MSI PRO A1000PL PCIE5

Serial Number 3067ZPLX17HD810538000007

Lab ID MS10003058

Certification ID 253058

Test Result Report ID: 25PS3058A

Certificate Issue Date: Dec 16, 2025

Scheme: ETA-EMI PSU



Scheme: LAMBDA PSU







Outside Validation Scope



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	MSI
Model	PRO A1000PL PCIE5
OEM/ODM	Huntkey
Serial Number	3067ZPLX17HD810538000007
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	6.5-13

Rated Frequency (Hz)	50-60
Rated Power (W)	1000
Operating Temperature (Continuous Full Load) (°C)	0 - 50
Type	ATX12V
Cable Design	Fully Modular
Warranty	No Info
Cybenetics Measurements	
Dimensions (W x H x D)	150 x 85 x 150mm
Weight	1.48 kg (3.26 lbs)
Cooling	120mm Sleeve Bearing Fan (D12SH-12)
Semi-Passive Operation	✗
Cybenetics Testing Information	
Lab ID	MS10003058
Date of receipt	Nov 7, 2025
Testing Date	Dec 2, 2025
Report Issued Date	Dec 16, 2025
Engineer Name	Georgios Theodoros Sarimpalas
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

Cables and Connectors(Non-accredited measurements)

Modular Cables				
Description	**Cable Count**	**Connector Count (Total)**	**Gauge**	**Cable Type**
ATX connector 20+4 pin (610mm)	1	1	18-22AWG	Tinned Copper
4+4 pin EPS12V (650mm)	2	2	18AWG	Tinned Copper
6+2 pin PCIe (600mm)	3	3	18AWG	Tinned Copper
12+4 pin PCIe (605mm) (600W)	1	1	16-24AWG	Tinned Copper
SATA (450mm+120mm+120mm) / 4-pin Molex (+125mm)	2	6 / 2	18AWG	Tinned Copper
AC Power Cord (1390mm) - C13 coupler	1	1	18AWG	-

Protection Features(Manufacturer)

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	20	20	83.3	2.5	0.3
	Watts	100		999.6	12.5	3.6
Total Max. Power (W)		1000				

Parts Description

General Data	
Manufacturer (OEM)	Huntkey
PCB Type	Double-Sided
Primary Side	
Transient Filter	4x Y caps, 2x X caps, 2x CM chokes, 1x MOV
Inrush Protection	NTC Thermistor 15S050M (5 Ohm @ 25°C) & Relay
Bridge Rectifier	2x PingWei GBU2510 (1000V, 25A @ 100°C)
APFC MOSFETs	2x Toshiba TK39N60W (600V, 38.8A @ 25°C, Rds(on): 0.055Ohm)
APFC Boost Diode	WeEn Semiconductor WNSC6D06650 (650V, 6A @ 156°C)
Bulk Cap(s)	SamXon (450V, 680uF, 2000h @ 105°C, HP(M))
Main Switchers	2x Silan SVSP60R090HD4 (600V, 38A @ 25°C, Rds(on): 90mOhm)
PFC/LLC Resonant Combo Controller	NXP HKP6288AT
Topology	Primary side: APFC, Half-Bridge & LLC Resonant Converter Secondary side: [12V] Synchronous Rectification & [Minor Rails] DC-DC converters

Secondary Side	
+12V MOSFETs	6x Alpha & Omega AONS66402 (40V, 210A @ 25°C, Rds(on): 1.6mOhm)
5V & 3.3V	DC-DC Converters: 4x Toshiba TPH1R403NL (30V, 150A @ 150°C, Rds(on): 1.4mOhm) PWM Controller(s): ANPEC APW7159C
Filtering Capacitors	Electrolytic: 2x CapXon (2-5,000h @ 105°C, GF) Elite (3-6,000h @ 105°C, EV) Elite (6-10,000h @ 105°C, EDJ) Elite (@ 105°C) Polymer: 16x Polycap, 4x Capcon, 10x
Synchronous Rectifier IC	NXP TEA2095
Supervisor IC	Infsitronix IN1T703I-SDG
Fan Model	Yate Loon D12SH-12 (120mm, 12V, 0.30A, Sleeve Bearing Fan)
5VSB Circuit	
Rectifier	2x SSL36BF(60V, 3A @ 110°C)
Standby PWM Controller	Infsitronix IN2P380C

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	✓
ALPM (Alternative Low Power Mode) compatible	✓
ATX v3.1 PSU Power Excursion	✓
Conducted Emissions EN 55032 & CISPR 32	Passed

Performance Summary

115V

Accredited	
Average Efficiency (>1450 load combinations)	90.786%
Average Noise Output (>1450 Load Combinations)	37.46dBA
Average PF (>1450 Load Combinations)	0.986
Efficiency With 10W (≤500W) or 2% (>500W) Load	78.374%
Standby Power Consumption	0.0814W
Non-Accredited	
12V Ripple (Full Load)	37.90mV
5V Ripple (Full Load)	24.30mV
3.3V Ripple (Full Load)	20.44mV
5VSB Ripple (Full Load)	17.90mV
12V Load Regulation	0.86%
5V Load Regulation	0.32%
3.3V Load Regulation	0.60%
5VSB Load Regulation	2.33%
Inrush Current	32.680A

230V

Accredited	
Average Efficiency (>1450 load combinations)	93.019%
Average Noise Output (>1450 Load Combinations)	37.37dBA
Average PF (>1450 Load Combinations)	0.979
Efficiency With 10W (≤500W) or 2% (>500W) Load	79.516%
Standby Power Consumption	0.1459W
Non-Accredited	
12V Ripple (Full Load)	40.03mV
5V Ripple (Full Load)	29.65mV
3.3V Ripple (Full Load)	17.18mV

5VSB Ripple (Full Load)		17.69mV
12V Load Regulation		0.89%
5V Load Regulation		0.34%
3.3V Load Regulation		0.63%
5VSB Load Regulation		2.39%
Inrush Current		65.620A
12V Transient Response (200%)		11.40V
5V Transient Response (200%)		4.970V
3.3V Transient Response (200%)		3.237V
5VSB Transient Response (200%)		4.922V
Hold-Up Time & PWR_OK Signal		23.50ms
AC Loss to PWR_OK Hold Up Time		21.00ms
PWR_OK Inactive to DC Loss Delay		2.50ms
PSU Timings: T1 (20% / 100%)	77.0ms	53.0ms
PSU Timings: T3 (20% / 100%)	110.0ms	110.0ms
12V OCP (28.0°C / 41.2°C)	92.00A (110.44%), 12.000V	89.00A (106.84%), 11.989V
5V OCP (28.0°C / 41.2°C)	26A (130.00%), 5.069V	26.1A (130.50%), 5.075V
3.3V OCP (28.0°C / 41.2°C)	25.9A (129.50%), 3.321V	25.8A (129.00%), 3.322V
5VSB OCP (28.0°C / 41.2°C)	4.3A (172.00%), 4.933V *High Ripple (>200mV)	4.4A (176.00%), 4.873V *High Ripple (>200mV)
OPP (28.39°C / 41.64°C)	119.91%	115.11%

Hold-Up Time & PWR_OK Signal

Hold-Up Time (ms)	23.5
AC Loss to PWR_OK Hold Up Time (ms)	21
PWR_OK Inactive to DC Loss Delay (ms)	2.5

Vampire Power

Tables

115V

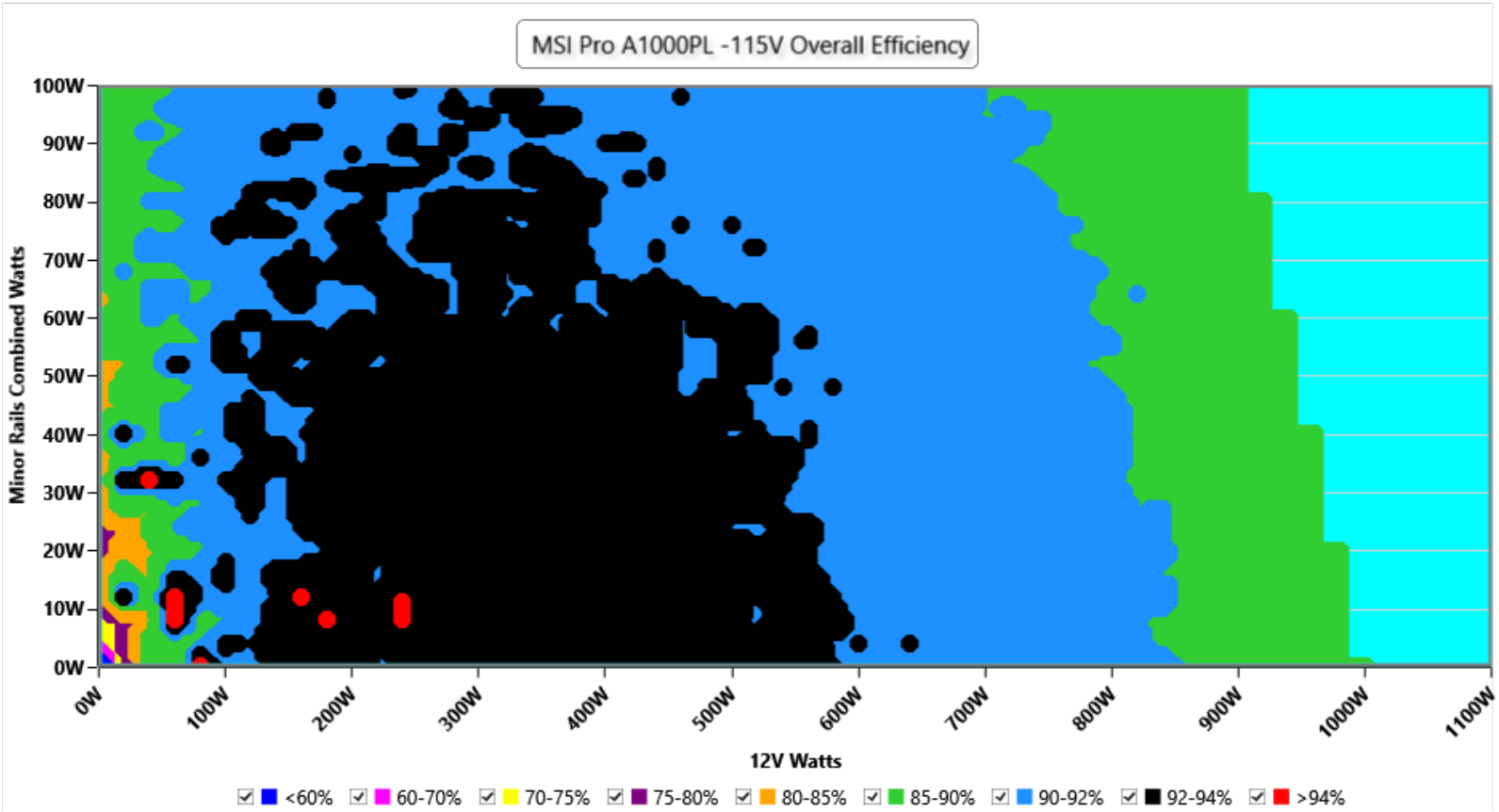
Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	115.03 V	115.00 V	113.85 V	115.11 V	116.15 V	PASS
Mains Frequency:	60.00 Hz	59.99 Hz	59.40 Hz	60.01 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.416	1.415	1.340	1.417	1.490	PASS
Mains Voltage THD:	0.13 %	0.09 %	N/A	0.17 %	2.00 %	PASS
Real Power:	0.081 W	-0.006 W	N/A	0.120 W	N/A	N/A
Apparent Power:	6.531 W	6.499 W	N/A	6.559 W	N/A	N/A
Power Factor:	0.014	N/A	N/A	N/A	N/A	N/A

230V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	230.01 V	230.00 V	227.70 V	230.05 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:	0.14 %	0.13 %	N/A	0.16 %	2.00 %	PASS
Real Power:	0.146 W	0.099 W	N/A	0.238 W	N/A	N/A
Apparent Power:	20.295 W	20.255 W	N/A	20.338 W	N/A	N/A
Power Factor:	0.007	N/A	N/A	N/A	N/A	N/A

Efficiency Graph

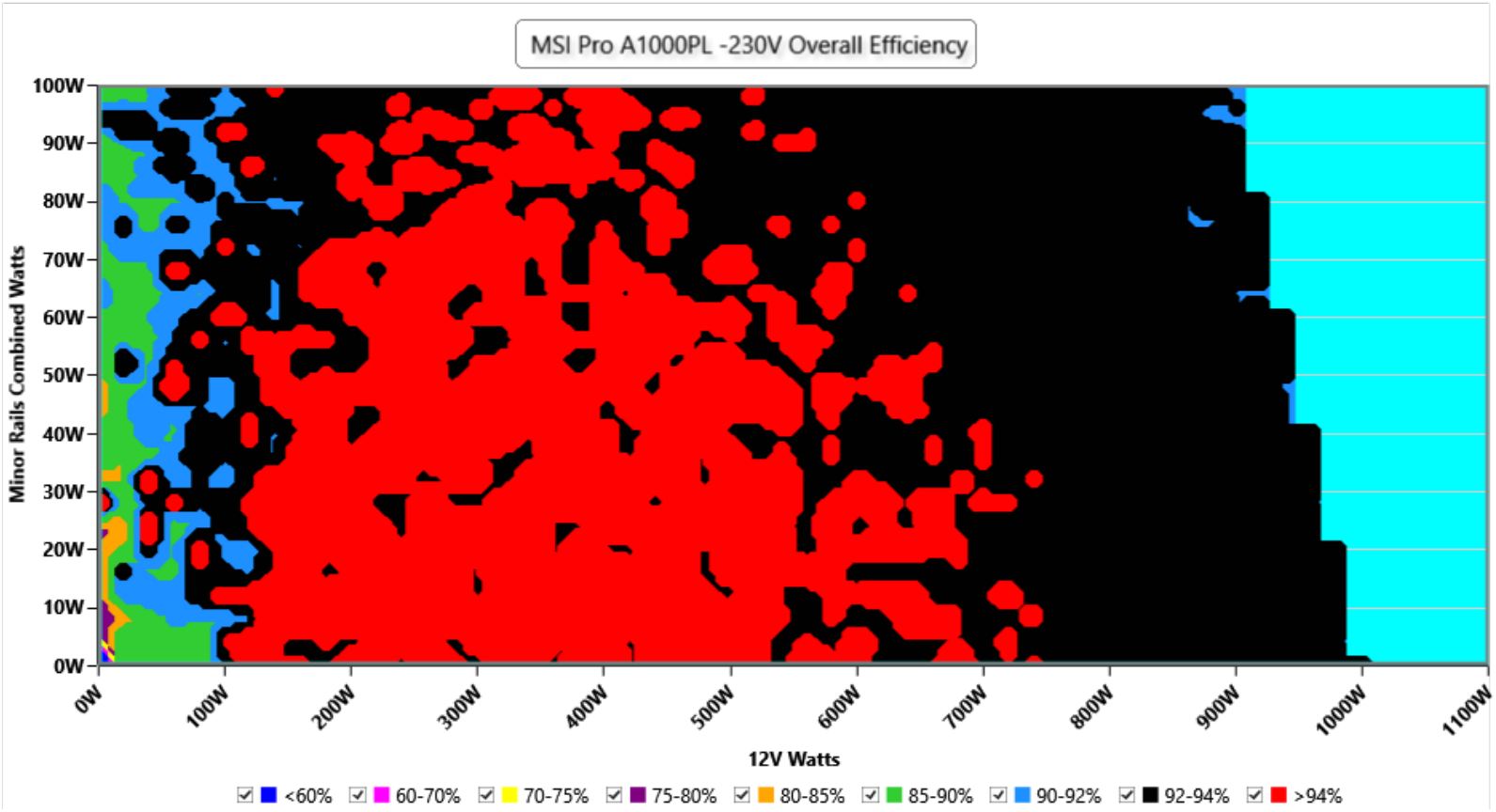
115V



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

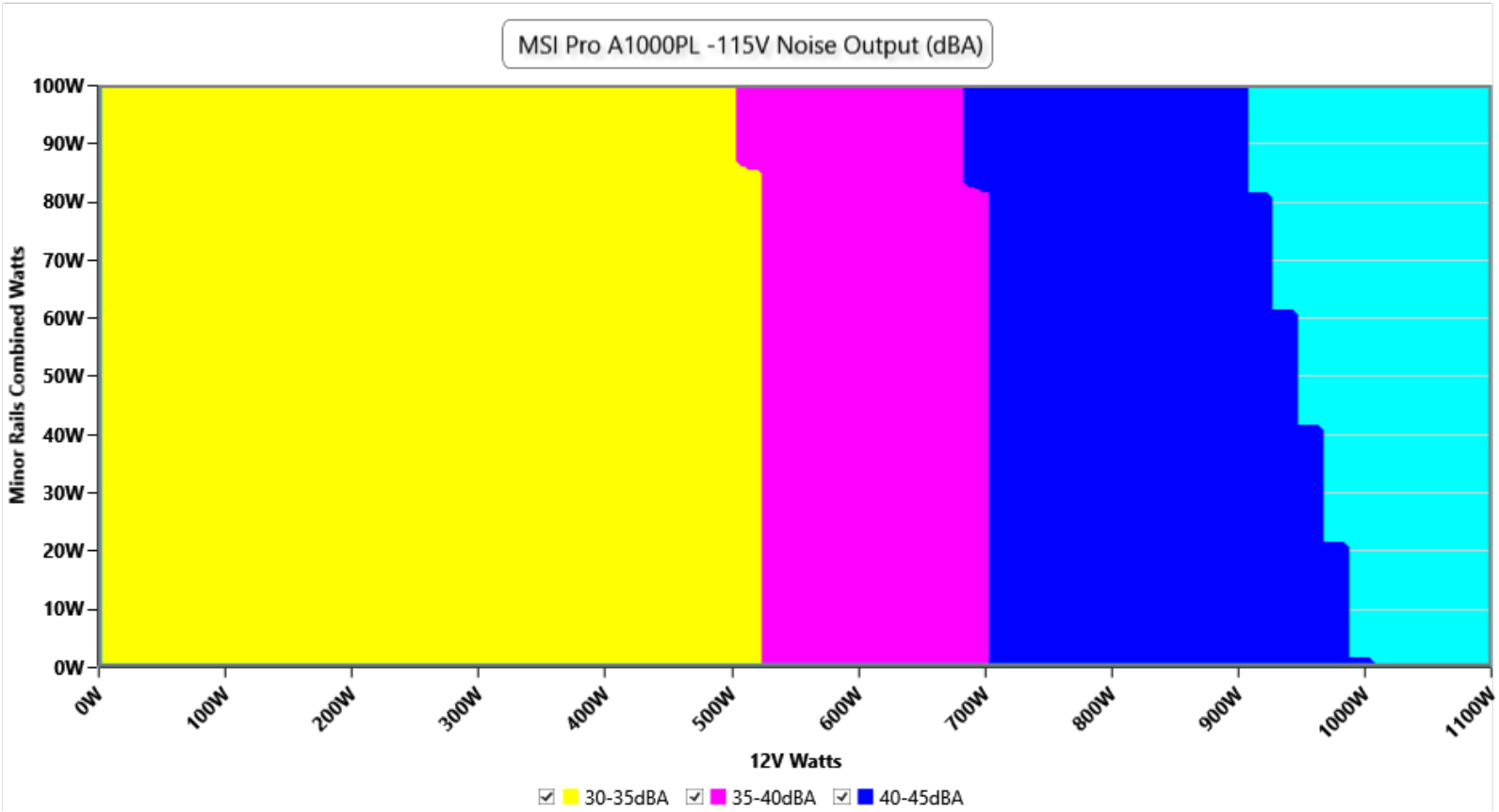


INFO

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

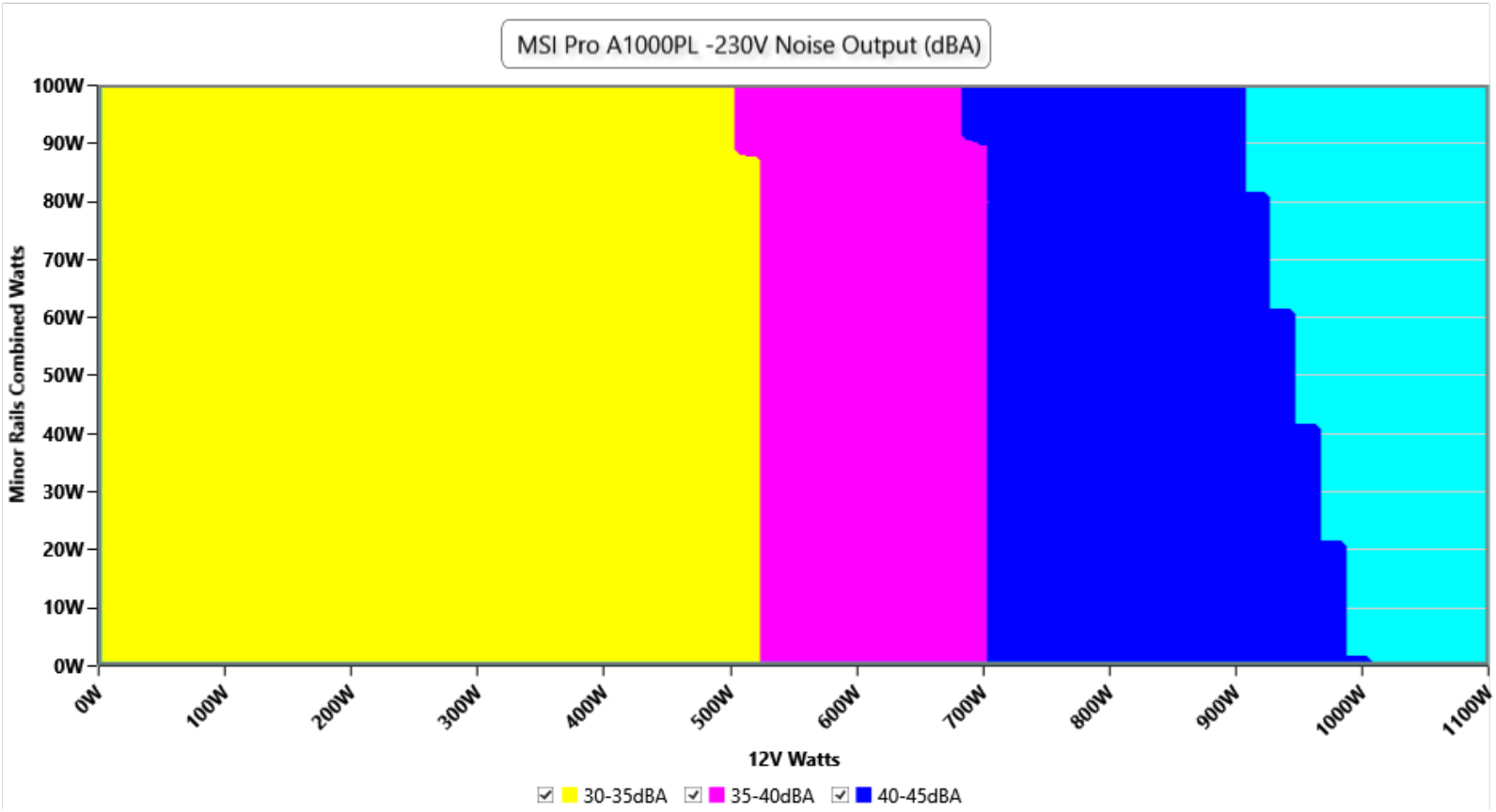
115V



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%	1102 RPM · 33.1 dB(A) · 30.8 °C	1119 RPM · 33.4 dB(A) · 40.2 °C	**+0.3 dB(A)**
20%	1109 RPM · 33.2 dB(A) · 30.5 °C	1157 RPM · 34.3 dB(A) · 41.0 °C	**+1.1 dB(A)**
50%	1102 RPM · 33.1 dB(A) · 30.4 °C	1422 RPM · 39.4 dB(A) · 42.2 °C	**+6.3 dB(A)**
100%	1682 RPM · 42.9 dB(A) · 30.5 °C	2093 RPM · 47.9 dB(A) · 45.2 °C	**+5.0 dB(A)**

230V

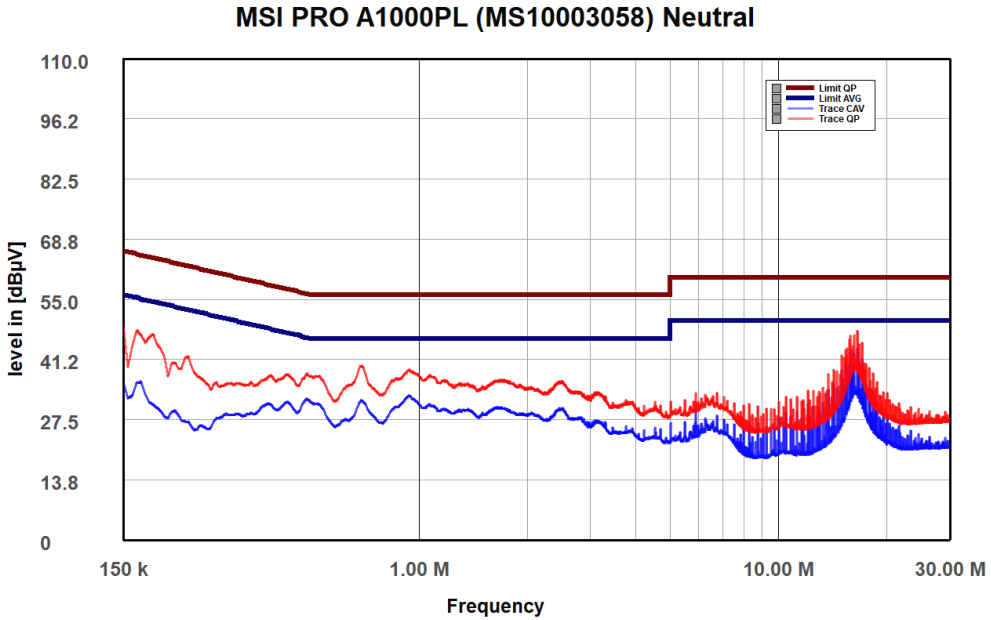
Load	Normal ambient fan · noise · intake	High ambient fan · noise · intake	Noise change
10%	1114 RPM · 33.3 dB(A) · 30.9 °C	1162 RPM · 34.4 dB(A) · 40.4 °C	**+1.1 dB(A)**
20%	1115 RPM · 33.3 dB(A) · 30.2 °C	1266 RPM · 36.5 dB(A) · 40.9 °C	**+3.2 dB(A)**
50%	1114 RPM · 33.3 dB(A) · 30.2 °C	1457 RPM · 40.0 dB(A) · 42.0 °C	**+6.7 dB(A)**
100%	1736 RPM · 43.7 dB(A) · 30.8 °C	2088 RPM · 47.8 dB(A) · 46.0 °C	**+4.1 dB(A)**

INFO

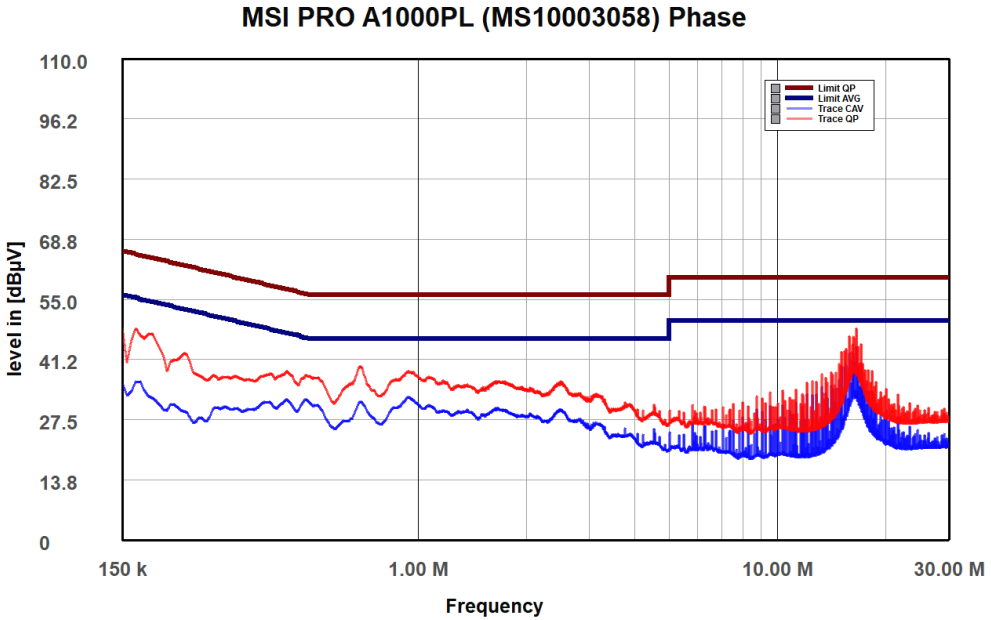
Fan speed, noise and the measured intake temperature at 10, 20, 50 and 100 % load, from the two load regulation tests: at normal ambient (about 30-32 °C) and at high ambient (about 40-47 °C). These are stabilized readings at fixed loads, not averages over the certification sweep, so they are indicative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

Conducted Emissions EN 55032 & CISPR 32



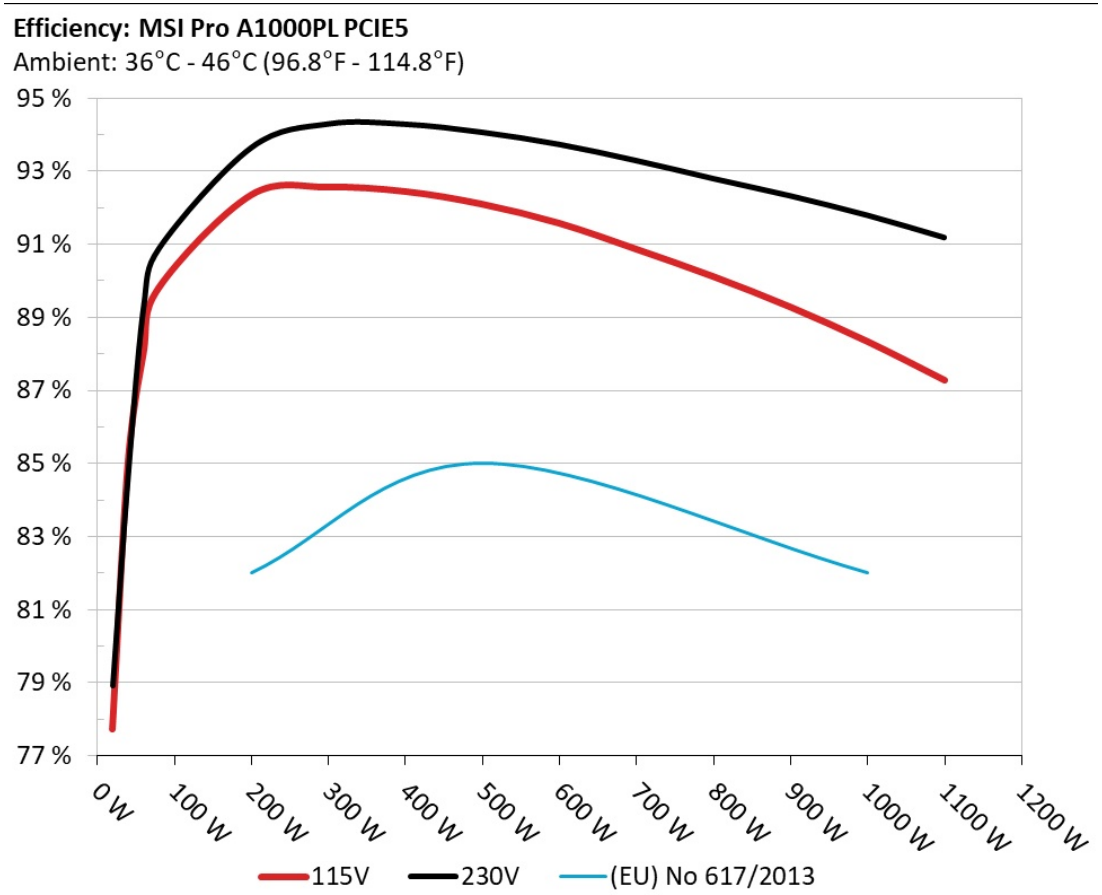
NEUTRAL



PHASE

Indicative Performance

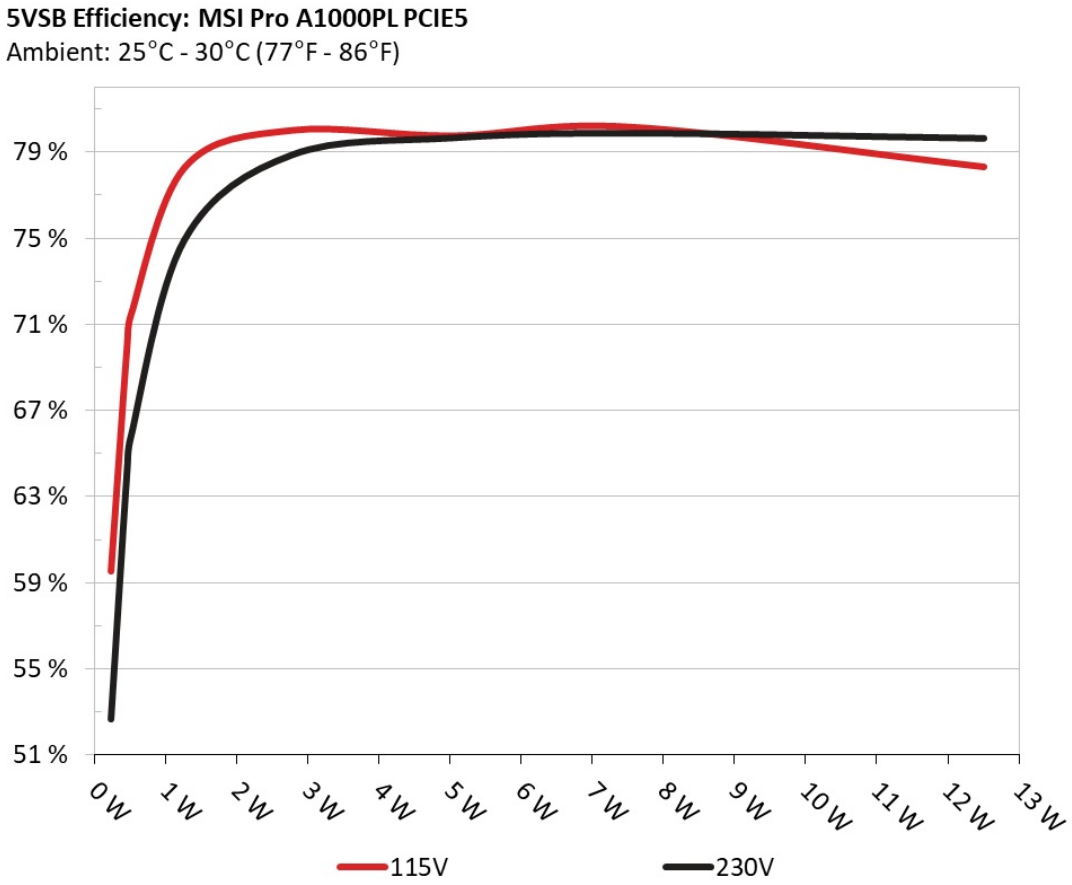
Efficiency under high ambient temperature



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**	0.228W	59.56%	0.061
	5.053V	0.383W		114.88V
2	**0.09A**	0.455W	70.081%	0.1
	5.052V	0.649W		114.89V
3	**0.55A**	2.774W	80.032%	0.335
	5.043V	3.466W		114.88V
4	**1A**	5.033W	79.776%	0.415
	5.033V	6.31W		114.87V
5	**1.5A**	7.534W	80.183%	0.45
	5.022V	9.396W		114.88V
6	**2.501A**	12.5W	78.335%	0.493
	4.999V	15.957W		114.87V

230V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	**0.045A**	0.228W	52.65%	0.02
	5.051V	0.433W		229.89V
2	**0.09A**	0.455W	64.265%	0.033
	5.051V	0.708W		229.88V
3	**0.55A**	2.774W	78.892%	0.149
	5.042V	3.517W		229.88V
4	**1A**	5.033W	79.68%	0.231
	5.032V	6.316W		229.88V
5	**1.5A**	7.533W	79.899%	0.293
	5.021V	9.427W		229.89V
6	**2.501A**	12.5W	79.662%	0.356
	4.999V	15.691W		229.88V

Protection Features

OCP (Normal @ 28.0°C)	12V: 92.00A (110.44%), 12.000V 5V: 26A (130.00%), 5.069V 3.3V: 25.9A (129.50%), 3.321V 5VSB: 4.3A (172.00%), 4.933V *High Ripple (>200mV)
OCP (Hot @ 41.2°C)	12V: 89.00A (106.84%), 11.989V 5V: 26.1A (130.50%), 5.075V 3.3V: 25.8A (129.00%), 3.322V 5VSB: 4.4A (176.00%), 4.873V *High Ripple (>200mV)
OPP (Normal @ 28.4°C)	1199.08W (119.91%)
OPP (Hot @ 41.6°C)	1151.07W (115.11%)
OTP	✓ (116°C @ 12V Heatsink)
SCP	12V to Earth: ✓ 5V to Earth: ✓ 3.3V to Earth: ✓ 5VSB to Earth: ✓ -12V to Earth: ✓
PWR_OK	Proper Operation
UVP (Full Load @ 90V)	✓
UVP (No Damage @ 80V)	✓
Conducted Emissions EN55032 & CISPR 32	✓
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%	**6.494A**	**1.981A**	**1.983A**	**0.996A**	100.009	90.007%	1119	33.4	40.17°C	0.954
	12.074V	5.048V	3.329V	5.023V	111.064				41.91°C	114.84V
20%	**14.010A**	**2.973A**	**2.976A**	**1.197A**	199.967	92.364%	1157	34.3	40.95°C	0.974
	12.067V	5.046V	3.327V	5.012V	216.571				40.94°C	114.81V
30%	**21.893A**	**3.469A**	**3.474A**	**1.4A**	300.025	92.579%	1296	36.9	41.23°C	0.985
	12.058V	5.045V	3.325V	5.002V	324.078				43.98°C	114.81V
40%	**29.750A**	**3.965A**	**3.972A**	**1.603A**	399.628	92.46%	1392	38.8	41.54°C	0.993
	12.048V	5.044V	3.324V	4.991V	432.17				43.75°C	114.74V
50%	**37.281A**	**4.959A**	**4.968A**	**1.807A**	499.349	92.115%	1422	39.4	42.22°C	0.994
	12.039V	5.042V	3.322V	4.98V	542.136				43.31°C	114.71V
60%	**44.890A**	**5.954A**	**5.966A**	**2A**	599.816	91.59%	1481	40.3	42.79°C	0.995
	12.031V	5.04V	3.32V	4.97V	654.897				43.38°C	114.67V
70%	**52.451A**	**6.95A**	**6.965A**	**2.219A**	699.61	90.881%	1676	42.8	43.48°C	0.996
	12.021V	5.037V	3.317V	4.959V	769.87				46.3°C	114.63V
80%	**60.102A**	**7.942A**	**7.963A**	**2.324A**	799.6	90.131%	1883	45.6	43.83°C	0.996
	12.008V	5.036V	3.315V	4.949V	887.136				50.43°C	114.59V
90%	**68.099A**	**8.441A**	**8.449A**	**2.43A**	899.372	89.299%	2062	47.5	44.52°C	0.996
	11.996V	5.035V	3.314V	4.94V	1007.233				49.73°C	114.55V
100%	**76.203A**	**8.94A**	**8.967A**	**2.535A**	1000.104	88.348%	2093	47.9	45.19°C	0.996
	11.980V	5.033V	3.312V	4.932V	1132.023				53.67°C	114.51V
110%	**83.942A**	**9.937A**	**10.06A**	**2.54A**	1099.919	87.291%	2090	47.8	46.2°C	0.996
	11.962V	5.032V	3.31V	4.923V	1260.071				56.15°C	114.48V
CL1	**0.118A**	**11.944A**	**11.96A**	**0A**	101.313	86.094%	1451	40	40.8°C	0.956
	12.045V	5.04V	3.319V	5.025V	117.76				45.13°C	114.83V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
CL2	**0.117A**	**19.808A**	**0A**	**0A**	101.366	85.619%	1324	37.2	40.76°C	0.956
	12.060V	5.046V	3.319V	5.033V	118.374				41.77°C	114.84V
CL3	**0.116A**	**0A**	**19.843A**	**0A**	67.388	81.052%	1261	36.5	40.16°C	0.945
	12.068V	5.04V	3.326V	5.031V	83.14				41.85°C	114.85V
CL4	**83.339A**	**0A**	**0A**	**0.001A**	999.967	89.243%	2099	48.1	45.23°C	0.996
	11.999V	5.044V	3.323V	5.003V	1120.532				50.17°C	114.52V

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%	**6.494A**	**1.98A**	**1.982A**	**0.996A**	100.001	91.351%	1162	34.4	40.37°C	0.938
	12.072V	5.049V	3.329V	5.022V	109.724				41.44°C	229.87V
20%	**14.012A**	**2.972A**	**2.976A**	**1.198A**	199.954	93.662%	1266	36.5	40.85°C	0.964
	12.064V	5.047V	3.327V	5.011V	213.51				43.67°C	229.85V
30%	**21.894A**	**3.468A**	**3.474A**	**1.4A**	300.007	94.31%	1297	36.9	41.36°C	0.977
	12.056V	5.046V	3.325V	5.001V	318.14				43.71°C	229.84V
40%	**29.747A**	**3.965A**	**3.972A**	**1.603A**	399.581	94.302%	1396	38.8	41.81°C	0.987
	12.047V	5.044V	3.324V	4.99V	423.842				45.97°C	229.83V
50%	**37.284A**	**4.958A**	**4.968A**	**1.808A**	499.308	94.081%	1457	40	42.04°C	0.992
	12.037V	5.042V	3.322V	4.979V	530.776				46.92°C	229.81V
60%	**44.902A**	**5.952A**	**5.966A**	**2A**	599.767	93.749%	1635	42.4	42.77°C	0.993
	12.027V	5.041V	3.319V	4.968V	638.661				48.45°C	229.45V
70%	**52.466A**	**6.948A**	**6.965A**	**2.22A**	699.56	93.306%	1744	43.8	43.16°C	0.995
	12.016V	5.038V	3.317V	4.956V	749.828				48.48°C	229.77V
80%	**60.118A**	**7.942A**	**7.964A**	**2.325A**	799.567	92.813%	1943	46	43.92°C	0.995
	12.004V	5.036V	3.315V	4.947V	861.458				52.28°C	229.75V
90%	**68.126A**	**8.441A**	**8.451A**	**2.431A**	899.352	92.341%	2054	47.4	44.69°C	0.995
	11.991V	5.035V	3.313V	4.938V	973.973				50.39°C	229.73V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
100%	**76.217A**	**8.941A**	**8.969A**	**2.536A**	1000.071	91.806%	2088	47.8	45.99°C	0.996
	11.978V	5.033V	3.311V	4.929V	1089.37				55.74°C	229.72V
110%	**83.961A**	**9.937A**	**10.063A**	**2.541A**	1099.894	91.198%	2083	47.8	46.05°C	0.996
	11.959V	5.031V	3.309V	4.921V	1206.049				57.55°C	229.69V
CL1	**0.117A**	**11.942A**	**11.961A**	**0A**	101.309	87.301%	1451	40	40.82°C	0.942
	12.047V	5.041V	3.319V	5.025V	116.09				46.85°C	229.87V
CL2	**0.116A**	**19.802A**	**0A**	**0A**	101.359	87.105%	1389	38.7	40.53°C	0.943
	12.061V	5.048V	3.319V	5.032V	116.539				45.03°C	229.87V
CL3	**0.115A**	**0A**	**19.845A**	**0A**	67.384	81.984%	1360	38.2	41.07°C	0.92
	12.067V	5.041V	3.325V	5.03V	82.388				44.28°C	229.87V
CL4	**83.372A**	**0A**	**0A**	**0.001A**	999.938	92.363%	2094	47.9	45.26°C	0.996
	11.993V	5.045V	3.323V	5.001V	1082.59				52.42°C	229.72V

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	**1.230A**	**0.495A**	**0.495A**	**0.198A**	20.008	77.734%	1112	33.3	36.83°C	0.685
	12.084V	5.049V	3.332V	5.047V	25.755				38.49°C	114.87V
40W	**2.706A**	**0.693A**	**0.694A**	**0.297A**	40.006	84.957%	1116	33.3	37.07°C	0.924
	12.081V	5.049V	3.331V	5.044V	47.262				39.01°C	114.86V
60W	**4.184A**	**0.891A**	**0.892A**	**0.397A**	60.006	88.009%	1119	33.4	38.31°C	0.937
	12.079V	5.049V	3.331V	5.04V	68.26				39.98°C	114.86V
80W	**5.658A**	**1.089A**	**1.09A**	**0.497A**	79.955	89.814%	1120	33.4	39.18°C	0.947
	12.076V	5.049V	3.33V	5.036V	89.122				40.75°C	114.85V

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	**1.229A**	**0.495A**	**0.495A**	**0.198A**	20.001	78.912%	1120	33.4	36.02°C	0.514
	12.084V	5.05V	3.332V	5.047V	25.345				36.88°C	229.89V
40W	**2.706A**	**0.693A**	**0.693A**	**0.297A**	40.002	84.733%	1125	33.5	37.31°C	0.796
	12.081V	5.05V	3.331V	5.043V	46.502				38.03°C	229.88V
60W	**4.184A**	**0.891A**	**0.892A**	**0.397A**	60.002	89.3%	1125	33.5	38.43°C	0.885
	12.079V	5.049V	3.331V	5.04V	67.326				39.01°C	229.88V
80W	**5.657A**	**1.089A**	**1.09A**	**0.496A**	79.948	90.899%	1126	33.5	39.11°C	0.931
	12.076V	5.049V	3.33V	5.036V	88.095				39.78°C	229.87V

The results above are not used in the certification process

Ripple Measurements

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	29.92mV	19.71mV	17.60mV	12.06mV	Pass
20% Load	23.63mV	19.71mV	18.21mV	12.37mV	Pass
30% Load	24.30mV	21.40mV	17.75mV	12.01mV	Pass
40% Load	25.01mV	20.83mV	18.62mV	13.19mV	Pass
50% Load	27.11mV	22.58mV	18.57mV	14.26mV	Pass
60% Load	27.92mV	23.56mV	18.83mV	14.83mV	Pass
70% Load	29.77mV	24.12mV	20.06mV	18.11mV	Pass
80% Load	30.89mV	25.30mV	20.11mV	17.86mV	Pass
90% Load	38.51mV	24.79mV	19.86mV	18.83mV	Pass
100% Load	37.90mV	24.30mV	20.44mV	17.90mV	Pass
110% Load	36.02mV	26.48mV	19.70mV	19.21mV	Pass
Crossload1	29.38mV	19.26mV	19.94mV	14.57mV	Pass
Crossload2	31.86mV	26.43mV	17.24mV	13.65mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
Crossload3	28.18mV	19.55mV	20.01mV	13.24mV	Pass
Crossload4	38.46mV	24.72mV	18.56mV	17.28mV	Pass

The results above are not used in the certification process

230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	30.28mV	24.17mV	16.36mV	12.06mV	Pass
20% Load	24.70mV	24.43mV	17.03mV	13.09mV	Pass
30% Load	24.86mV	24.38mV	16.01mV	12.26mV	Pass
40% Load	26.19mV	25.61mV	16.32mV	12.98mV	Pass
50% Load	28.85mV	27.20mV	16.83mV	13.80mV	Pass
60% Load	28.54mV	26.07mV	16.67mV	14.06mV	Pass
70% Load	30.38mV	27.61mV	17.85mV	17.60mV	Pass
80% Load	29.92mV	29.30mV	18.01mV	17.80mV	Pass
90% Load	38.87mV	28.74mV	17.96mV	20.01mV	Pass
100% Load	40.03mV	29.65mV	17.18mV	17.69mV	Pass
110% Load	40.24mV	31.02mV	18.47mV	19.35mV	Pass
Crossload1	30.67mV	23.35mV	16.16mV	12.95mV	Pass
Crossload2	31.66mV	28.74mV	15.96mV	13.50mV	Pass
Crossload3	28.54mV	25.20mV	19.14mV	13.65mV	Pass
Crossload4	40.19mV	29.88mV	16.10mV	18.61mV	Pass

The results above are not used in the certification process

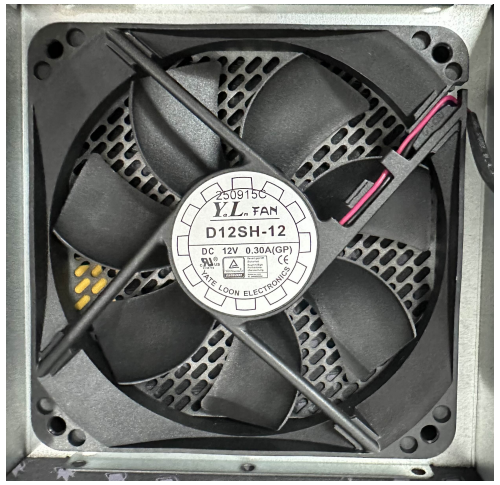
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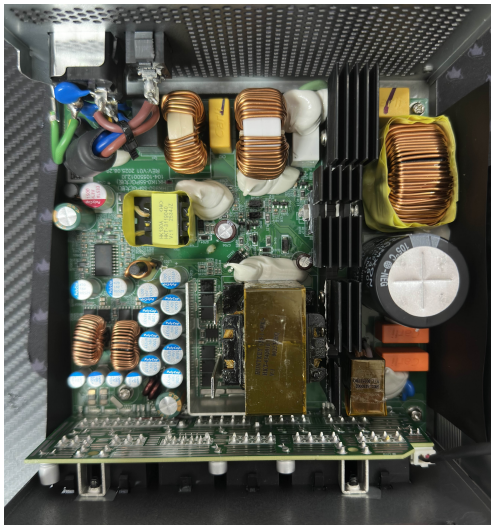
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Power specifications label



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PSU INTERNAL

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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