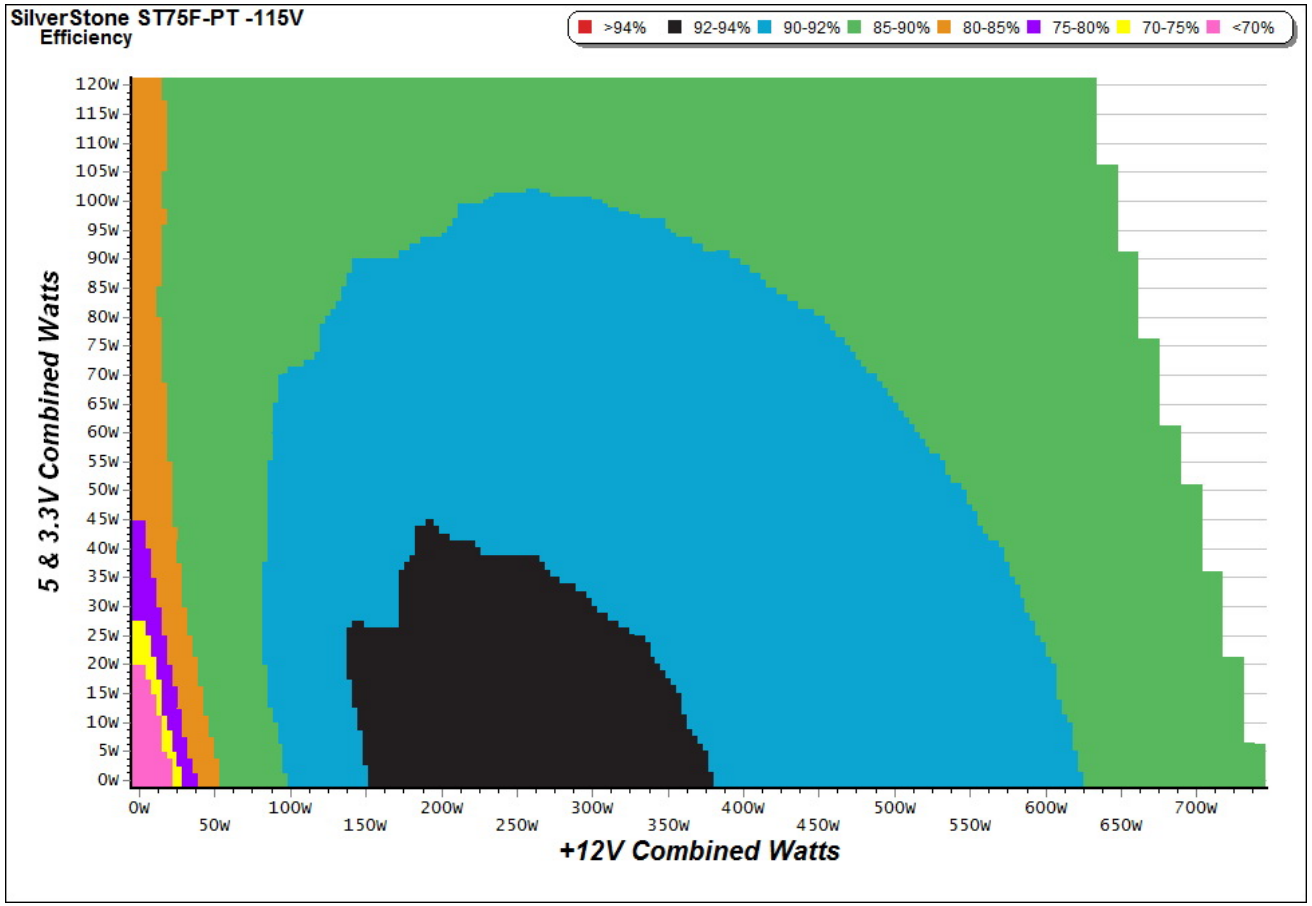
Vampire Power

Graphs 115V



Efficiency Graph

115V

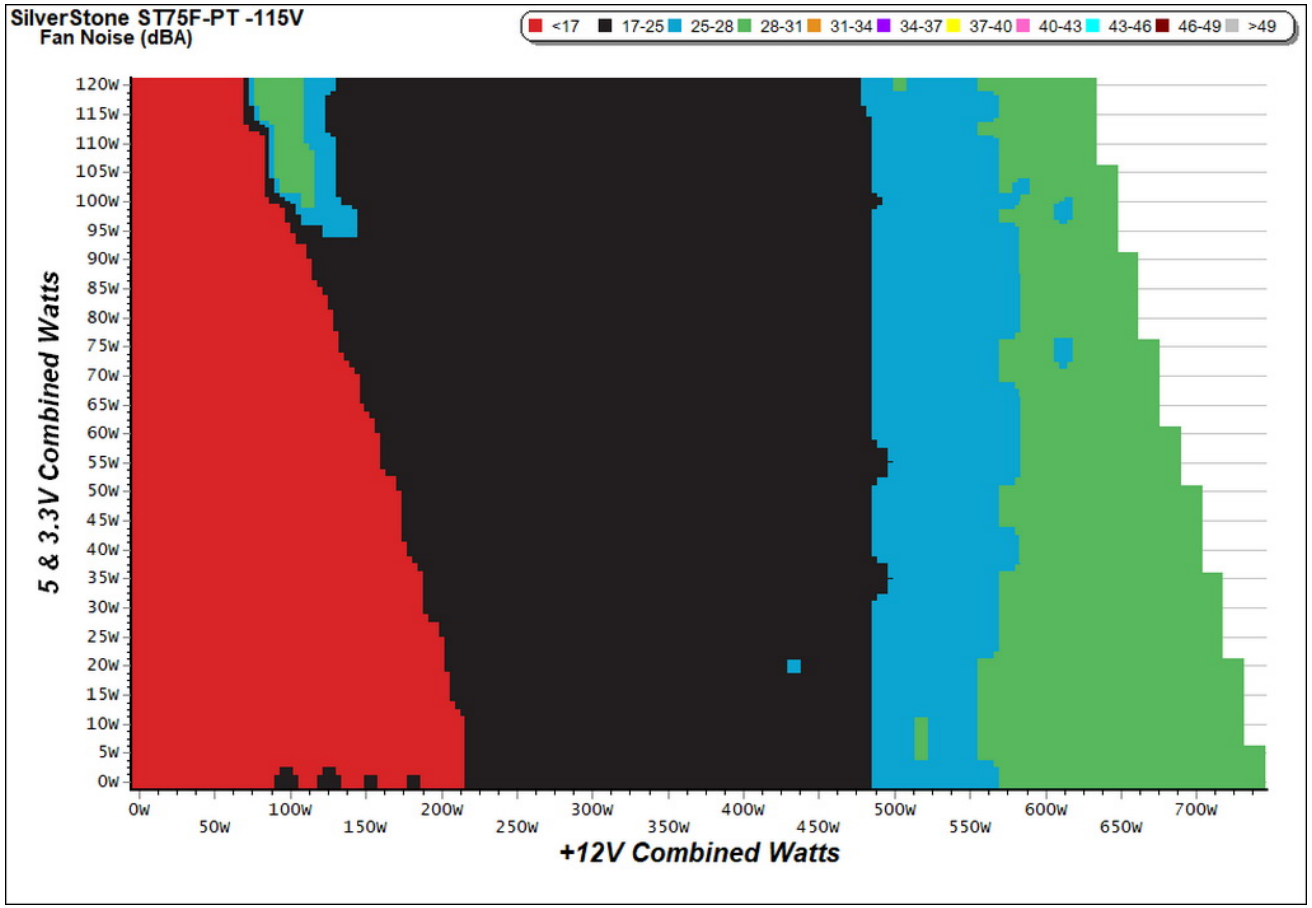


INFO

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.

Noise under high ambient temperature (indicative)

115V

Load	Normal ambient fan · noise · intake	High ambient fan · noise · intake	Noise change
10%	-	-	-
20%	-	-	-
50%	-	-	-
100%	-	-	-

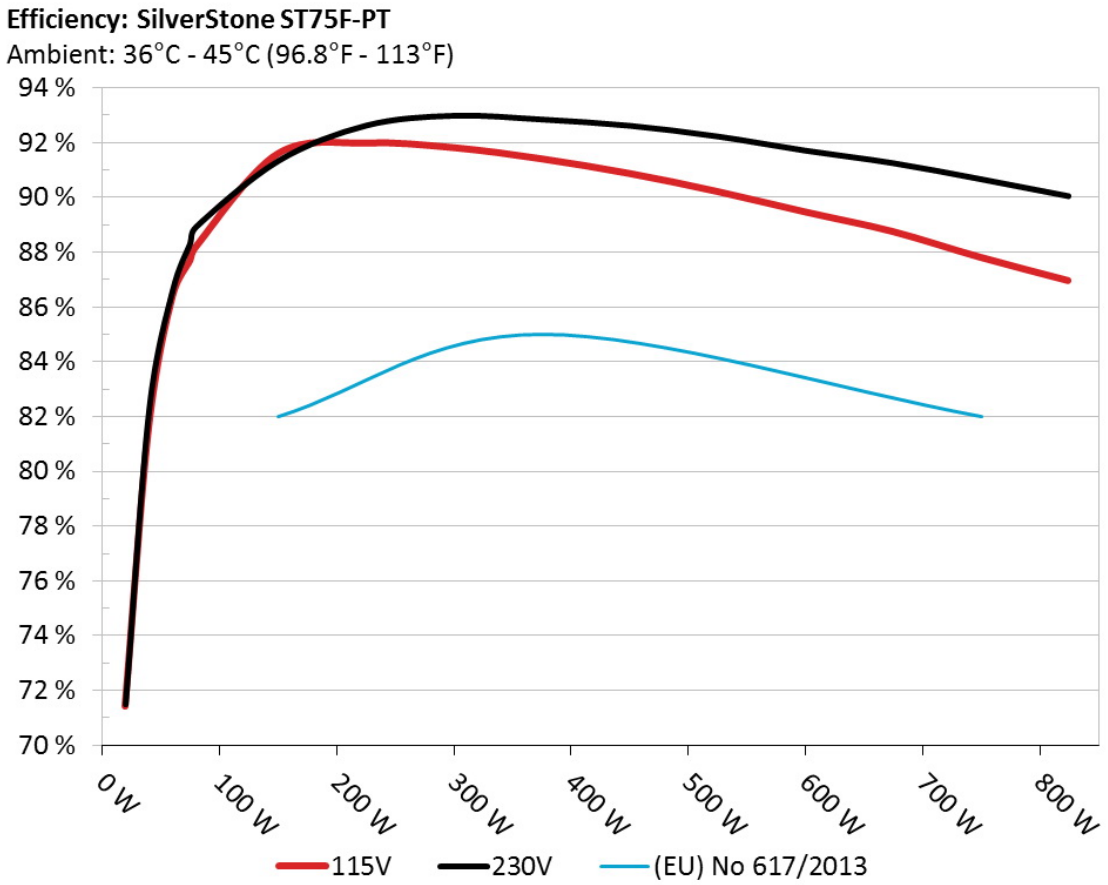
INFO

Fan speed, noise and the measured intake temperature at 10, 20, 50 and 100 % load, from the two load regulation tests: at normal ambient (about 30-32 °C) and at high ambient (about 40-47 °C). These are stabilized readings at fixed loads, not averages over the certification sweep, so they are indicative of how the fan behaves when it is hot. "<6.0" is the floor of our sound meter, with the fan stopped; with the fan stopped, the intake sensor can read higher than the chamber air.

Informational. Not part of the ETA or LAMBDA rating.

Indicative Performance

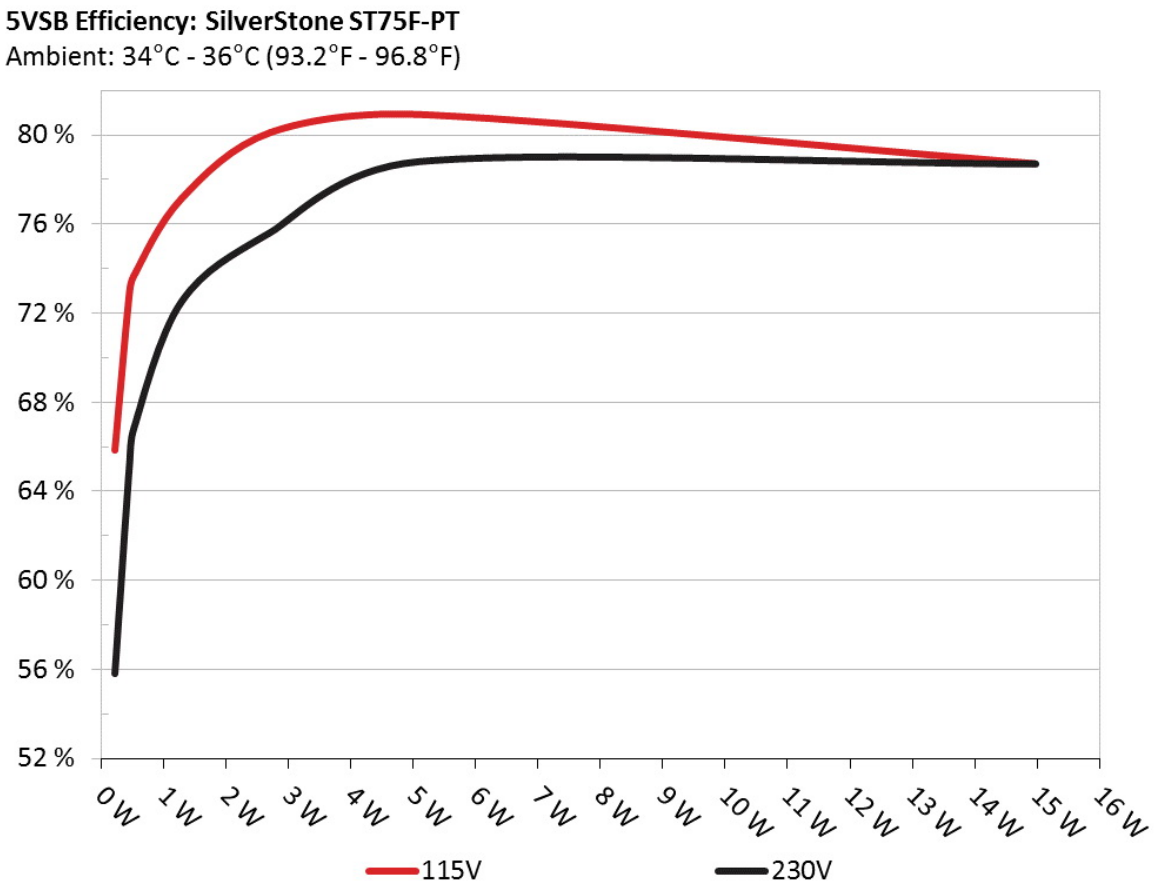
Efficiency under high ambient temperature



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	0.042A	0.212	65.839%	0.045
	5.116V	0.322		115.09V

2	0.087A	0.443	72.862%	0.083
	5.114V	0.608		115.10V
3	0.532A	2.707	80.112%	0.265
	5.094V	3.379		115.10V
4	3.002A	14.951	78.677%	0.378
	4.981V	19.003		115.09V

Supplementary Tests (For Reference)

Typical Load Tests 115V

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noi (dB
1	4.354A	1.963A	1.965A	0.986A	74.804	87.669%		
	12.225V	5.092V	3.356V	5.063V	85.325			
2	9.744A	2.949A	2.959A	1.186A	149.747	91.575%		
	12.205V	5.079V	3.341V	5.045V	163.523			
3	15.509A	3.456A	3.485A	1.391A	224.889	91.972%		
	12.175V	5.063V	3.326V	5.024V	244.519			
4	21.283A	3.960A	3.983A	1.596A	299.767	91.801%		
	12.150V	5.050V	3.312V	5.003V	326.540			
5	26.737A	4.969A	5.001A	1.804A	374.776	91.395%		
	12.128V	5.034V	3.298V	4.985V	410.060			
6	32.222A	5.975A	6.029A	2.011A	449.641	90.860%		
	12.100V	5.019V	3.283V	4.967V	494.871			
7	37.717A	6.999A	7.063A	2.221A	524.637	90.206%		
	12.079V	5.005V	3.268V	4.948V	581.597			
8	43.249A	8.021A	8.115A	2.431A	599.534	89.459%		
	12.051V	4.988V	3.252V	4.930V	670.176			
9	49.225A	8.545A	8.673A	2.440A	674.594	88.741%		
	12.027V	4.972V	3.240V	4.917V	760.183			

10	54.973A	9.075A	9.213A	3.073A	749.400	87.801%		
	12.001V	4.959V	3.223V	4.879V	853.522			
11	61.33A	9.099A	9.250A	3.081A	824.224	86.950%		
	11.978V	4.946V	3.210V	4.866V	947.933			
CL1	0.099A	14.024A	14.005A	0.005A	118.628	82.878%		
	12.202V	5.051V	3.319V	5.117V	143.136			
CL2	62.454A	1.003A	1.003A	1.002A	763.200	88.482%		
	12.010V	4.988V	3.253V	4.955V	862.549			

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	1.195A	0.481A	0.474A	0.196A	19.662	71.412%			0.898
	12.228V	5.105V	3.368V	5.097V	27.533				115.09V
2	2.413A	0.979A	0.980A	0.391A	39.763	81.604%			0.952
	12.227V	5.100V	3.364V	5.089V	48.727				115.09V
3	3.634A	1.466A	1.486A	0.591A	59.897	86.368%			0.967
	12.226V	5.097V	3.360V	5.079V	69.351				115.10V
4	4.846A	1.964A	1.965A	0.786A	79.783	88.174%			0.975
	12.222V	5.093V	3.356V	5.070V	90.484				115.10V

The results above are not used in the certification process

Ripple Measurements 115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	8.70mV	5.50mV	4.80mV	5.00mV	Pass
20% Load	7.40mV	6.10mV	4.60mV	4.80mV	Pass
30% Load	9.20mV	7.80mV	6.00mV	5.90mV	Pass
40% Load	10.90mV	10.40mV	7.70mV	8.50mV	Pass
50% Load	12.60mV	12.80mV	8.90mV	11.60mV	Pass
60% Load	13.70mV	11.10mV	11.80mV	10.00mV	Pass
70% Load	16.60mV	12.40mV	11.30mV	10.60mV	Pass
80% Load	20.70mV	12.20mV	12.30mV	10.40mV	Pass
90% Load	27.30mV	13.30mV	15.10mV	10.80mV	Pass
100% Load	33.90mV	16.00mV	17.00mV	11.90mV	Pass
110% Load	40.40mV	18.40mV	19.40mV	12.60mV	Pass
Crossload1	8.10mV	6.30mV	7.00mV	5.00mV	Pass
Crossload2	33.60mV	15.00mV	14.80mV	11.20mV	Pass

The results above are not used in the certification process