Segotep

Segotep PM650W (SG-650P)

Serial Number SAQN2B403000987

Lab ID ST65002755

Certification ID 252755

Test Result Report ID: 25PS2755A

Certificate Issue Date: Feb 28, 2025

115V 230V

Scheme: ETA-EMI PSU

115V 230V





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	Segotep
Model	PM650W (SG-650P)
OEM/ODM	Huizhou Xinggu Technology
Serial Number	SAQN2B403000987
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	12-6

Rated Frequency (Hz)	47-63
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	120mm Rifle Bearing Fan (DF1202512RFLN)
Semi-Passive Operation	✗
Cybenetics Testing Information	
Lab ID	ST65002755
Date of receipt	Dec 10, 2024
Testing Date	Feb 27, 2025
Report Issued Date	Feb 28, 2025
DUT Notes	The PSU didn't get an efficiency rating because, among other things, its CPU cable melted. This is also why we couldn't evaluate the protection features.
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**	In Cable Capacitors
ATX connector 20+4 pin (600mm)	1	1	18AWG	No
4+4 pin EPS12V (700mm+150mm)	1	2	18AWG	No
6+2 pin PCIe (550mm)	2	2	18AWG	No
SATA (450mm+150mm+150mm+150mm)	1	4	18AWG	No
4-pin Molex (450mm+150mm+150mm)	1	3	18AWG	No

AC Power Cord (1350mm) - C13 coupler	1	1	18AWG	-

Protection Features

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

Power Specifications

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	16	15	54	2.5	0.3
	Watts	103		648	12.5	3.6
Total Max. Power (W)		650				

Parts Description

General Data	
Manufacturer (OEM)	Huizhou Xinggu Technology
PCB Type	Double-Sided
Primary Side	
Transient Filter	4x Y caps, 3x X caps, 2x CM chokes, 1x MOV
Inrush Protection	1x NTC Thermistor MF72 2.5D-15 (2.5 ohm) & Relay
Bridge Rectifier(s)	2x
APFC MOSFETs	1x Infineon IPW60R060P7 (650V, 30A @ 100°C, Rds(on): 0.060Ohm)
APFC Boost Diode	1x CREE C6D10065A (650V, 10A @ 155°C)

Bulk Cap(s)	1x CapXon (420V, 560uF, 2,000h @ 105°C, HP)
Main Switchers	2x Oriental Semiconductor OSG65R099HT3ZF (650V, 25.3A @ 100°C, Rds(on): 99mOhm)
APFC Controller	Champion CM6502UHHX
Resonant Controller	Champion CM6901X
Topology	Primary side: APFC, Half-Bridge & LLC Resonant converter Secondary side: Synchronous Rectification & DC-DC converters
Secondary Side	
+12V MOSFETs	4x Chongqing Pingwei PWC012N04ES (40V, 61A @ 100°C, Rds(on): 1.2mOhm)
5V & 3.3V	DC-DC Converters: 4x Onsemi NTMFS4C022N (30V, 30A @ 25°C, Rds(on): 1.76mOhm) PWM Controller(s): 2x AnpecAPW7073
Filtering Capacitors	Electrolytic: 4x Chengx (2-3,000h @105°C, GR) 1x CS (1,000h @105°C, WR) Polymer: 31x Apaq, 3x
Supervisor IC	UTC8313
Fan Model	DF1202512RFLN (120mm, 12V, 0.16A, Rifle Bearing Fan)
5VSB	
Rectifier	1x Dongke Semiconductor DK5V45R10S (45V, 10A)
Standby PWM Controller	Excelliance MOS EM8569C

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)	89.635%
Average Noise Output (>1450 Load Combinations)	28.91dBA
Average PF (>1450 Load Combinations)	0.985
Efficiency With 10W (≤500W) or 2% (>500W) Load	63.231%
Standby Power Consumption	0.4078W
Non-Accredited	
12V Ripple (Full Load)	28.81mV
5V Ripple (Full Load)	12.75mV
3.3V Ripple (Full Load)	16.34mV
5VSB Ripple (Full Load)	12.04mV
12V Load Regulation	1.60%
5V Load Regulation	2.65%
3.3V Load Regulation	4.80%
5VSB Load Regulation	8.22%
Inrush Current	62.450A

230V

Accredited	
Average Efficiency (>1450 load combinations)	90.711%
Average Noise Output (>1450 Load Combinations)	29.70dBA
Average PF (>1450 Load Combinations)	0.933
Efficiency With 10W (≤500W) or 2% (>500W) Load	44.080%
Standby Power Consumption	0.6873W
Non-Accredited	
12V Ripple (Full Load)	28.34mV
5V Ripple (Full Load)	12.48mV
3.3V Ripple (Full Load)	16.15mV

5VSB Ripple (Full Load)		11.99mV
12V Load Regulation		1.88%
5V Load Regulation		2.65%
3.3V Load Regulation		4.80%
5VSB Load Regulation		8.15%
Inrush Current		127.200A
12V Transient Response (150%)		11.76V
5V Transient Response (150%)		4.895V
3.3V Transient Response (150%)		3.181V
5VSB Transient Response (150%)		4.939V
Hold-Up Time & PWR_OK Signal		0.00ms
AC Loss to PWR_OK Hold Up Time		0.00ms
PWR_OK Inactive to DC Loss Delay		0.00ms
PSU Timings: T1 (20% / 100%)	60.0ms	60.0ms
PSU Timings: T3 (20% / 100%)	324.0ms	324.0ms
OPP (0.00°C / 0.00°C)	-	-

Hold-Up Time & PWR_OK Signal

Hold-Up Time (ms)	0
AC Loss to PWR_OK Hold Up Time (ms)	0
PWR_OK Inactive to DC Loss Delay (ms)	0

Vampire Power

Tables

115V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	114.89 V	114.85 V	113.85 V	114.94 V	116.15 V	PASS

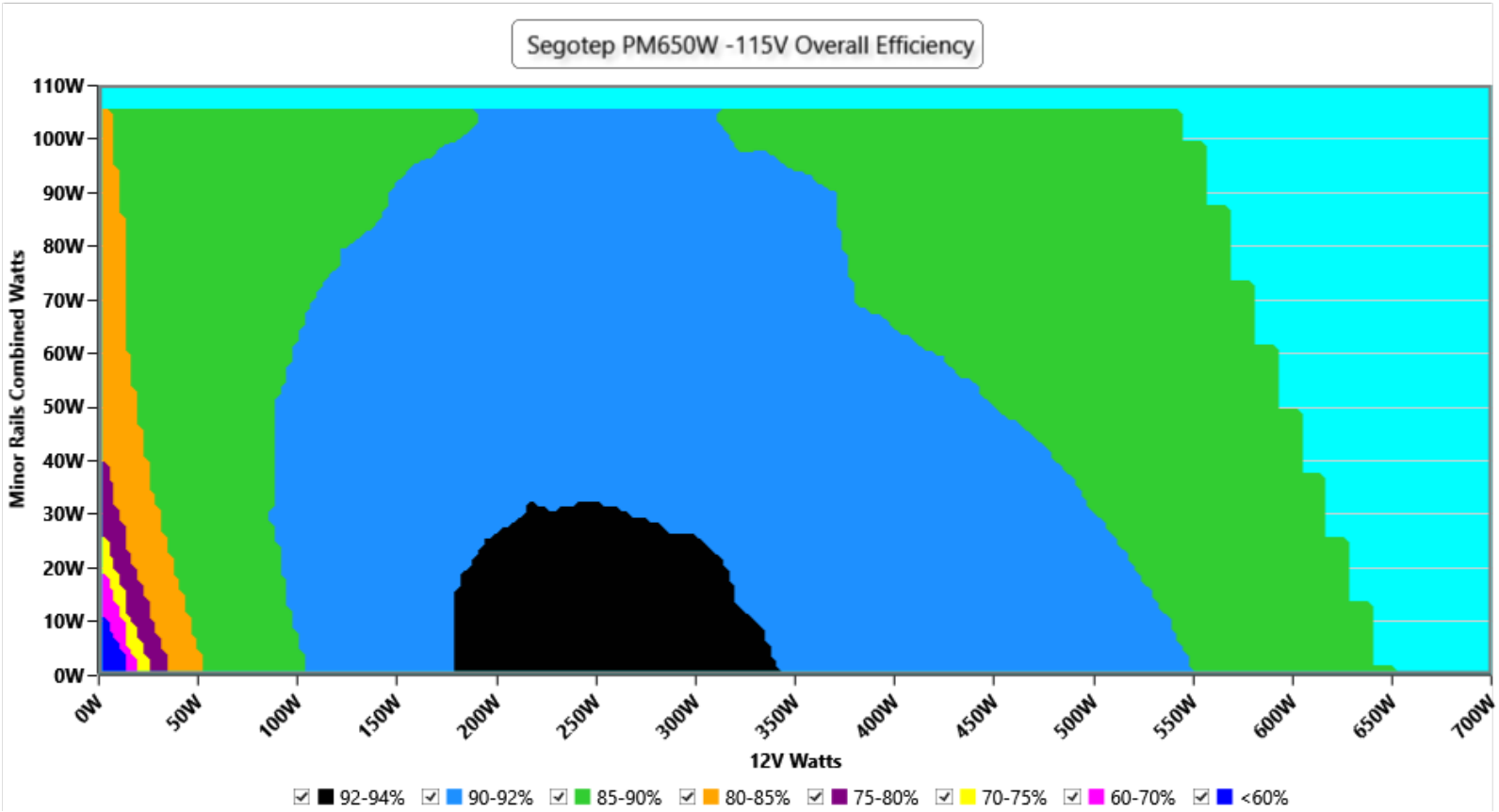
Mains Frequency:	60.00 Hz	59.98 Hz	59.40 Hz	60.01 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.416	1.415	1.340	1.419	1.490	PASS
Mains Voltage THD:	0.14 %	0.11 %	N/A	0.21 %	2.00 %	PASS
Real Power:	0.408 W	0.073 W	N/A	0.482 W	N/A	N/A
Apparent Power:	10.031 W	9.926 W	N/A	10.085 W	N/A	N/A
Power Factor:	0.041	N/A	N/A	N/A	N/A	N/A

230V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	229.97 V	229.90 V	227.70 V	230.00 V	232.30 V	PASS
Mains Frequency:	50.00 Hz	50.00 Hz	49.50 Hz	50.01 Hz	50.50 Hz	PASS
Mains Voltage CF:	1.415	1.415	1.340	1.416	1.490	PASS
Mains Voltage THD:	0.14 %	0.12 %	N/A	0.16 %	2.00 %	PASS
Real Power:	0.687 W	0.572 W	N/A	0.796 W	N/A	N/A
Apparent Power:	33.542 W	33.500 W	N/A	33.598 W	N/A	N/A
Power Factor:	0.019	N/A	N/A	N/A	N/A	N/A

Efficiency Graph

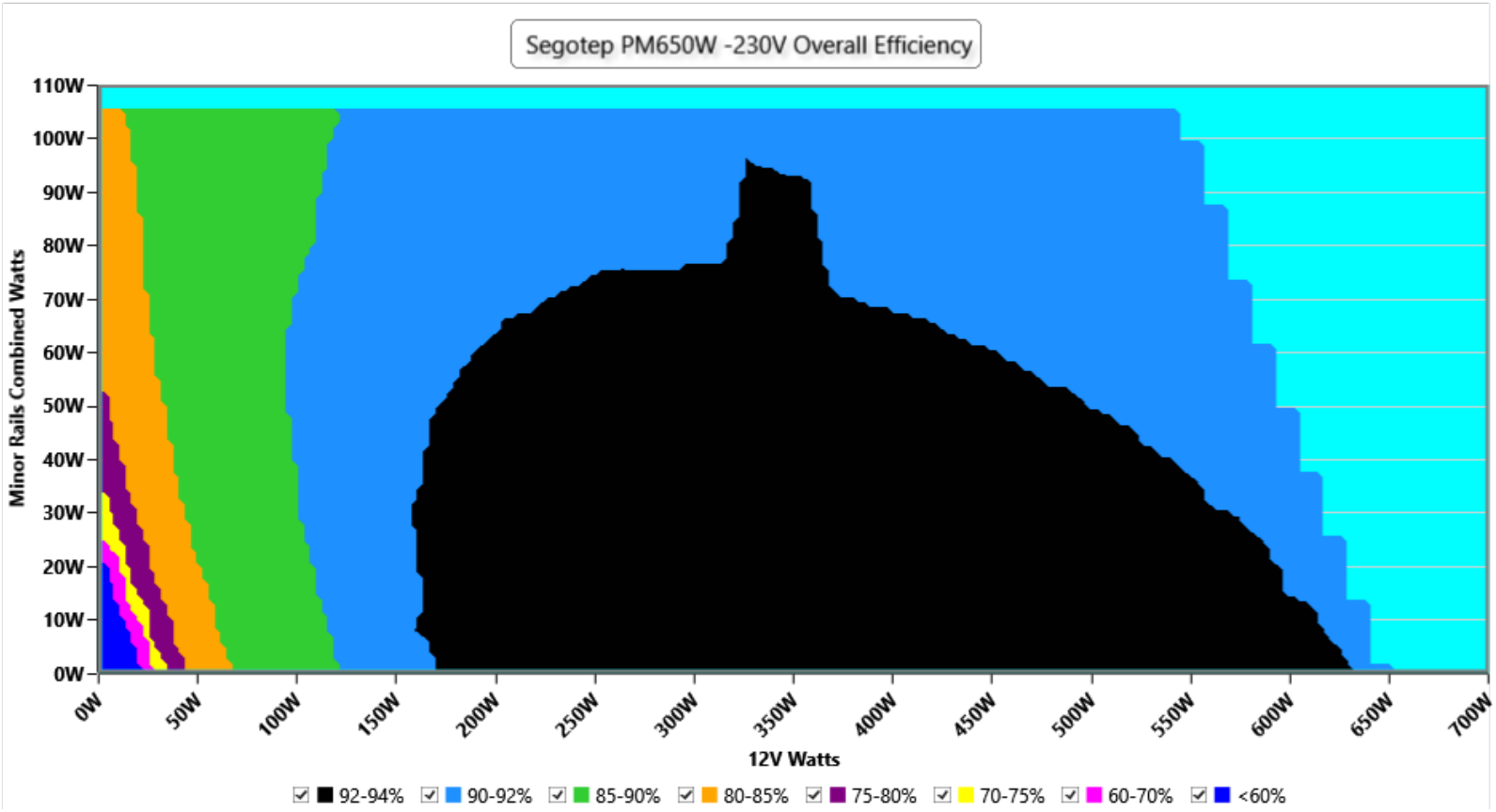
115V



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

230V

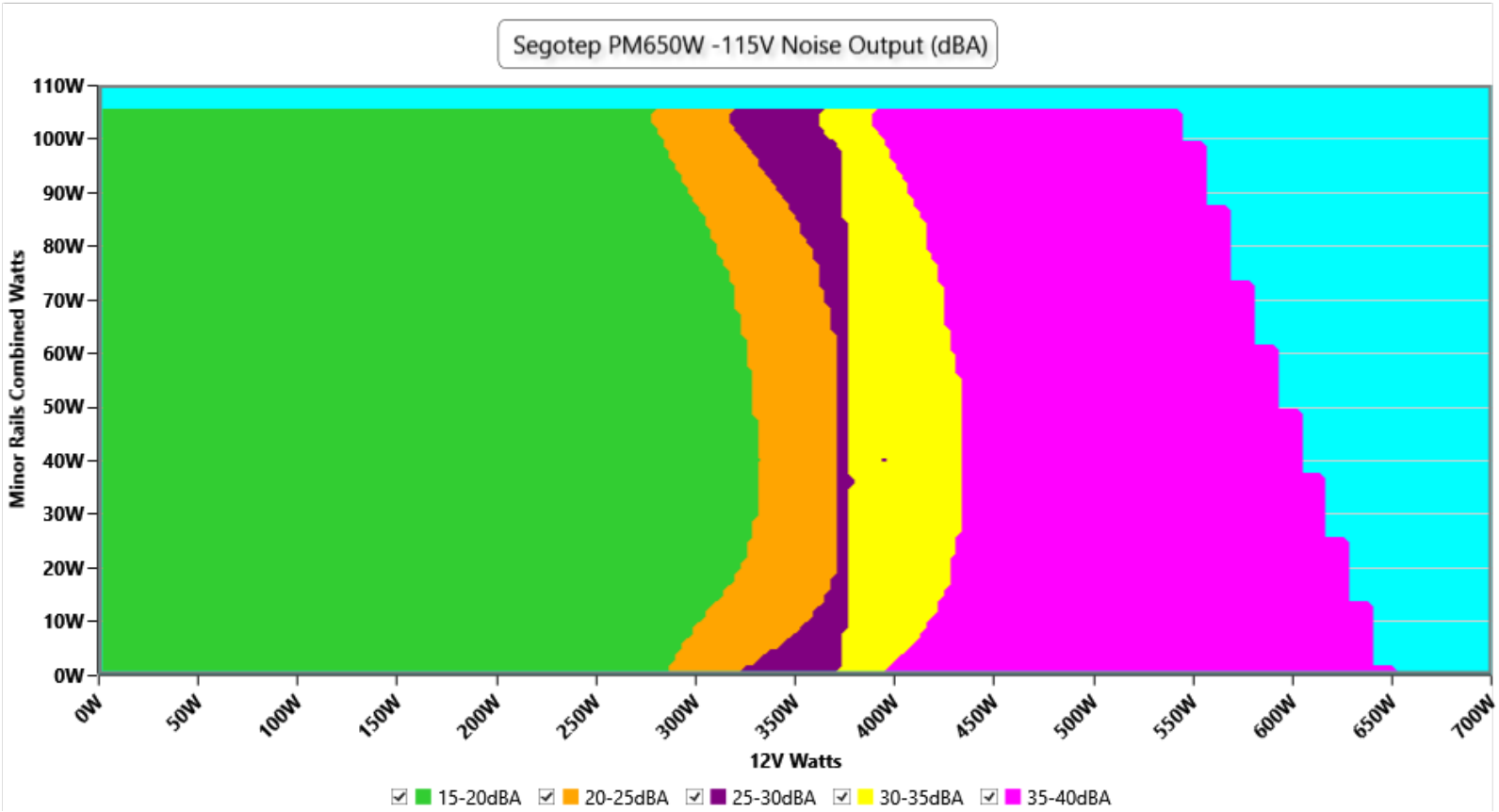


INFO

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

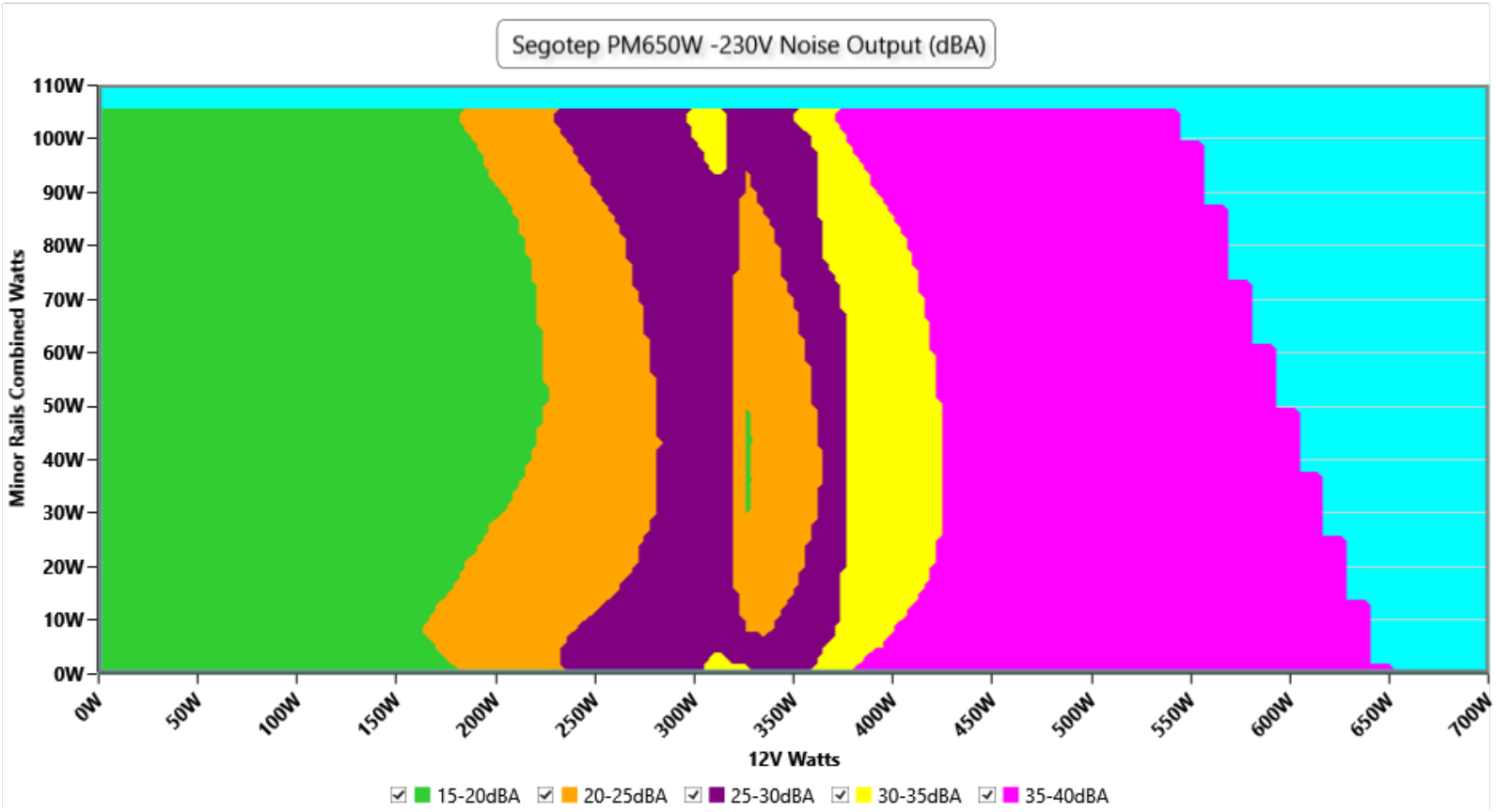
115V



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

230V



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%	793 RPM · 18.2 dB(A) · 30.0 °C	827 RPM · 18.7 dB(A) · 40.1 °C	**+0.5 dB(A)**
20%	800 RPM · 18.3 dB(A) · 30.6 °C	843 RPM · 19.2 dB(A) · 40.9 °C	**+0.9 dB(A)**
50%	809 RPM · 17.9 dB(A) · 30.8 °C	1407 RPM · 34.4 dB(A) · 42.4 °C	**+16.5 dB(A)**
100%	1485 RPM · 35.8 dB(A) · 30.9 °C	1511 RPM · 36.6 dB(A) · 45.9 °C	**+0.8 dB(A)**

230V

Load	Normal ambient fan · noise · intake	High ambient fan · noise · intake	Noise change
10%	794 RPM · 18.2 dB(A) · 30.6 °C	1317 RPM · 32.4 dB(A) · 40.4 °C	**+14.2 dB(A)**
20%	800 RPM · 18.3 dB(A) · 30.2 °C	1391 RPM · 33.8 dB(A) · 40.7 °C	**+15.5 dB(A)**
50%	975 RPM · 23.1 dB(A) · 30.6 °C	1497 RPM · 36.0 dB(A) · 42.5 °C	**+12.9 dB(A)**
100%	1483 RPM · 35.7 dB(A) · 30.4 °C	1511 RPM · 36.6 dB(A) · 45.9 °C	**+0.9 dB(A)**

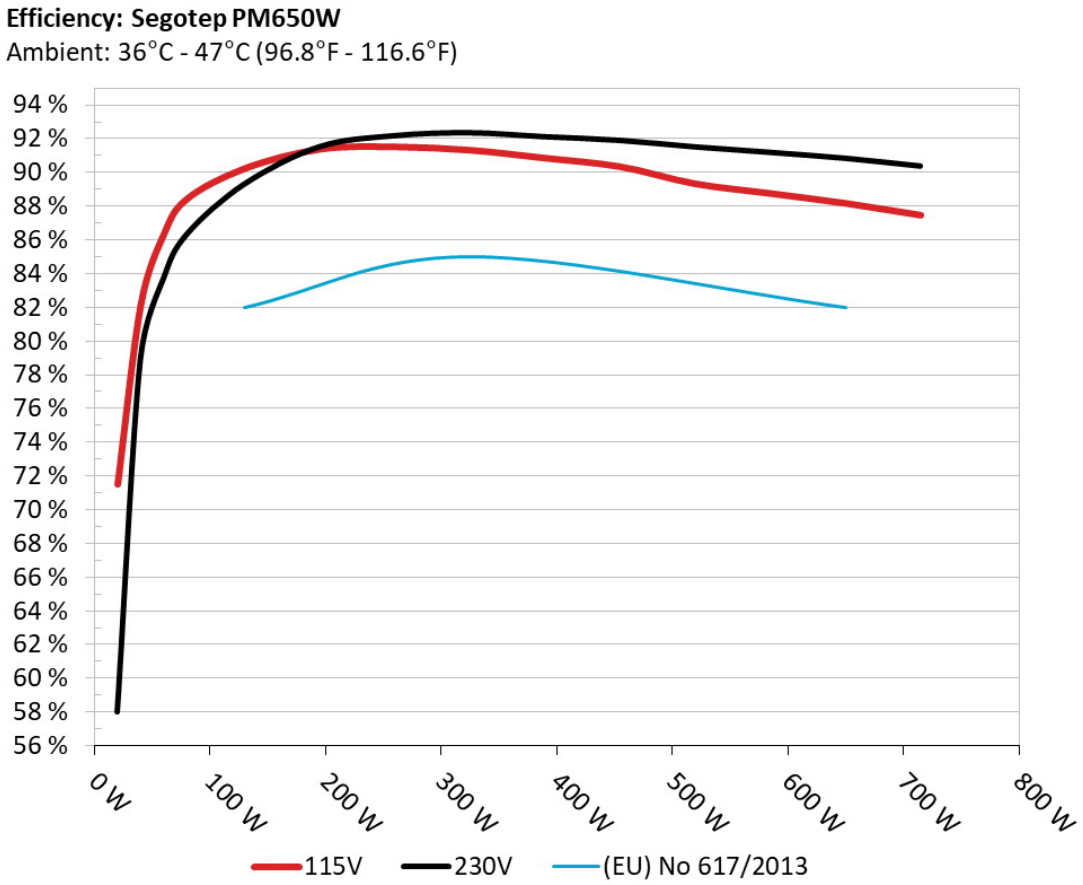
INFO

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: the fan is stopped or too quiet to measure (the fan speed column says which); 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

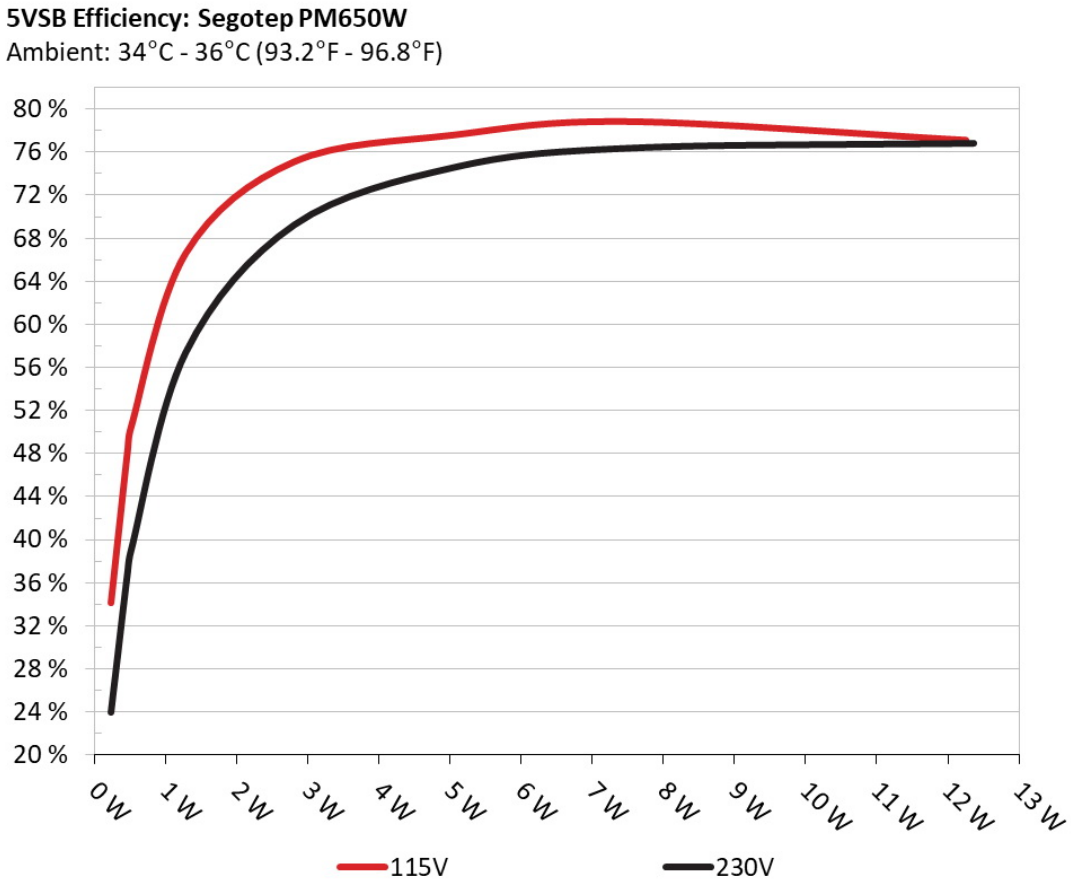
Efficiency under high ambient temperature



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	**0.045A**	0.232W	34.146%	0.067
	5.154V	0.68W		114.87V
2	**0.09A**	0.464W	48.218%	0.093
	5.149V	0.962W		114.87V
3	**0.55A**	2.803W	75.086%	0.239
	5.096V	3.733W		114.87V
4	**1A**	5.044W	77.576%	0.302
	5.043V	6.501W		114.87V
5	**1.5A**	7.479W	78.826%	0.336
	4.985V	9.487W		114.87V
6	**2.5A**	12.247W	77.107%	0.373
	4.898V	15.883W		114.86V

230V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	**0.045A**	0.232W	23.913%	0.029
	5.154V	0.972W		229.95V
2	**0.09A**	0.463W	36.833%	0.037
	5.149V	1.258W		229.95V
3	**0.55A**	2.808W	69.254%	0.113
	5.105V	4.055W		229.95V
4	**1A**	5.058W	74.603%	0.158
	5.058V	6.779W		229.95V
5	**1.5A**	7.514W	76.39%	0.206
	5.009V	9.838W		229.95V
6	**2.5A**	12.358W	76.837%	0.271
	4.943V	16.082W		229.95V

Protection Features

OCP (Normal @ -°C)	-
OCP (Hot @ -°C)	-
OPP (Normal @ -°C)	-
OPP (Hot @ -°C)	-
OTP	-
SCP	-
PWR_OK	-
NLO	✓
Fan Failure Protection	✗
SIP	Surge: MOV Inrush: NTC & Bypass Relay

Supplementary Tests (For Reference)

Typical 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%	**3.560A**	**1.971A**	**1.957A**	**0.991A**	64.992	86.161%	827	18.7	40.09°C	0.946
	12.187V	5.072V	3.372V	5.044V	75.432				43.72°C	114.85V
20%	**8.137A**	**2.966A**	**2.95A**	**1.198A**	129.911	90.259%	843	19.2	40.94°C	0.978
	12.168V	5.058V	3.356V	5.008V	143.933				45.86°C	114.82V
30%	**13.075A**	**3.468A**	**3.456A**	**1.407A**	194.909	91.408%	1097	26.9	41.3°C	0.988
	12.150V	5.046V	3.342V	4.973V	213.227				47.7°C	114.81V
40%	**18.035A**	**3.974A**	**3.967A**	**1.62A**	259.992	91.543%	1302	32.1	41.77°C	0.987
	12.131V	5.033V	3.327V	4.937V	284.011				49.92°C	114.78V
50%	**22.665A**	**4.982A**	**4.984A**	**1.837A**	324.985	91.347%	1407	34.4	42.43°C	0.988
	12.111V	5.018V	3.311V	4.899V	355.771				50.67°C	114.76V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
60%	**27.253A**	**5.997A**	**6.011A**	**2A**	389.037	90.882%	1492	35.9	42.82°C	0.991
	12.090V	5.004V	3.294V	4.869V	428.067				52.55°C	114.74V
70%	**31.941A**	**7.016A**	**7.049A**	**2.28A**	454.609	90.372%	1506	36.4	43.28°C	0.994
	12.069V	4.989V	3.277V	4.825V	503.044				55.09°C	114.71V
80%	**36.643A**	**8.039A**	**8.096A**	**2.397A**	519.402	89.357%	1507	36.4	43.77°C	0.995
	12.049V	4.975V	3.26V	4.798V	581.27				58.05°C	114.69V
90%	**41.756A**	**8.562A**	**8.626A**	**2.515A**	584.818	88.778%	1509	36.5	44.09°C	0.997
	12.030V	4.963V	3.246V	4.771V	658.741				61.23°C	114.66V
100%	**46.821A**	**9.09A**	**9.192A**	**2.634A**	649.548	88.196%	1511	36.6	45.93°C	0.997
	12.010V	4.95V	3.231V	4.745V	736.487				62.7°C	114.64V
110%	**51.644A**	**10.132A**	**10.362A**	**2.645A**	714.953	87.486%	1513	36.7	46.82°C	0.998
	11.989V	4.934V	3.213V	4.727V	817.21				62.84°C	114.62V
CL1	**0.114A**	**12.319A**	**12.287A**	**0A**	104.279	84.557%	1387	33.9	41.49°C	0.973
	12.152V	5.032V	3.328V	5.102V	123.324				47.91°C	114.83V
CL2	**0.113A**	**14.853A**	**0A**	**0A**	76.381	83.946%	1050	25.8	40.02°C	0.956
	12.177V	5.049V	3.361V	5.127V	90.989				45.19°C	114.84V
CL3	**0.113A**	**0A**	**15.786A**	**0A**	54.177	78.494%	1006	24.2	41.22°C	0.935
	12.172V	5.061V	3.344V	5.121V	69.023				45.8°C	114.85V
CL4	**53.928A**	**0A**	**0A**	**0A**	649.504	89.206%	1512	36.6	45.18°C	0.997
	12.044V	4.99V	3.27V	5.033V	728.089				61.85°C	114.65V

The results above are not used in the certification process

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%	**3.563A**	**1.972A**	**1.958A**	**0.991A**	64.999	83.39%	1317	32.4	40.4°C	0.714
	12.181V	5.072V	3.371V	5.048V	77.945				43.25°C	229.94V
20%	**8.145A**	**2.966A**	**2.951A**	**1.197A**	129.925	89.332%	1391	33.8	40.73°C	0.865
	12.158V	5.057V	3.355V	5.013V	145.441				44.21°C	229.93V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
30%	**13.077A**	**3.47A**	**3.457A**	**1.406A**	194.923	91.547%	1381	34.3	41.09°C	0.92
	12.149V	5.044V	3.341V	4.978V	212.922				44.8°C	229.92V
40%	**18.039A**	**3.975A**	**3.968A**	**1.618A**	260.009	92.204%	1459	35.6	41.82°C	0.947
	12.130V	5.032V	3.327V	4.944V	281.993				46.33°C	229.91V
50%	**22.667A**	**4.983A**	**4.985A**	**1.834A**	325.003	92.378%	1497	36	42.47°C	0.961
	12.110V	5.017V	3.31V	4.907V	351.817				47.65°C	229.9V
60%	**27.259A**	**5.997A**	**6.012A**	**2A**	389.104	92.148%	1501	36.3	42.84°C	0.969
	12.090V	5.003V	3.294V	4.875V	422.261				49°C	229.89V
70%	**31.947A**	**7.017A**	**7.05A**	**2.277A**	454.661	91.931%	1504	36.3	43.47°C	0.975
	12.069V	4.989V	3.277V	4.831V	494.57				50.44°C	229.88V
80%	**36.649A**	**8.04A**	**8.097A**	**2.395A**	519.449	91.546%	1507	36.4	43.6°C	0.979
	12.048V	4.975V	3.26V	4.803V	567.417				52.48°C	229.87V
90%	**41.765A**	**8.564A**	**8.628A**	**2.514A**	584.863	91.218%	1508	36.4	44.81°C	0.981
	12.028V	4.962V	3.245V	4.774V	641.172				54.23°C	229.86V
100%	**46.834A**	**9.093A**	**9.194A**	**2.633A**	649.593	90.869%	1511	36.6	45.87°C	0.984
	12.008V	4.949V	3.23V	4.748V	714.863				54.66°C	229.86V
110%	**51.656A**	**10.134A**	**10.365A**	**2.643A**	714.996	90.406%	1514	36.7	46.19°C	0.986
	11.987V	4.933V	3.212V	4.729V	790.875				55.59°C	229.84V
CL1	**0.114A**	**12.318A**	**12.289A**	**0A**	104.284	85.175%	1439	35.4	41.86°C	0.825
	12.152V	5.033V	3.328V	5.102V	122.435				47.68°C	229.93V
CL2	**0.114A**	**14.851A**	**0A**	**0A**	76.385	81.787%	1492	35.9	41.6°C	0.768
	12.170V	5.05V	3.361V	5.127V	93.394				45.68°C	229.94V
CL3	**0.114A**	**0A**	**15.791A**	**0A**	54.18	75.527%	1441	35.4	41.34°C	0.691
	12.165V	5.06V	3.343V	5.121V	71.736				43.89°C	229.94V
CL4	**53.939A**	**0A**	**0A**	**0A**	649.531	91.919%	1512	36.6	45.7°C	0.983
	12.042V	4.988V	3.269V	5.032V	706.632				53.75°C	229.85V

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])	Temps (In/Out)	PF/AC Volts
20W	**1.216A**	**0.492A**	**0.487A**	**0.195A**	19.988	71.508%	811	18.1	36.27°C	0.774
	12.202V	5.081V	3.386V	5.135V	27.954				37.35°C	114.88V
40W	**2.680A**	**0.689A**	**0.683A**	**0.293A**	39.989	82.161%	818	18.5	37.07°C	0.892
	12.197V	5.079V	3.382V	5.121V	48.672				39.13°C	114.86V
60W	**4.144A**	**0.886A**	**0.879A**	**0.391A**	59.99	86.359%	822	18.6	38.48°C	0.936
	12.192V	5.076V	3.377V	5.107V	69.466				40.9°C	114.86V
80W	**5.604A**	**1.084A**	**1.076A**	**0.491A**	79.922	88.453%	826	18.7	39.45°C	0.956
	12.186V	5.073V	3.373V	5.093V	90.356				42.83°C	114.84V

The results above are not used in the certification process

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	**1.214A**	**0.492A**	**0.487A**	**0.195A**	19.993	58.042%	801	18.3	36.34°C	0.487
	12.234V	5.08V	3.385V	5.135V	34.45				39.49°C	229.95V
40W	**2.680A**	**0.689A**	**0.683A**	**0.293A**	39.995	78.929%	813	18.2	37.44°C	0.588
	12.196V	5.08V	3.381V	5.122V	50.676				40.09°C	229.95V
60W	**4.146A**	**0.886A**	**0.879A**	**0.391A**	59.995	83.739%	1104	27.5	38.11°C	0.691
	12.186V	5.078V	3.377V	5.109V	71.647				41.38°C	229.94V
80W	**5.608A**	**1.084A**	**1.076A**	**0.491A**	79.934	86.344%	1253	31.4	39.43°C	0.765
	12.179V	5.074V	3.372V	5.095V	92.578				42.28°C	229.94V

The results above are not used in the certification process

Ripple Measurements

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	10.83mV	8.71mV	9.46mV	6.92mV	Pass
20% Load	14.37mV	8.45mV	10.19mV	7.12mV	Pass
30% Load	14.58mV	9.07mV	11.27mV	7.69mV	Pass
40% Load	14.97mV	9.48mV	10.86mV	7.74mV	Pass
50% Load	15.93mV	9.48mV	11.37mV	8.31mV	Pass
60% Load	16.84mV	9.63mV	11.84mV	9.03mV	Pass
70% Load	17.36mV	10.15mV	13.08mV	10.01mV	Pass
80% Load	16.34mV	10.97mV	14.11mV	10.99mV	Pass
90% Load	17.17mV	11.64mV	14.84mV	10.79mV	Pass
100% Load	28.81mV	12.75mV	16.34mV	12.04mV	Pass
110% Load	28.58mV	13.89mV	16.91mV	13.91mV	Pass
Crossload1	23.06mV	12.16mV	14.75mV	15.72mV	Pass
Crossload2	12.84mV	9.63mV	9.93mV	12.23mV	Pass
Crossload3	11.70mV	8.81mV	12.46mV	14.66mV	Pass
Crossload4	26.33mV	11.50mV	12.87mV	14.82mV	Pass

The results above are not used in the certification process

230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	9.80mV	8.29mV	9.77mV	7.49mV	Pass
20% Load	9.80mV	8.76mV	9.98mV	7.64mV	Pass
30% Load	28.34mV	9.22mV	11.22mV	7.64mV	Pass
40% Load	20.90mV	9.89mV	10.97mV	7.79mV	Pass
50% Load	19.24mV	9.32mV	11.79mV	8.00mV	Pass
60% Load	18.70mV	11.08mV	13.60mV	8.98mV	Pass

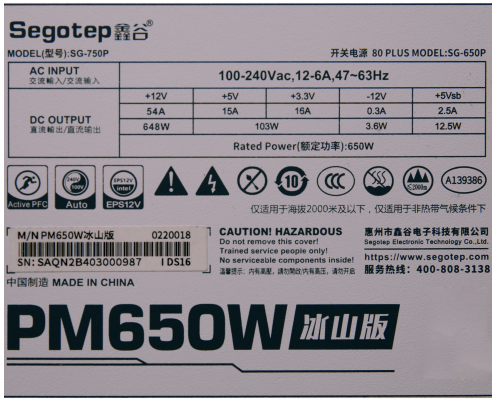
Test	12V	5V	3.3V	5VSB	Pass/Fail
70% Load	17.51mV	11.49mV	12.10mV	9.76mV	Pass
80% Load	17.27mV	10.51mV	14.58mV	10.17mV	Pass
90% Load	17.00mV	10.87mV	14.01mV	11.05mV	Pass
100% Load	28.34mV	12.48mV	16.15mV	11.99mV	Pass
110% Load	29.45mV	13.10mV	16.63mV	13.25mV	Pass
Crossload1	12.97mV	11.38mV	14.59mV	13.48mV	Pass
Crossload2	10.62mV	9.63mV	10.60mV	11.20mV	Pass
Crossload3	9.90mV	9.17mV	13.08mV	13.27mV	Pass
Crossload4	27.06mV	10.31mV	12.78mV	14.78mV	Pass

The results above are not used in the certification process

Segotep PM650W (SG-650P)



Top side



Power specifications label



PSU Open



Failed Cable

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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