MSI MPG A850GS PCIE5

Serial Number -

Lab ID MS85002705

Certification ID 252705

Test Result Report ID: 25PS2705A

Certificate Issue Date: Jan 13, 2025

Scheme: ETA-EMI PSU

115V



230V

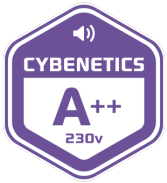


Scheme: LAMBDA PSU

115V



230V





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	MPG A850GS PCIE5
OEM/ODM	CWT
Serial Number	-
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	10

Rated Frequency (Hz)	50-60
Rated Power (W)	850
Operating Temperature (Continuous Full Load) (°C)	
Type	ATX12V
Cable Design	Fully Modular
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
Cooling	135mm Fluid Dynamic Bearing Fan (ZFF132512H)
Semi-Passive Operation	✓ (selectable)
Cybenetics Testing Information	
Lab ID	MS85002705
Date of receipt	Dec 28, 2024
Testing Date	Jan 10, 2025
Report Issued Date	Jan 13, 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**	In Cable Capacitors
ATX connector 24 pin (600mm)	1	1	16-20AWG	No
4+4 pin EPS12V (750mm)	2	2	18AWG	No
6+2 pin PCIe (600mm)	2	4	18AWG	No
2x 6+2 pin PCIe (600mm)	1	2	18AWG	No
12+4 pin PCIe (600mm) (600W)	1	1	16-24AWG	No
SATA (500mm+150mm+150mm+150mm)	2	8	18AWG	No
4-pin Molex (500mm+150mm+150mm+150mm)	1	4	18AWG	No

AC Power Cord (1380mm) - 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	22	22	70.8	3	0.3
	Watts	120		849.6	15	3.6
Total Max. Power (W)		850				

Parts Description

General Data	
Manufacturer (OEM)	CWT
Platform	CTE
PCB Type	Double-Sided
Primary Side	
Transient Filter	4x Y caps, 2x X caps, 2x CM chokes, 1x MOV
Inrush Protection	1x NTC Thermistor SCK207R0 (7 Ohm) & Relay
Bridge Rectifier(s)	1x GBJ2506 (1000V, 25A @ 100°C)
APFC MOSFETs	2x Infineon IPA60R125P6 (650V, 19A @ 100°C, Rds(on): 0.125Ohm)
APFC Boost Diode	1x Vishay VS-3C10ET07T-M3 (650V, 10A @ 140°C)

Bulk Cap(s)	1x Rubycon (420V, 680uF, 2,000h @ 105°C, MXE)
Main Switchers	2x Infineon IPA60R190P6 (650V, 12.7A @ 100°C, Rds(on): 0.190Ohm)
PFC / PWM Combo Controller	MPS HR1280
Topology	Primary side: APFC, Half-Bridge, LLC Resonant Converter Secondary side: Synchronous Rectification & DC-DC converters
Secondary Side	
+12V MOSFETs	4x On Semiconductor NTMFS5C430N (40V, 131A @ 100°C, Rds(on): 1.7mOhm)
5V & 3.3V	DC-DC Converters: 2x UBIQ QM3054M6 (30V, 61A @ 100°C, Rds(on): 4.8mOhm) & 2x UBIQ QN3107M6N (30V, 70A @ 100°C, Rds(on): 2.6mOhm) PWM Controller(s):
Filtering Capacitors	Electrolytic: 2x Nippon Chemi-Con (@ 105°C, W) 2x Nippon Chemi-Con (2-5,000h @ 105°C,KZE), 2x Rubycon (3-6,000h @ 105°C, YXS) 1x Rubycon (6-10,000h @ 105°C, ZLH) Polymer: 2x Nippon Chemi-Con, 23x FPCAP
Supervisor IC	-
Fan Controller	Nuvoton MS51FB9AE
Fan Model	ZIC ZFF132512H BAX3 (135mm, 12V, 0.45A, Fluid Dynamic Bearing Fan)
5VSB Circuit	
Rectifier	1x Dongke Semiconductor DK5V45R10S (45V, 10A)
Standby PWM Controller	On Bright OB2365T

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	✓

Performance Summary

115V

Accredited	
Average Efficiency (>1450 load combinations)	88.097%
Average Noise Output (>1450 Load Combinations)	12.92dBA
Average PF (>1450 Load Combinations)	0.994
Efficiency With 10W (≤500W) or 2% (>500W) Load	72.749%
Standby Power Consumption	0.0154W
Non-Accredited	
12V Ripple (Full Load)	29.82mV
5V Ripple (Full Load)	22.40mV
3.3V Ripple (Full Load)	24.79mV
5VSB Ripple (Full Load)	15.85mV
12V Load Regulation	0.58%
5V Load Regulation	0.54%
3.3V Load Regulation	0.70%
5VSB Load Regulation	1.47%
Inrush Current	23.850A

230V

Accredited	
Average Efficiency (>1450 load combinations)	90.407%
Average Noise Output (>1450 Load Combinations)	12.49dBA
Average PF (>1450 Load Combinations)	0.972
Efficiency With 10W (≤500W) or 2% (>500W) Load	64.609%
Standby Power Consumption	0.0892W
Non-Accredited	
12V Ripple (Full Load)	26.67mV
5V Ripple (Full Load)	22.18mV
3.3V Ripple (Full Load)	23.94mV

5VSB Ripple (Full Load)		15.22mV
12V Load Regulation		0.57%
5V Load Regulation		0.52%
3.3V Load Regulation		0.70%
5VSB Load Regulation		1.43%
Inrush Current		46.830A
12V Transient Response (200%)		11.46V
5V Transient Response (200%)		4.925V
3.3V Transient Response (200%)		3.180V
5VSB Transient Response (200%)		4.903V
Hold-Up Time & PWR_OK Signal		16.60ms
AC Loss to PWR_OK Hold Up Time		14.40ms
PWR_OK Inactive to DC Loss Delay		2.20ms
PSU Timings: T1 (20% / 100%)	91.0ms	66.0ms
PSU Timings: T3 (20% / 100%)	134.0ms	134.0ms
12V OCP (29.3°C / 44.2°C)	91.20A (128.81%), 12.046V	91.00A (128.53%), 12.040V
5V OCP (29.3°C / 44.2°C)	26A (118.18%), 5.019V	25.9A (117.73%), 5.015V
3.3V OCP (29.3°C / 44.2°C)	27.3A (124.09%), 3.286V	26.898A (122.26%), 3.284V
5VSB OCP (29.3°C / 44.2°C)	4.9A (163.33%), 5.037V	4.9A (163.33%), 5.031V
OPP (29.85°C / 44.07°C)	128.54%	123.72%

Hold-Up Time & PWR_OK Signal

Hold-Up Time (ms)	16.6
AC Loss to PWR_OK Hold Up Time (ms)	14.4
PWR_OK Inactive to DC Loss Delay (ms)	2.2

Tables

115V

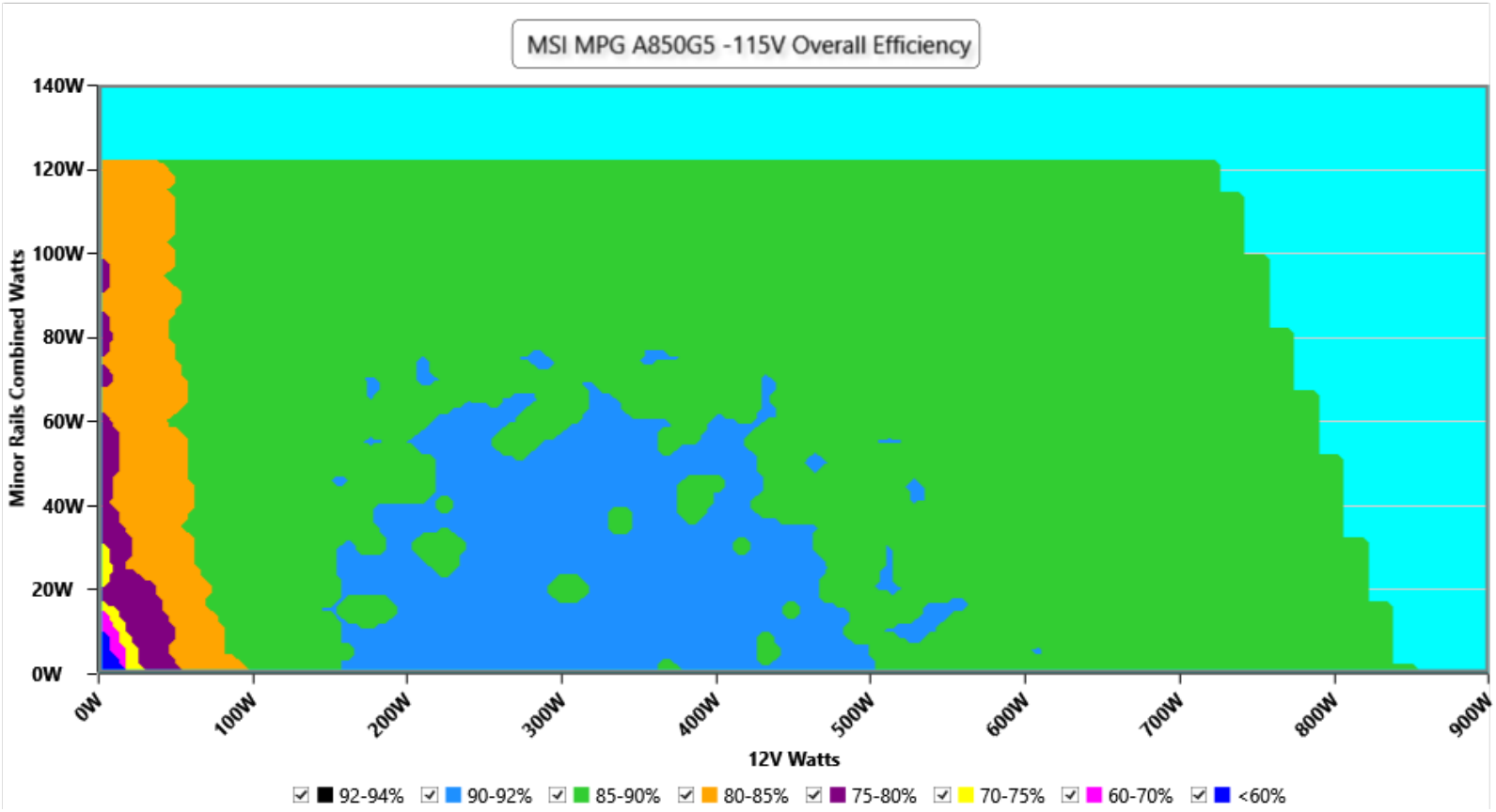
Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	115.04 V	115.00 V	113.85 V	115.08 V	116.15 V	PASS
Mains Frequency:	60.00 Hz	59.99 Hz	59.40 Hz	60.01 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.416	1.415	1.340	1.418	1.490	PASS
Mains Voltage THD:	0.13 %	0.09 %	N/A	0.18 %	2.00 %	PASS
Real Power:	0.015 W	-0.002 W	N/A	0.056 W	N/A	N/A
Apparent Power:	10.193 W	10.134 W	N/A	10.262 W	N/A	N/A
Power Factor:	0.004	N/A	N/A	N/A	N/A	N/A

230V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	230.99 V	230.89 V	227.70 V	231.04 V	232.30 V	PASS
Mains Frequency:	50.00 Hz	49.99 Hz	49.50 Hz	50.01 Hz	50.50 Hz	PASS
Mains Voltage CF:	1.417	1.416	1.340	1.419	1.490	PASS
Mains Voltage THD:	0.17 %	0.14 %	N/A	0.25 %	2.00 %	PASS
Real Power:	0.089 W	0.050 W	N/A	0.141 W	N/A	N/A
Apparent Power:	34.975 W	34.772 W	N/A	35.201 W	N/A	N/A
Power Factor:	0.003	N/A	N/A	N/A	N/A	N/A

Efficiency Graph

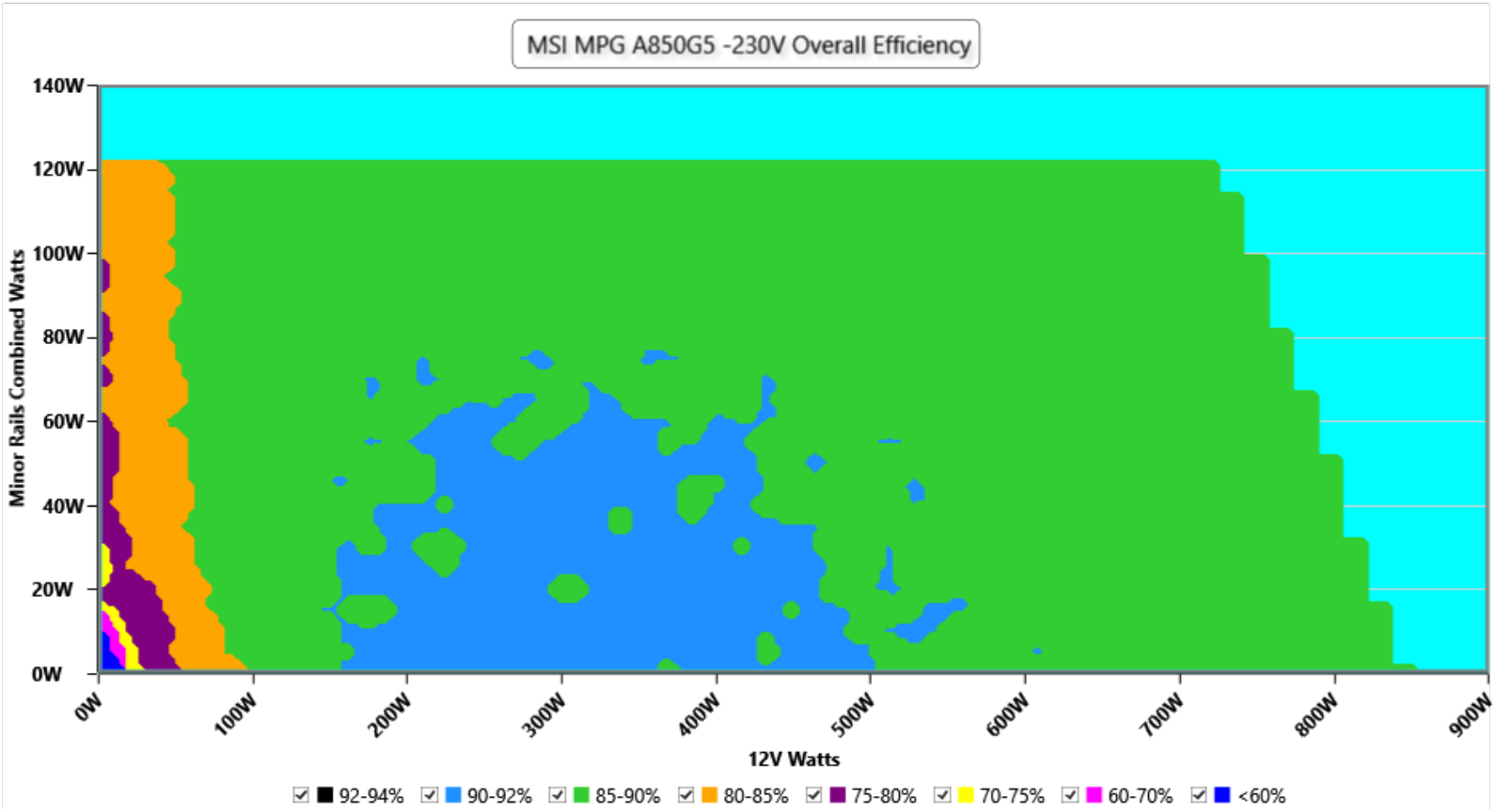
115V



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

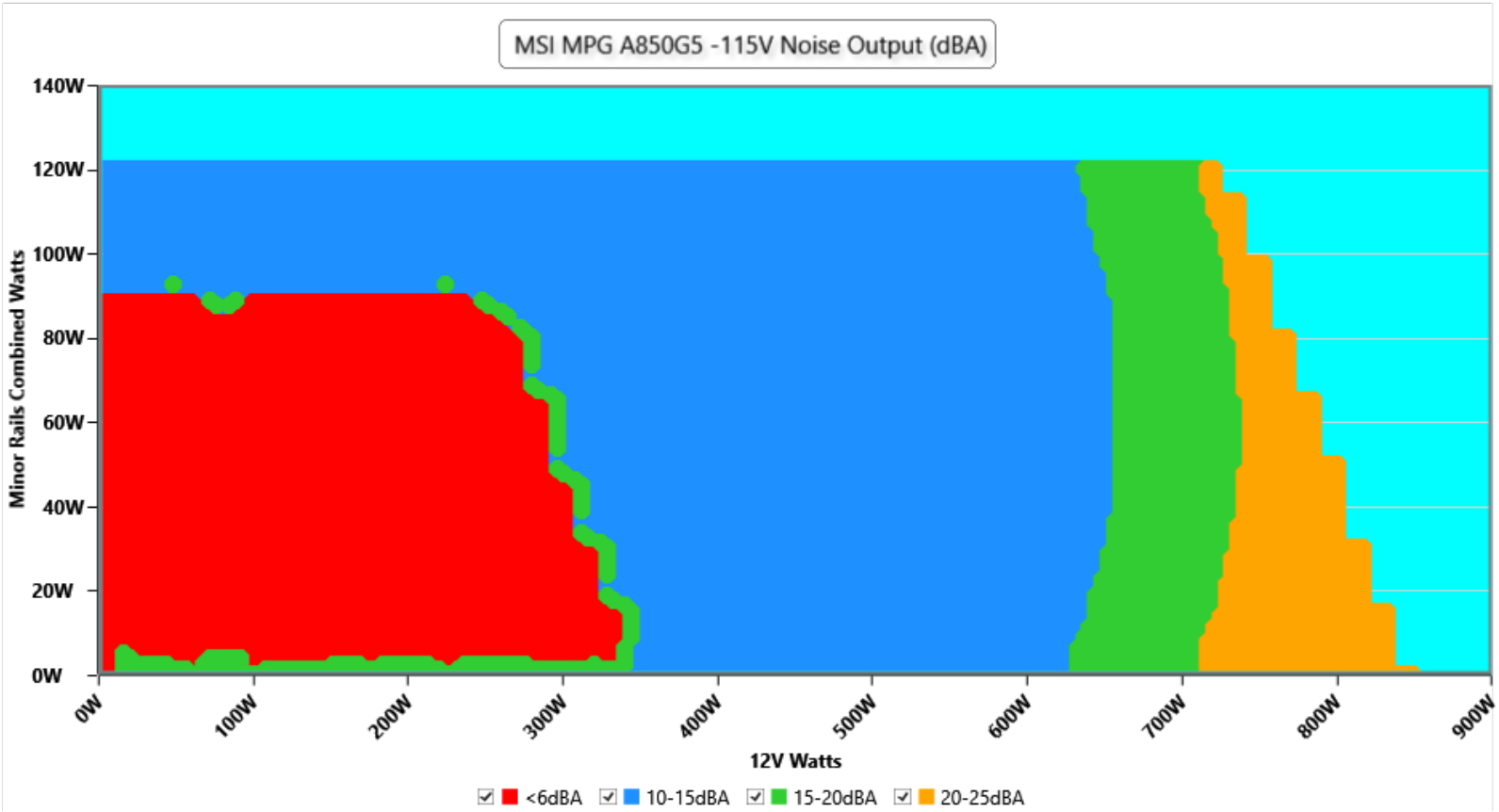


INFO

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

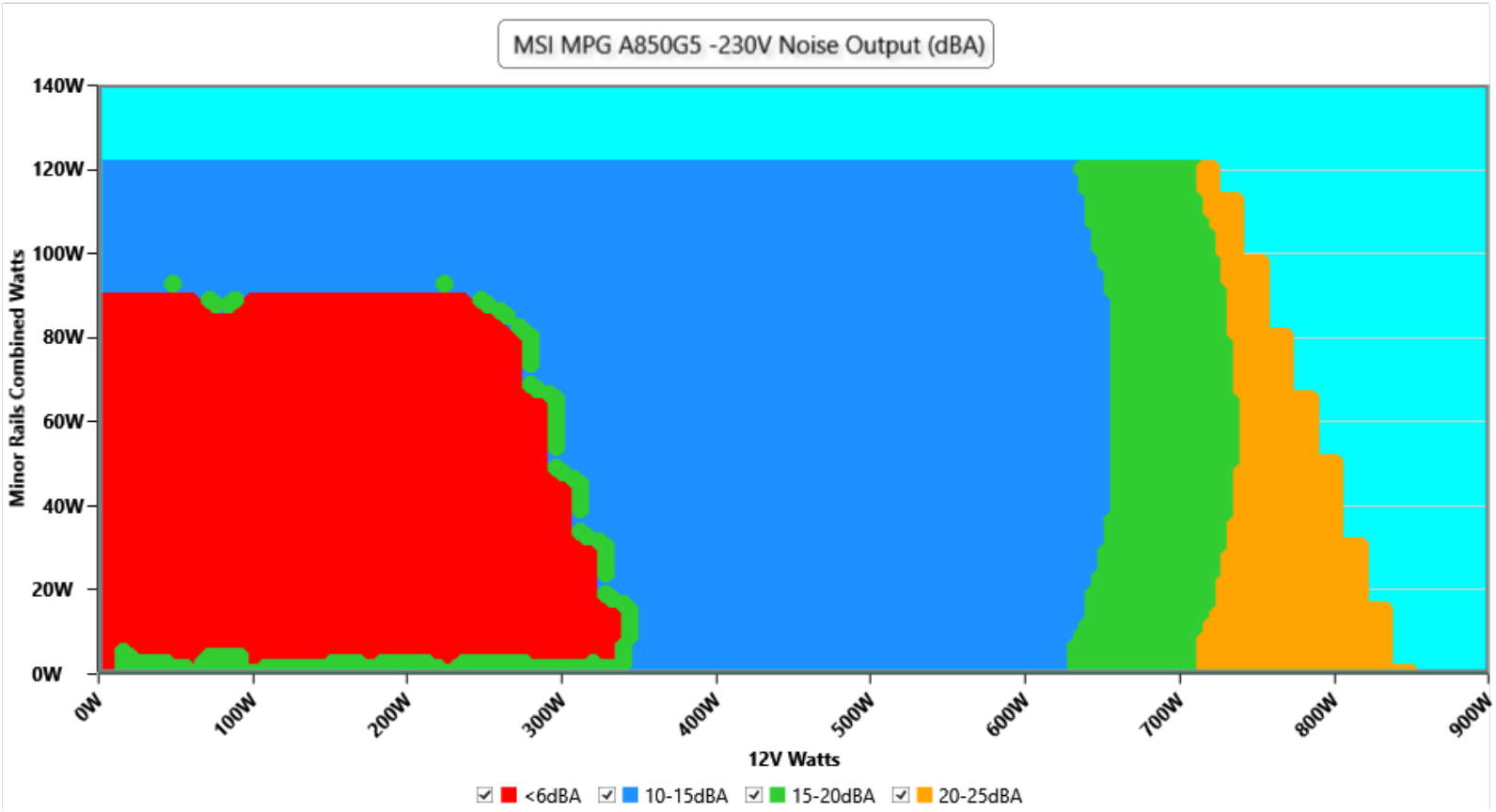
115V



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%	0 RPM · <6.0 dB(A) · 34.2 °C	0 RPM · <6.0 dB(A) · 48.3 °C	fan off in both
20%	0 RPM · <6.0 dB(A) · 35.1 °C	0 RPM · <6.0 dB(A) · 51.2 °C	fan off in both
50%	386 RPM · 12.3 dB(A) · 30.1 °C	409 RPM · 12.0 dB(A) · 42.1 °C	**-0.3 dB(A)**
100%	712 RPM · 15.7 dB(A) · 30.6 °C	1413 RPM · 37.2 dB(A) · 45.2 °C	**+21.5 dB(A)**

230V

Load	Normal ambient fan · noise · intake	High ambient fan · noise · intake	Noise change
10%	0 RPM · <6.0 dB(A) · 34.9 °C	0 RPM · <6.0 dB(A) · 49.0 °C	fan off in both
20%	0 RPM · <6.0 dB(A) · 36.7 °C	0 RPM · <6.0 dB(A) · 49.9 °C	fan off in both
50%	386 RPM · 12.3 dB(A) · 30.4 °C	407 RPM · 12.0 dB(A) · 42.5 °C	**-0.3 dB(A)**
100%	712 RPM · 15.7 dB(A) · 30.9 °C	1331 RPM · 35.8 dB(A) · 45.5 °C	**+20.1 dB(A)**

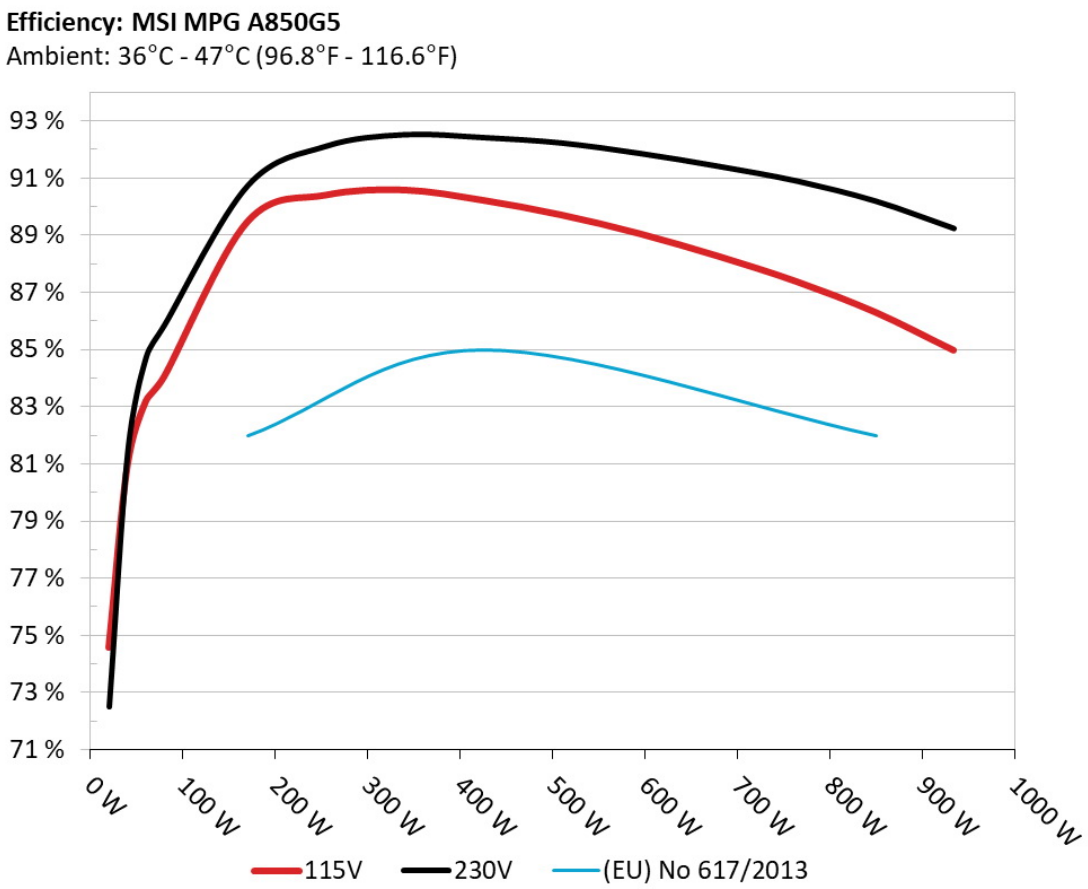
INFO

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.

Indicative Performance

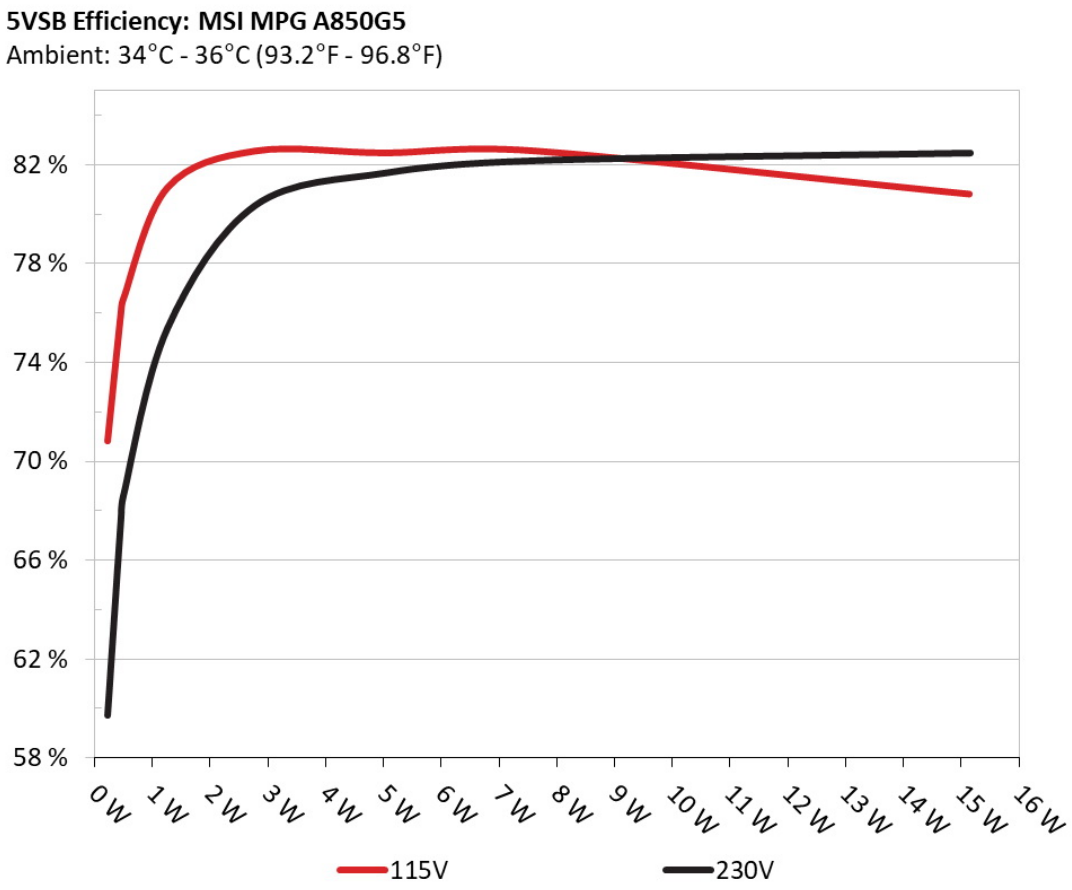
Efficiency under high ambient temperature



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	70.81%	0.031
	5.057V	0.322W		114.85V
2	**0.09A**	0.455W	75.926%	0.057
	5.056V	0.599W		114.84V
3	**0.55A**	2.781W	82.575%	0.26
	5.056V	3.368W		114.83V
4	**1A**	5.055W	82.496%	0.368
	5.054V	6.128W		114.83V
5	**1.5A**	7.581W	82.584%	0.421
	5.053V	9.18W		114.83V
6	**3A**	15.147W	80.827%	0.503
	5.048V	18.74W		114.83V

Protection Features

OCP (Normal @ 29.3°C)	12V: 91.20A (128.81%), 12.046V 5V: 26A (118.18%), 5.019V 3.3V: 27.3A (124.09%), 3.286V 5VSB: 4.9A (163.33%), 5.037V
OCP (Hot @ 44.2°C)	12V: 91.00A (128.53%), 12.040V 5V: 25.9A (117.73%), 5.015V 3.3V: 26.898A (122.26%), 3.284V 5VSB: 4.9A (163.33%), 5.031V
OPP (Normal @ 29.9°C)	1092.63W (128.54%)
OPP (Hot @ 44.1°C)	1051.64W (123.72%)
OTP	✓ (120°C @ Secondary Side)

SCP	12V to Earth: ✓ 5V to Earth: ✓ 3.3V to Earth: ✓ 5VSB to Earth: ✓ -12V to Earth: ✓
PWR_OK	Proper Operation
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%	**5.242A**	**1.98A**	**1.991A**	**0.991A**	84.998	84.522%	0	<6.0	48.25°C	0.974
	12.094V	5.049V	3.314V	5.047V	100.62				40.38°C	114.96V
20%	**11.503A**	**2.972A**	**2.989A**	**1.191A**	169.922	89.471%	0	<6.0	51.2°C	0.99
	12.086V	5.046V	3.312V	5.04V	189.942				40.6°C	114.95V
30%	**18.117A**	**3.47A**	**3.489A**	**1.391A**	254.926	90.407%	0	<6.0	57.91°C	0.994
	12.081V	5.043V	3.31V	5.033V	281.667				41.4°C	114.73V
40%	**24.746A**	**3.968A**	**3.99A**	**1.592A**	340.01	90.585%	0	<6.0	61.92°C	0.997
	12.075V	5.041V	3.308V	5.026V	372.046				40.87°C	114.02V
50%	**31.014A**	**4.962A**	**4.992A**	**1.794A**	424.77	90.226%	409	12	42.1°C	0.998
	12.068V	5.038V	3.306V	5.018V	470.529				63.36°C	114.75V
60%	**37.272A**	**5.958A**	**5.995A**	**1.996A**	509.333	89.716%	496	10.7	42.92°C	0.998
	12.061V	5.035V	3.303V	5.011V	567.752				64°C	114.76V
70%	**43.600A**	**6.955A**	**7A**	**2.198A**	594.644	89.057%	668	14.3	43.19°C	0.998
	12.053V	5.033V	3.301V	5.004V	667.74				64.61°C	114.79V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
80%	**49.938A**	**7.951A**	**8.004A**	**2.301A**	679.476	88.271%	792	19.3	43.58°C	0.998
	12.046V	5.03V	3.298V	4.997V	769.847				64.84°C	114.72V
90%	**56.681A**	**8.452A**	**8.494A**	**2.405A**	764.91	87.378%	974	26.3	44.46°C	0.998
	12.039V	5.028V	3.296V	4.99V	875.478				67.04°C	114.69V
100%	**63.169A**	**8.953A**	**9.016A**	**3.011A**	849.736	86.311%	1413	37.2	45.22°C	0.998
	12.032V	5.026V	3.294V	4.982V	984.651				66.9°C	114.8V
110%	**69.531A**	**9.954A**	**10.117A**	**3.016A**	934.317	84.981%	1959	47	46.35°C	0.998
	12.024V	5.023V	3.291V	4.974V	1099.507				67.66°C	114.6V
CL1	**0.116A**	**14.371A**	**14.479A**	**0A**	121.296	82.137%	496	10.7	41.94°C	0.987
	12.076V	5.024V	3.294V	5.035V	147.676				57.86°C	115.42V
CL2	**0.115A**	**21.913A**	**0A**	**0A**	111.293	80.451%	409	12	40.39°C	0.984
	12.082V	5.016V	3.304V	5.039V	138.353				56.86°C	115.81V
CL3	**0.114A**	**0A**	**22.067A**	**0A**	73.982	73.881%	407	12	41.85°C	0.974
	12.085V	5.03V	3.29V	5.039V	100.171				54.81°C	115.6V
CL4	**70.536A**	**0A**	**0A**	**0A**	849.498	87.233%	1192	32.6	45.22°C	0.998
	12.043V	5.038V	3.307V	4.995V	973.858				66.19°C	114.92V

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%	**5.243A**	**1.98A**	**1.993A**	**0.991A**	85.004	86.291%	0	<6.0	48.98°C	0.868
	12.094V	5.05V	3.312V	5.045V	98.531				40.26°C	232.11V
20%	**11.503A**	**2.972A**	**2.992A**	**1.191A**	169.933	90.718%	0	<6.0	49.93°C	0.951
	12.086V	5.047V	3.309V	5.038V	187.262				40.71°C	231.91V
30%	**18.119A**	**3.469A**	**3.492A**	**1.391A**	254.94	92.097%	0	<6.0	51.83°C	0.975
	12.081V	5.045V	3.307V	5.031V	276.85				41.11°C	232.01V
40%	**24.748A**	**3.966A**	**3.993A**	**1.592A**	340.025	92.5%	0	<6.0	53.6°C	0.981
	12.074V	5.042V	3.305V	5.025V	367.611				41.56°C	231.96V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
50%	**31.017A**	**4.96A**	**4.996A**	**1.794A**	424.807	92.397%	407	12	42.46°C	0.985
	12.067V	5.04V	3.303V	5.018V	459.756				59.77°C	231.69V
60%	**37.273A**	**5.955A**	**6A**	**1.996A**	509.35	92.208%	506	10.8	42.73°C	0.989
	12.061V	5.038V	3.3V	5.01V	552.396				59.71°C	230.46V
70%	**43.600A**	**6.952A**	**7.005A**	**2.199A**	594.655	91.84%	648	13.2	43.31°C	0.992
	12.053V	5.035V	3.298V	5.003V	647.562				60.1°C	230.32V
80%	**49.939A**	**7.947A**	**8.011A**	**2.302A**	679.488	91.39%	789	19.1	43.77°C	0.993
	12.047V	5.032V	3.295V	4.997V	743.599				60.87°C	231.33V
90%	**56.682A**	**8.448A**	**8.501A**	**2.405A**	764.921	90.872%	980	26.6	44.64°C	0.995
	12.039V	5.03V	3.293V	4.99V	841.836				62.48°C	231.69V
100%	**63.166A**	**8.949A**	**9.023A**	**3.011A**	849.731	90.171%	1331	35.8	45.52°C	0.995
	12.032V	5.028V	3.291V	4.982V	942.33				62.48°C	231.5V
110%	**69.531A**	**9.95A**	**10.125A**	**3.016A**	934.312	89.219%	1900	46.3	46.72°C	0.996
	12.024V	5.025V	3.289V	4.974V	1047.161				63.56°C	229.72V
CL1	**0.116A**	**14.364A**	**14.491A**	**0A**	121.296	83.396%	467	10.7	40.82°C	0.929
	12.076V	5.027V	3.292V	5.035V	145.423				56.29°C	229.86V
CL2	**0.115A**	**21.902A**	**0A**	**0A**	111.292	81.888%	408	12	40.44°C	0.92
	12.081V	5.018V	3.301V	5.039V	135.927				55.39°C	229.87V
CL3	**0.114A**	**0A**	**22.093A**	**0A**	73.981	74.795%	407	12	41.89°C	0.873
	12.085V	5.032V	3.286V	5.039V	98.898				54.66°C	229.87V
CL4	**70.538A**	**0A**	**0A**	**0A**	849.496	90.988%	1190	32.6	46.46°C	0.995
	12.043V	5.04V	3.304V	4.995V	933.648				62.44°C	229.69V

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	**1.226A**	**0.495A**	**0.497A**	**0.198A**	19.989	74.591%	0	<6.0	40.72°C	0.858
	12.101V	5.053V	3.317V	5.055V	26.814				36.25°C	114.88V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
40W	**2.702A**	**0.693A**	**0.696A**	**0.297A**	39.991	80.931%	0	<6.0	42.59°C	0.934
	12.098V	5.052V	3.316V	5.053V	49.423				37.61°C	114.9V
60W	**4.178A**	**0.89A**	**0.895A**	**0.396A**	59.992	83.199%	0	<6.0	43.82°C	0.96
	12.091V	5.051V	3.316V	5.051V	72.131				38.16°C	114.94V
80W	**5.646A**	**1.089A**	**1.095A**	**0.495A**	79.927	84.061%	0	<6.0	45.99°C	0.973
	12.095V	5.051V	3.316V	5.049V	95.085				39.48°C	114.92V

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	**1.227A**	**0.495A**	**0.498A**	**0.198A**	19.998	72.489%	0	<6.0	43.46°C	0.472
	12.101V	5.054V	3.314V	5.053V	26.235				36.27°C	232.17V
40W	**2.702A**	**0.693A**	**0.697A**	**0.297A**	39.999	81.399%	0	<6.0	44.84°C	0.685
	12.099V	5.053V	3.314V	5.051V	49.128				37.38°C	231.27V
60W	**4.178A**	**0.89A**	**0.896A**	**0.396A**	59.999	84.722%	0	<6.0	46.27°C	0.792
	12.094V	5.053V	3.314V	5.049V	70.792				38.41°C	231.42V
80W	**5.648A**	**1.089A**	**1.096A**	**0.495A**	79.941	85.85%	0	<6.0	47.74°C	0.856
	12.096V	5.052V	3.313V	5.047V	93.113				39.46°C	232.12V

The results above are not used in the certification process

Ripple Measurements

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	19.39mV	16.01mV	16.57mV	10.78mV	Pass
20% Load	20.15mV	16.83mV	17.14mV	10.67mV	Pass
30% Load	20.00mV	16.78mV	17.03mV	10.67mV	Pass
40% Load	20.25mV	17.45mV	17.34mV	10.88mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
50% Load	20.30mV	18.78mV	18.98mV	11.44mV	Pass
60% Load	22.30mV	18.63mV	19.29mV	11.55mV	Pass
70% Load	22.25mV	20.38mV	19.86mV	11.85mV	Pass
80% Load	23.22mV	19.71mV	21.49mV	13.24mV	Pass
90% Load	22.55mV	20.32mV	22.83mV	13.29mV	Pass
100% Load	29.82mV	22.40mV	24.79mV	15.85mV	Pass
110% Load	29.80mV	21.45mV	24.26mV	15.72mV	Pass
Crossload1	22.10mV	20.90mV	21.79mV	13.89mV	Pass
Crossload2	20.15mV	24.94mV	20.27mV	13.39mV	Pass
Crossload3	21.17mV	21.25mV	23.55mV	12.01mV	Pass
Crossload4	26.36mV	20.50mV	19.44mV	14.24mV	Pass

The results above are not used in the certification process

230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	15.7 mV	16.1 mV	16.0 mV	10.3 mV	Pass
20% Load	18.2 mV	16.0 mV	16.4 mV	10.0 mV	Pass
30% Load	18.6 mV	16.3 mV	16.6 mV	10.8 mV	Pass
40% Load	20.0 mV	18.2 mV	18.4 mV	11.3 mV	Pass
50% Load	27.3 mV	18.1 mV	18.5 mV	11.8 mV	Pass
60% Load	22.3 mV	19.7 mV	19.6 mV	11.9 mV	Pass
70% Load	22.0 mV	19.1 mV	20.9 mV	12.7 mV	Pass
80% Load	21.7 mV	19.4 mV	20.2 mV	12.7 mV	Pass
90% Load	22.1 mV	19.4 mV	20.9 mV	12.6 mV	Pass
100% Load	26.7 mV	22.2 mV	23.9 mV	15.2 mV	Pass
110% Load	31.4 mV	23.1 mV	25.8 mV	17.0 mV	Pass
Crossload 1	19.8 mV	19.8 mV	21.9 mV	13.2 mV	Pass
Crossload 2	18.9 mV	22.3 mV	20.9 mV	12.3 mV	Pass
Crossload 3	14.6 mV	20.7 mV	23.8 mV	11.9 mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
Crossload 4	27.6 mV	19.2 mV	20.5 mV	14.3 mV	Pass

The results above are not used in the certification process

MSI MPG A850GS PCIE5



Top side



Power specifications label

Cybenetics □□□□□□□□□□□□□□□□□□ ETA□□□□ LAMBDA□□□□ SAFE□□□□□□□□□□□□□□□□ DELTA□□□□□□ PHI□□□□□□□□