Aerocool ACP-650FP7

Serial Number D170500001

Lab ID 149

Certification ID 25149

Test Result Report ID: 19PS149A

Certificate Issue Date: Jul 31, 2018

115V 230V

Scheme: ETA-EMI PSU

CYBENETICS PLATINUM

115V 230V

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	Aerocool
Model	ACP-650FP7
OEM/ODM	Andyson
Serial Number	D170500001
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	10-5
Rated Frequency (Hz)	50-60

Rated Power (W)	650
Operating Temperature (Continuous Full Load) (°C)	
Type	ATX12V
Cable Design	Fully Modular
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
Cooling	140mm Fluid Dynamic Bearing Fan (CD1425M12F)
Semi-Passive Operation	✓
Cybenetics Testing Information	
Lab ID	149
Date of receipt	Jul 15, 2018
Testing Date	Jul 27, 2018
Report Issued Date	Jul 31, 2018
DUT Notes	Retested on 7/10/17
Engineer Name	-
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

Protection Features(Manufacturer)

Over Power Protection	✓
Over Current (+12V) Protection	✗
Over Temperature Protection	✓
Short Circuit Protection	✗
Surge Protection	✗
Inrush Current Protection	✗
Fan Failure Protection	✗

Test Results

Temperature & Compliance Info

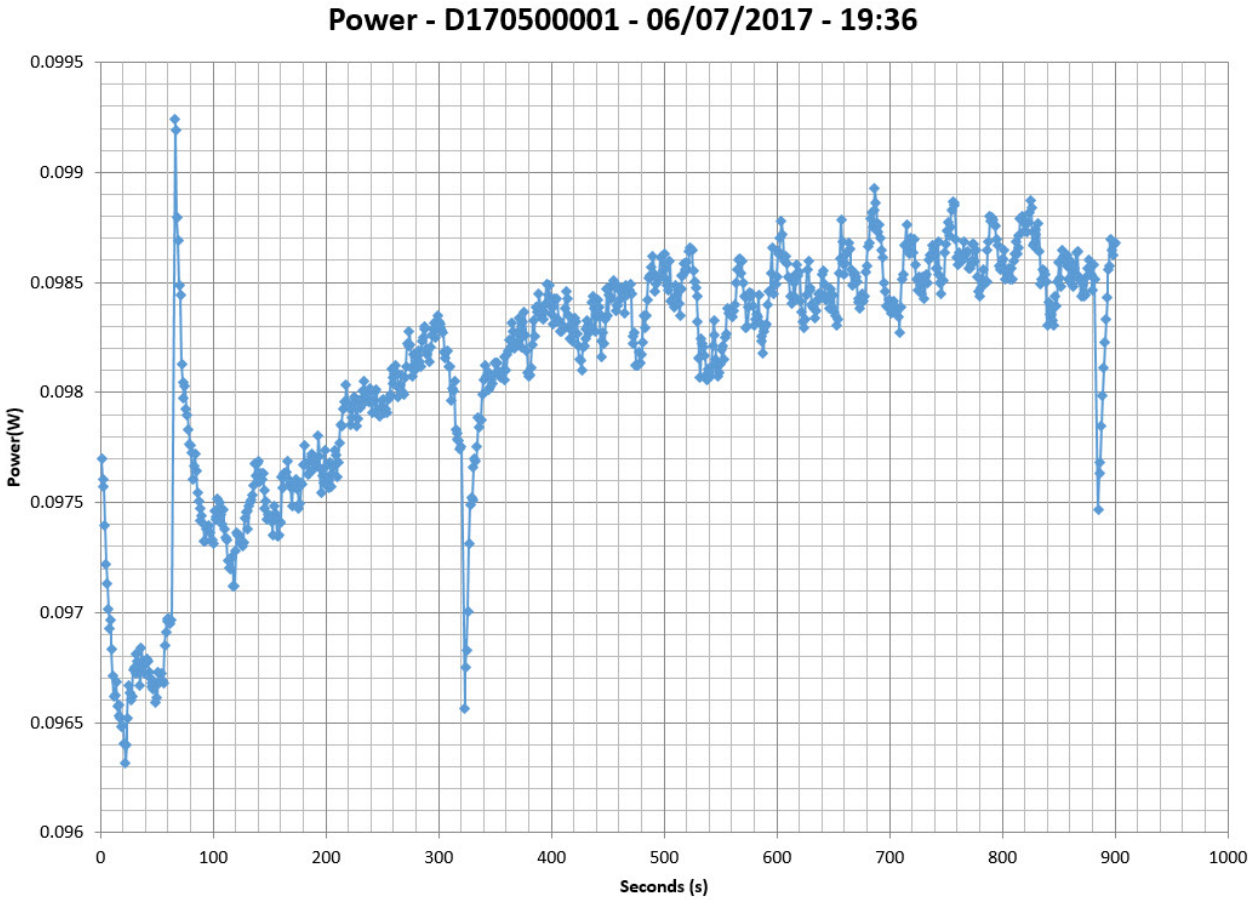
Temperature Range (°C /°F)	28-32 / 82.4-89.6
ErP Lot 3/6 Ready	ErP Lot 3/6 2010: ✓ ErP Lot 3/6 2013: ✓ ErP Lot 3/6 2014, CEC: Partially
(EU) No 617/2013 Compliance	✓

Performance Summary 115V

Accredited	
Average Efficiency (>1450 load combinations)	90.337%
Average Noise Output (>1450 Load Combinations)	13.45dBA
Average PF (>1450 Load Combinations)	0.979
Efficiency With 10W (≤500W) or 2% (>500W) Load	-
Standby Power Consumption	0.0987W
Non-Accredited	
12V Ripple (Full Load)	22.38mV
5V Ripple (Full Load)	-
3.3V Ripple (Full Load)	-
5VSB Ripple (Full Load)	27.13mV
12V Load Regulation	0.49%
5V Load Regulation	-
3.3V Load Regulation	-
5VSB Load Regulation	2.39%
Inrush Current	31.657A

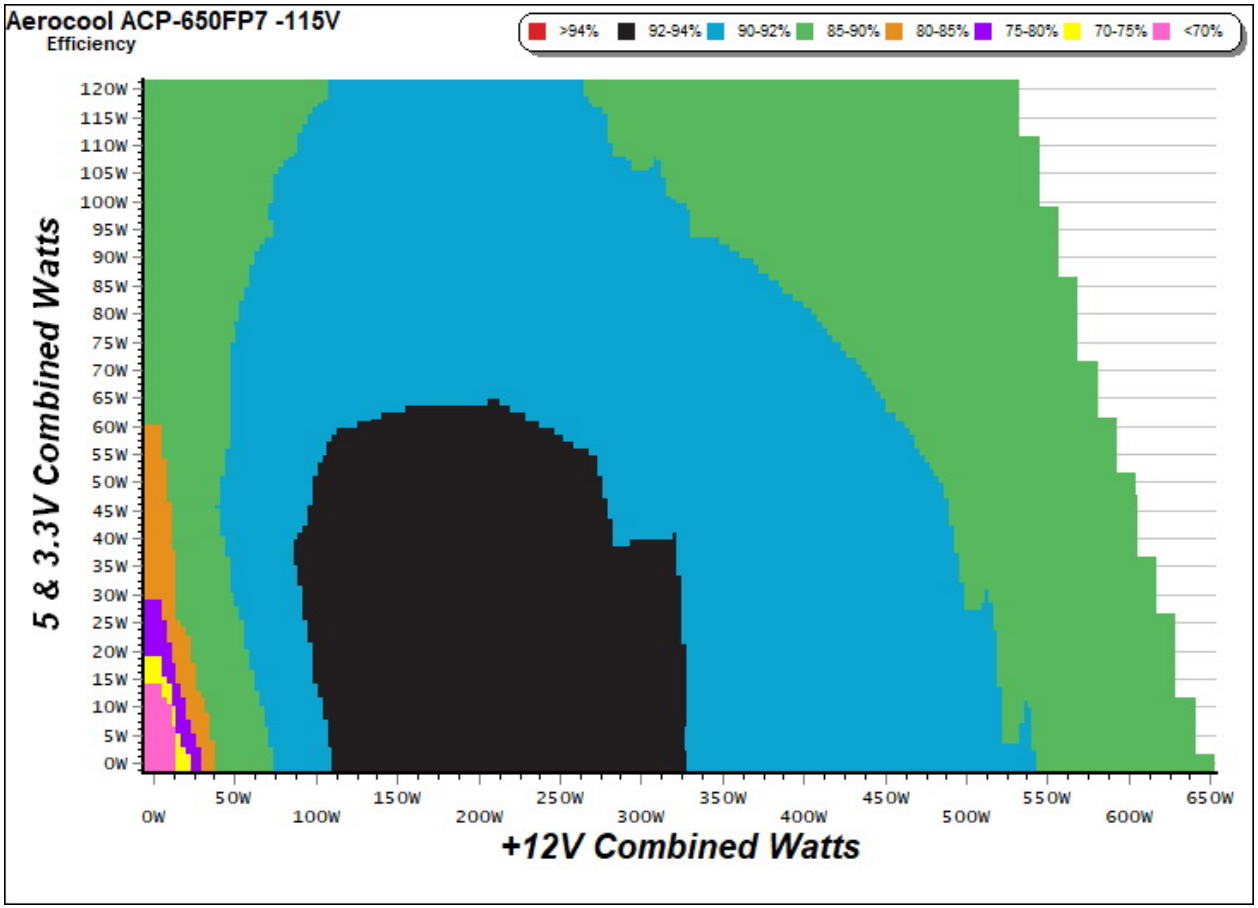
Vampire Power

Graphs 115V



Efficiency Graph

115V

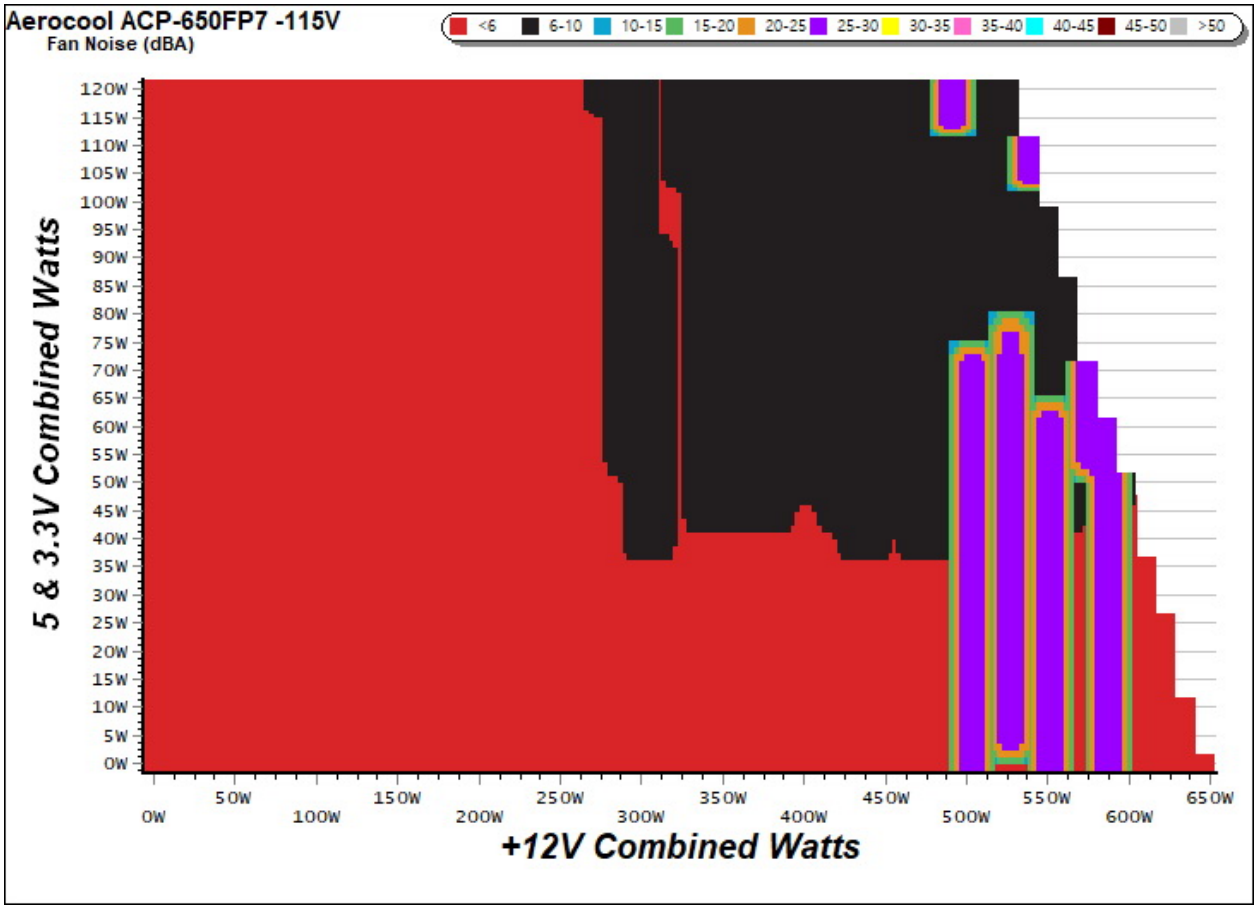


INFO

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

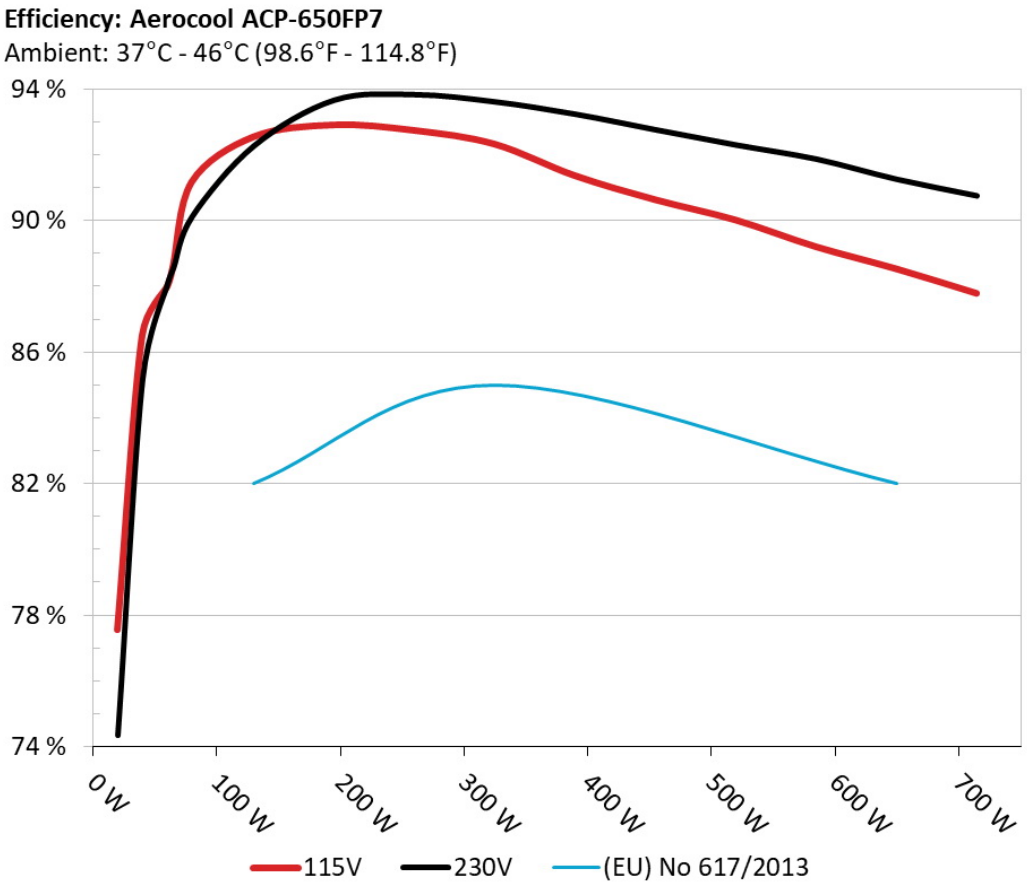


INFO

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.

Indicative Performance

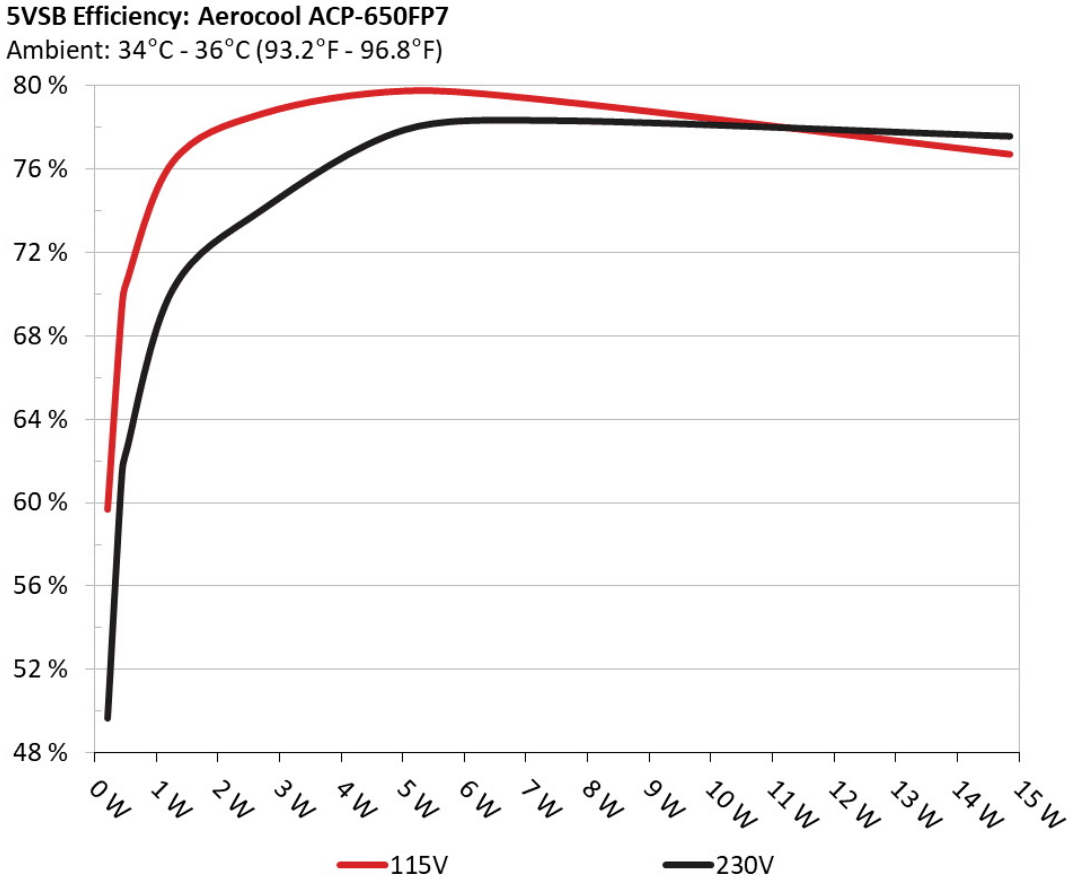
Efficiency under high ambient temperature



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.

Supplementary Tests (For Reference)

Typical Load Tests 115V

The results above are not used in the certification process

Light Load Tests 115V

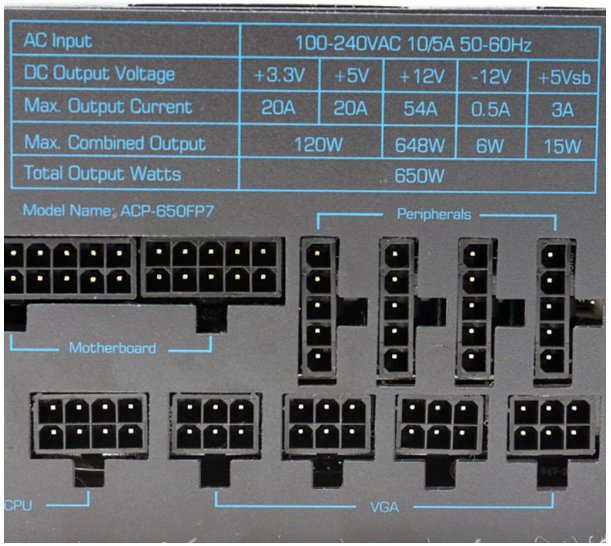
The results above are not used in the certification process

Ripple Measurements 115V

The results above are not used in the certification process

Aerocool ACP-650FP7

Top side



Power specifications label

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

Cybenetics runs voluntary certification programs for power supplies - ETA for efficiency, LAMBDA for noise and SAFE for safety and correct operation - and for cooling products, with DELTA for chassis soundproofing and PHI for fan airflow and static pressure. THETA rates cooler performance on AMD AM5 and Intel LGA1851 outside ISO 17065 and accreditation scope

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