MSI MAG A1250GL PCIE5

Serial Number C23014262141

Lab ID MS12502449

Certification ID 252449

Test Result Report ID: 24PS2449A

Certificate Issue Date: May 21, 2024

Scheme: ETA-EMI PSU

115V



230V



115V



230V



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	MAG A1250GL PCIE5
OEM/ODM	CWT
Serial Number	C23014262141
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	100-240

Rated Current (Arms)	15
Rated Frequency (Hz)	50-60
Rated Power (W)	1250
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 (HA13525H12SF-Z)
Semi-Passive Operation	✗
Cybenetics Testing Information	
Lab ID	MS12502449
Date of receipt	May 8, 2024
Testing Date	May 20, 2024
Report Issued Date	May 21, 2024
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	16AWG	No
4+4 pin EPS12V (750mm)	2	2	18AWG	No
6+2 pin PCIe (600mm+150mm)	2	4	16-18AWG	No
12+4 pin PCIe (600mm) (450W)	1	1	16-26AWG	No
SATA (500mm+150mm+150mm+150mm)	4	16	18AWG	No

Modular Cables				
4-pin Molex (500mm+150mm+150mm+150mm) / FDD (+150mm)	1	4 / 1	18-20AWG	No
AC Power Cord (1395mm) - 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	22	22	104.1	3	0.3
	Watts	120		1249	15	3.6
Total Max. Power (W)		1250				

Parts Description

General Data	
Manufacturer (OEM)	CWT
Platfform	CSZ
PCB Type	Double-Sided
Primary Side	
Transient Filter	4x Y caps, 1x X caps, 2x CM chokes, 1x MOV
Inrush Protection	1x NTC Thermistor SCK207R0 (7 Ohm @25°C) & Relay
Bridge Rectifier(s)	2x Yangjie GBJL2506 (420V, 3.5A @ 25°C)
APFC MOSFETs	3x Infineon IPB50R140CP (550V, 15A @ 100°C, Rds(on): 0.14Ohm)

APFC Boost Diode	1x Vishay 3C16ET07T (650V, 16A @ 142°C)
Bulk Cap(s)	1x Teapo (420V, 820uF, 2000h @ 105°C, LS)
Main Switchers	2x Infineon IPP60R099C6 (650V, 37.9A @ 25°C, Rds(on): 0.099Ohm)
APFC Controller	Champion CM6500UNX
Resonant Controller	Champion CM6901X
Topology	Primary side: APFC, Half-Bridge & LLC converter Secondary side: Synchronous Rectification & DC-DC converters
Secondary Side	
+12V MOSFETs	10x Vishay R626 (60V, 100A @ 25°C, Rds(on): 1.7mOhm)
5V & 3.3V	DC-DC Converters: 2x Excelliance Mos B04N03 (30V, 75A @ 25°C, Rds(on): 4mOhm) 2x On Semiconductor ON3107335 (20V, 8.3A @ 25°C, Rds(on): 12.2mOhm) PWM Controller(s): 1x uP3861P
Filtering Capacitors	Electrolytic: 7x Chengx (2-3000 @ 105°C, GR), Polymer: 7x Nippon Chemi-Con, 5x CapXon ,15x AP-Con
Supervisor IC	Weltrend WT7502
Fan Model	Hong Hua HA13525H12SF-Z (135mm, 12V, 0.5A, Fluid Dynamic Bearing Fan)
5VSB	
Low Side Rectifier	P6SMB6
Standby PWM Controller	B2365T

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)	88.032%
Average Noise Output (>1450 Load Combinations)	38.89dBA
Average PF (>1450 Load Combinations)	0.985
Efficiency With 10W (≤500W) or 2% (>500W) Load	77.932%
Standby Power Consumption	0.0167W
Non-Accredited	
12V Ripple (Full Load)	16.35mV
5V Ripple (Full Load)	20.25mV
3.3V Ripple (Full Load)	16.35mV
5VSB Ripple (Full Load)	29.86mV
12V Load Regulation	1.79%
5V Load Regulation	0.92%
3.3V Load Regulation	0.99%
5VSB Load Regulation	2.95%
Inrush Current	25.940A

230V

Accredited	
Average Efficiency (>1450 load combinations)	90.340%
Average Noise Output (>1450 Load Combinations)	38.56dBA
Average PF (>1450 Load Combinations)	0.963
Efficiency With 10W (≤500W) or 2% (>500W) Load	77.251%
Standby Power Consumption	0.0761W
Non-Accredited	
12V Ripple (Full Load)	28.39mV
5V Ripple (Full Load)	18.19mV
3.3V Ripple (Full Load)	15.85mV

5VSB Ripple (Full Load)		18.16mV
12V Load Regulation		1.86%
5V Load Regulation		0.94%
3.3V Load Regulation		0.96%
5VSB Load Regulation		3.08%
Inrush Current		49.560A
12V Transient Response (200%)		11.13V
5V Transient Response (200%)		4.913V
3.3V Transient Response (200%)		3.144V
5VSB Transient Response (200%)		4.784V
Hold-Up Time & PWR_OK Signal		14.90ms
AC Loss to PWR_OK Hold Up Time		12.40ms
PWR_OK Inactive to DC Loss Delay		2.50ms
PSU Timings: T1 (20% / 100%)	66.0ms	66.0ms
PSU Timings: T3 (20% / 100%)	130.0ms	129.0ms
OPP (29.15°C / 41.63°C)	121.72%	115.48%

Hold-Up Time & PWR_OK Signal

Hold-Up Time (ms)	14.9
AC Loss to PWR_OK Hold Up Time (ms)	12.4
PWR_OK Inactive to DC Loss Delay (ms)	2.5

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Tables

115V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	115.07 V	115.03 V	113.85 V	115.11 V	116.15 V	PASS

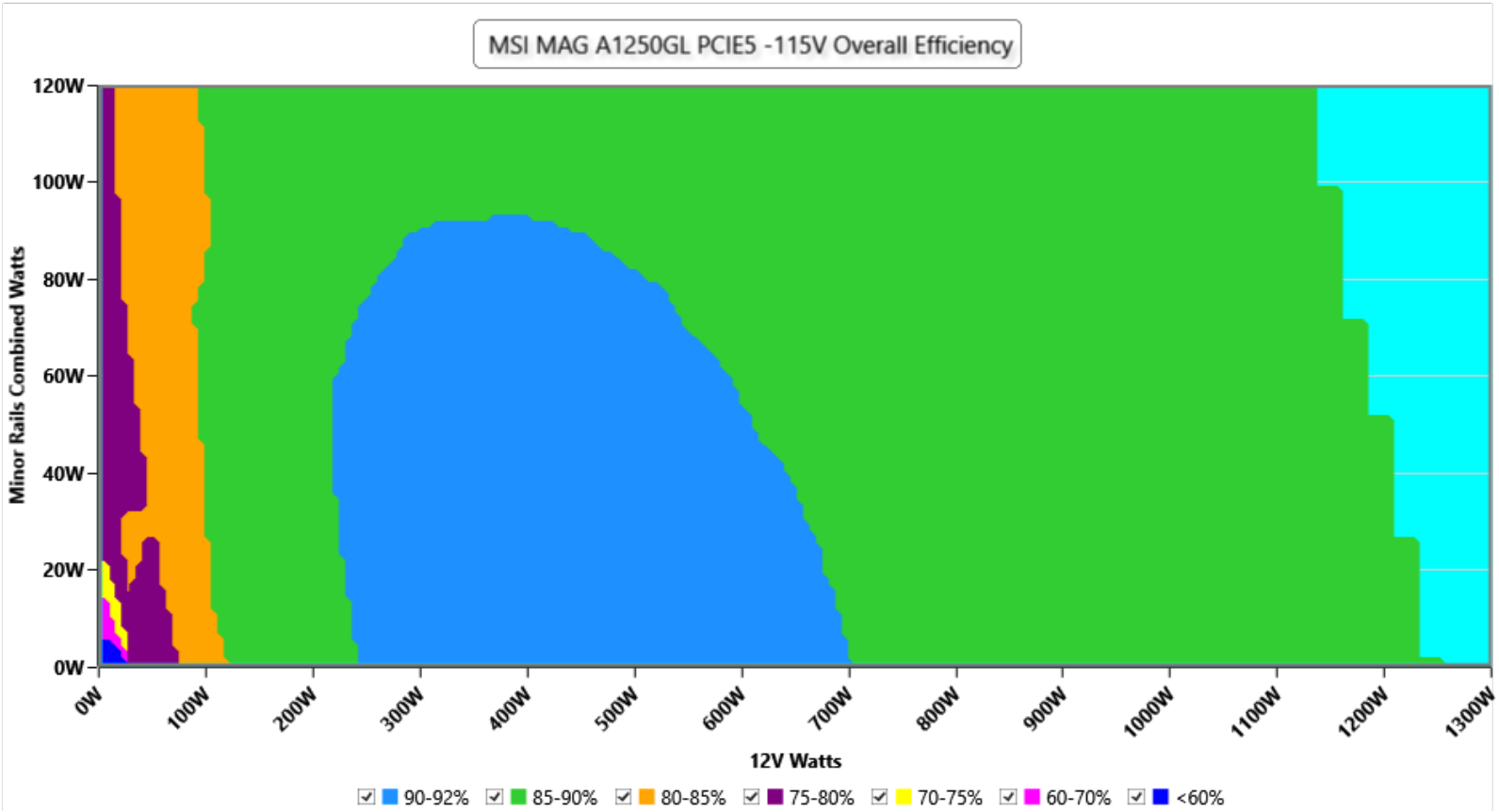
Mains Frequency:	60.00 Hz	59.93 Hz	59.40 Hz	60.02 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.416	1.415	1.340	1.418	1.490	PASS
Mains Voltage THD:	0.13 %	0.09 %	N/A	0.17 %	2.00 %	PASS
Real Power:	0.017 W	0.012 W	N/A	0.021 W	N/A	N/A
Apparent Power:	10.263 W	10.156 W	N/A	10.364 W	N/A	N/A
Power Factor:	0.001	N/A	N/A	N/A	N/A	N/A

230V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	231.00 V	230.89 V	227.70 V	231.06 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:	0.076 W	0.066 W	N/A	0.095 W	N/A	N/A
Apparent Power:	34.219 W	33.915 W	N/A	34.542 W	N/A	N/A
Power Factor:	0.002	N/A	N/A	N/A	N/A	N/A

Efficiency Graph

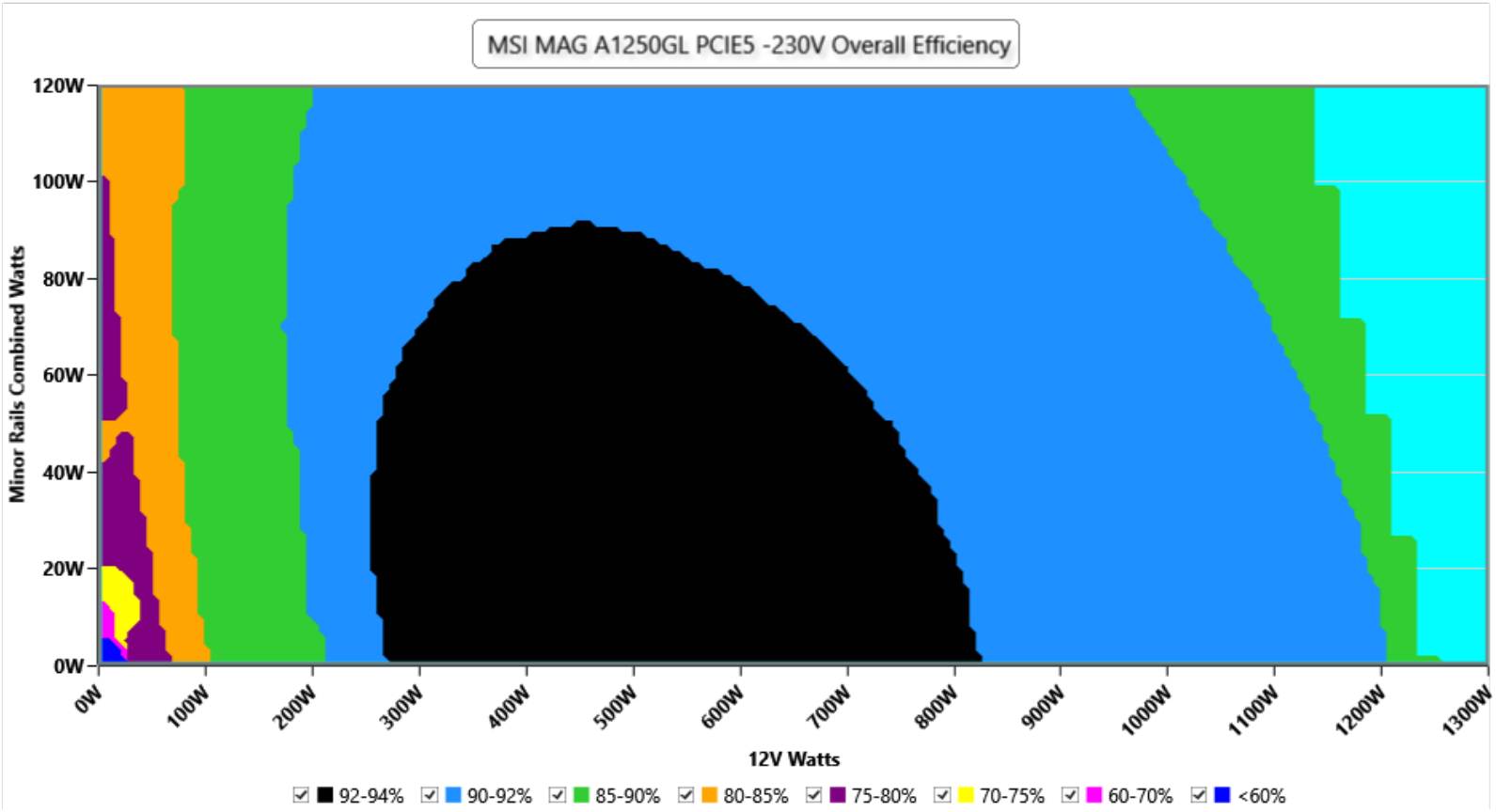
115V



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

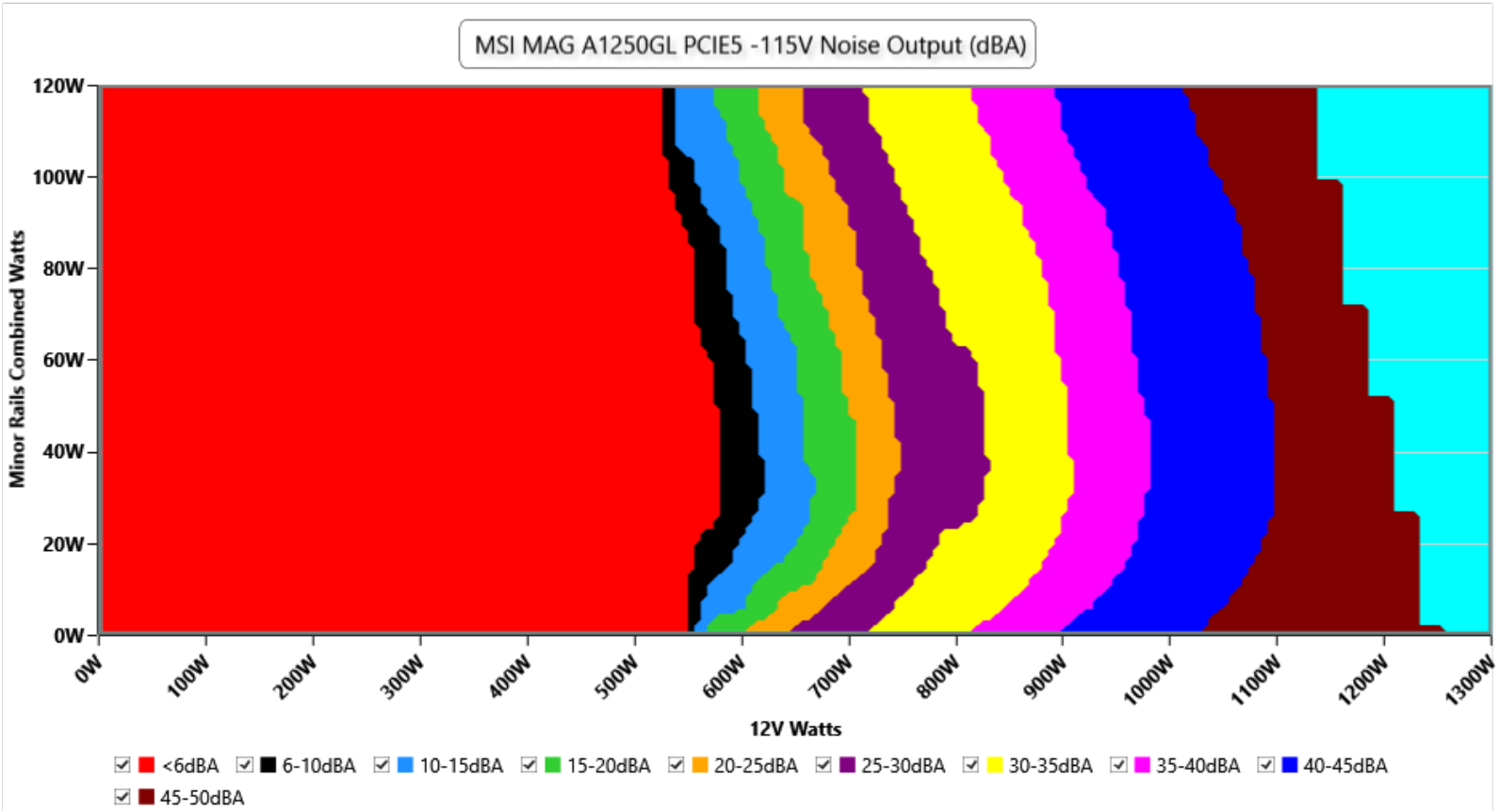


INFO

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Noise Graph

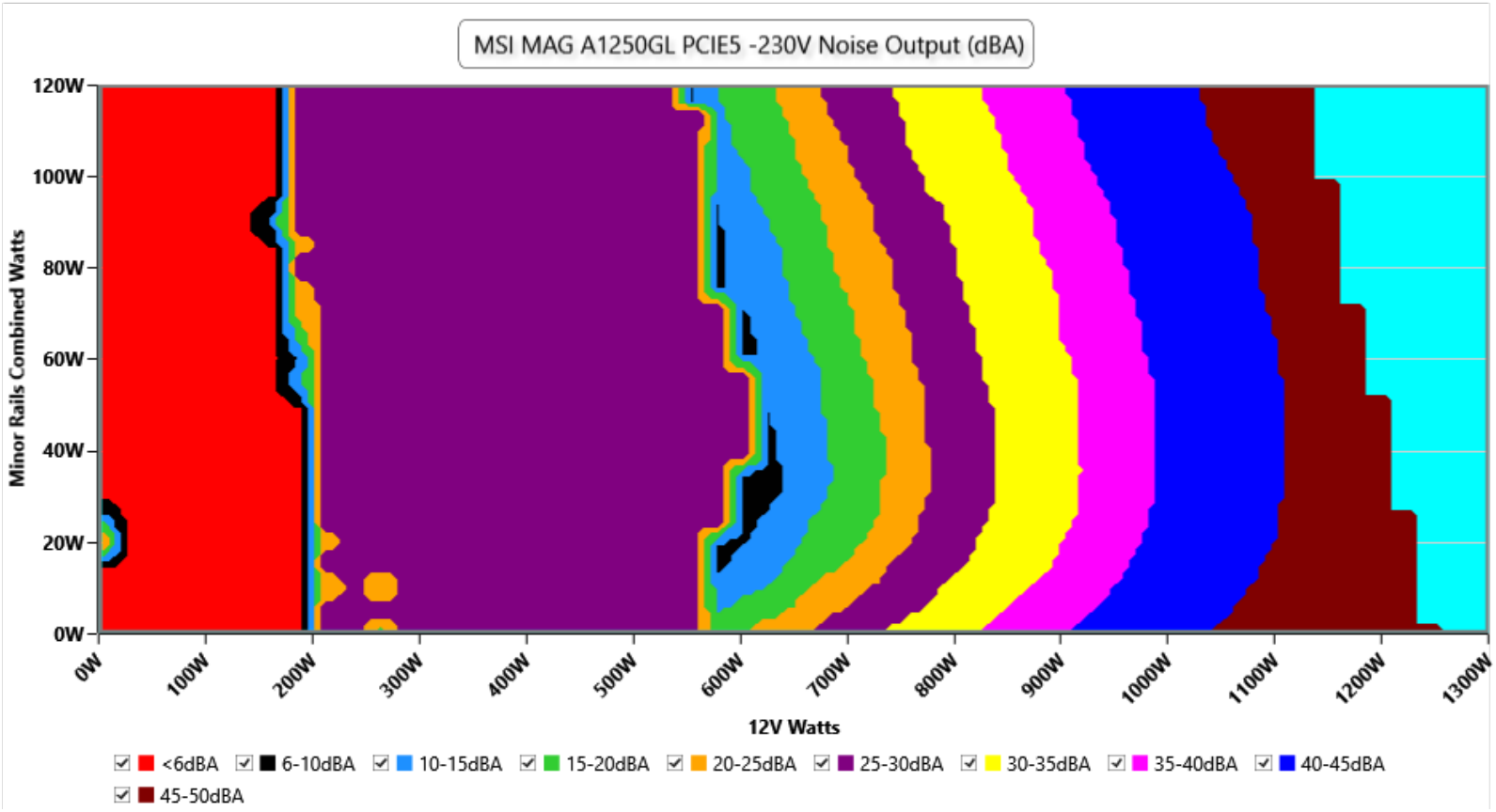
115V



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%	400 RPM · <6.0 dB(A) · 40.2 °C	400 RPM · <6.0 dB(A) · 40.2 °C	<6.0 in both
20%	401 RPM · <6.0 dB(A) · 40.7 °C	401 RPM · <6.0 dB(A) · 40.7 °C	<6.0 in both
50%	446 RPM · 7.2 dB(A) · 42.5 °C	446 RPM · 7.2 dB(A) · 42.5 °C	**+0.0 dB(A)**
100%	2186 RPM · 50.2 dB(A) · 45.5 °C	2186 RPM · 50.2 dB(A) · 45.5 °C	**+0.0 dB(A)**

230V

Load	Normal ambient fan · noise · intake	High ambient fan · noise · intake	Noise change
10%	399 RPM · <6.0 dB(A) · 40.4 °C	399 RPM · <6.0 dB(A) · 40.4 °C	<6.0 in both
20%	400 RPM · <6.0 dB(A) · 40.6 °C	400 RPM · <6.0 dB(A) · 40.6 °C	<6.0 in both
50%	598 RPM · 14.1 dB(A) · 42.0 °C	598 RPM · 14.1 dB(A) · 42.0 °C	**+0.0 dB(A)**
100%	2197 RPM · 50.4 dB(A) · 45.5 °C	2197 RPM · 50.4 dB(A) · 45.5 °C	**+0.0 dB(A)**

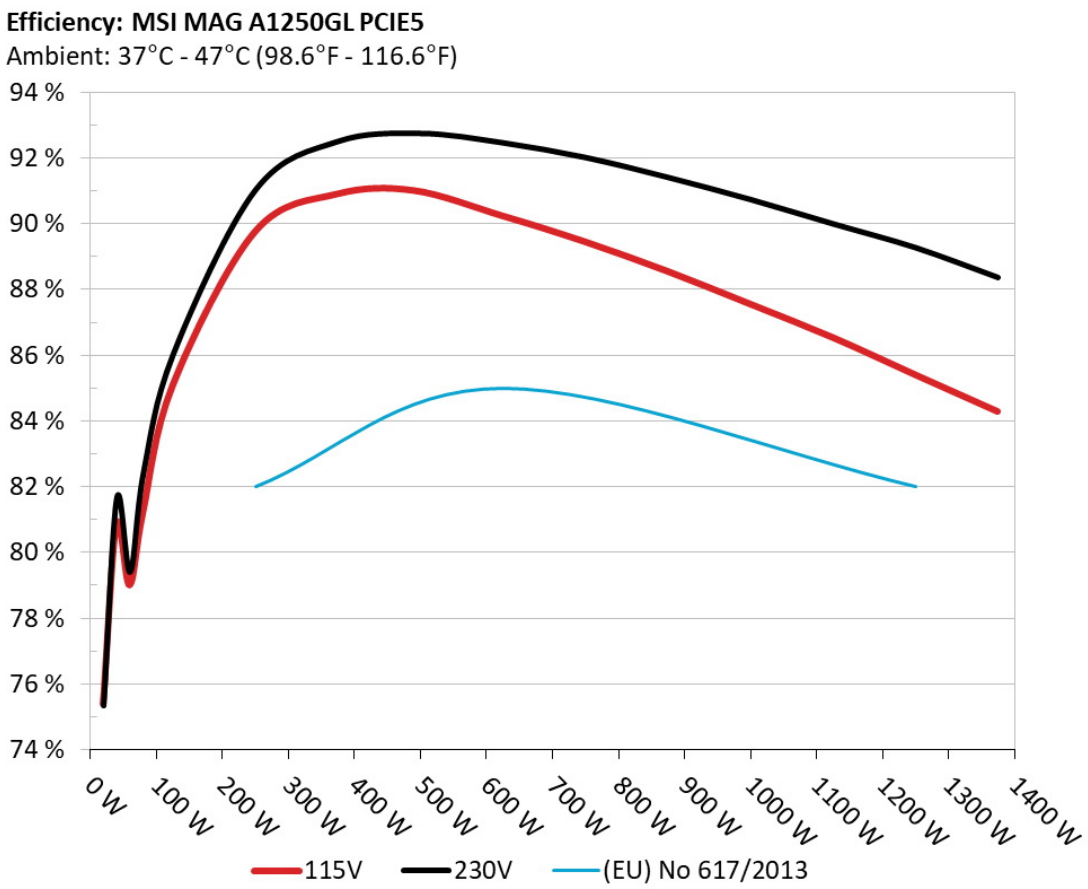
INFO

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

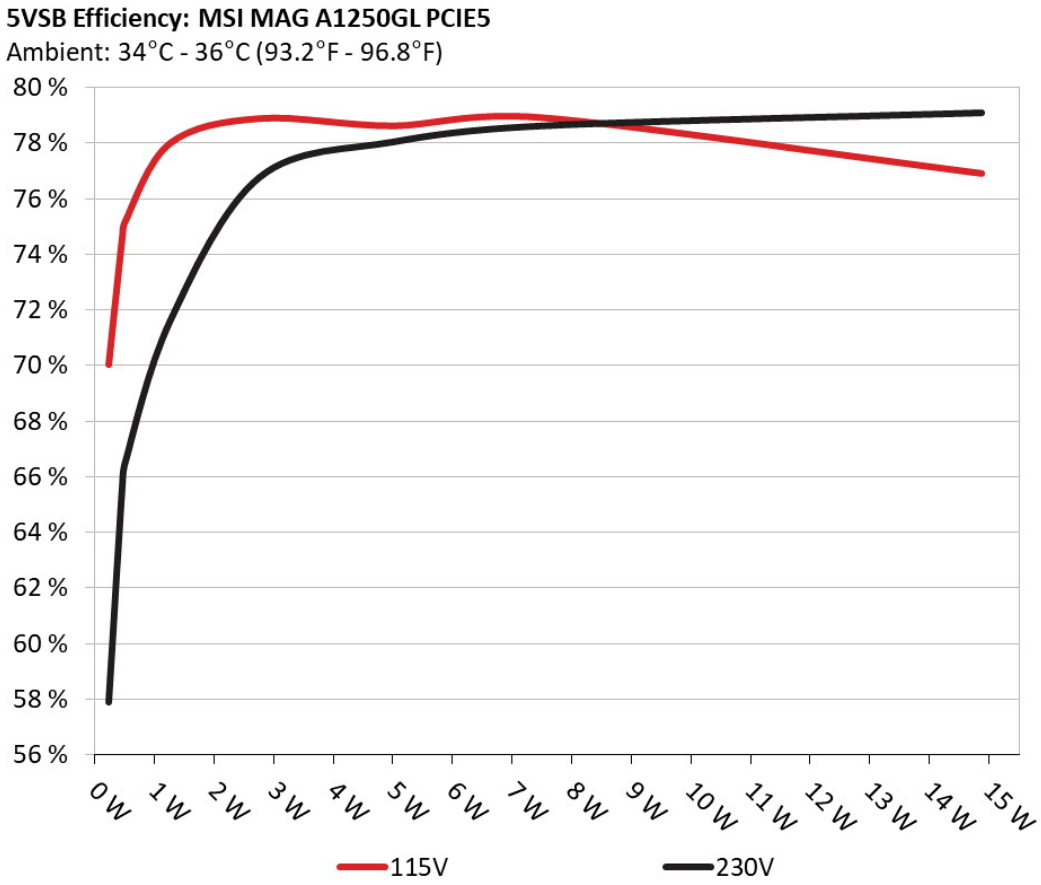
Efficiency under high ambient temperature



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**	0.227W	70.047%	0.032
	5.037V	0.324W		114.93V
2	**0.09A**	0.453W	74.576%	0.059
	5.035V	0.607W		114.93V
3	**0.55A**	2.763W	78.871%	0.271
	5.023V	3.503W		114.92V
4	**1A**	5.012W	78.606%	0.377
	5.012V	6.376W		114.91V
5	**1.5A**	7.499W	78.902%	0.429
	4.999V	9.504W		114.92V
6	**3A**	14.878W	76.904%	0.505
	4.959V	19.347W		114.91V

230V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	**0.045A**	0.227W	57.916%	0.012
	5.035V	0.393W		229.88V
2	**0.09A**	0.453W	65.671%	0.02
	5.034V	0.691W		229.88V
3	**0.55A**	2.762W	76.777%	0.101
	5.022V	3.599W		229.88V
4	**1A**	5.011W	78.042%	0.169
	5.011V	6.42W		229.88V
5	**1.5A**	7.497W	78.613%	0.229
	4.997V	9.536W		229.88V
6	**3A**	14.875W	79.084%	0.331
	4.959V	18.808W		229.88V

Protection Features

Protection Features	
OCP (Cold @ 27°C)	12V: 129A (123.92%), 11.96V 5V: 28.3A (128.64%), 5.014V 3.3V: 30A (136.36%), 3.324V 5VSB: 4.8A (160%), 4.91V
OCP (Hot @ 40°C)	12V: - 5V: 27.5A (125%), 4.993V 3.3V: 29.6A (134.55%), 3.324V 5VSB: 4.8A (160%), 4.908V
OPP (Cold @ 29°C)	1521.54W (121.72%)
OPP (Hot @ 42°C)	1443.49W (115.48%)
OTP	-
SCP	12V to Earth: ✓ 5V to Earth: ✓ 3.3V to Earth: ✓ 5VSB to Earth: ✓ -12V to Earth: ✓
PWR_OK	Accurate but lower than 16ms
NLO	✓
Fan Failure Protection	✗
SIP	Surge: MOV Inrush: NTC Thermistor & 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
	8.522A	**1.981A**	**1.972A**	**1.001A**	124.967	85.068%	400	<6.0	40.18°C	0.971
	12.130V	5.047V	3.347V	4.995V	146.902				44.47°C	114.87V
	18.077A	**2.975A**	**2.961A**	**1.205A**	249.974	89.756%	401	<6.0	40.7°C	0.981
	12.119V	5.042V	3.344V	4.979V	278.511				45.29°C	114.83V
	28.008A	**3.473A**	**3.457A**	**1.402A**	374.46	90.902%	401	<6.0	41.25°C	0.981
	12.082V	5.039V	3.342V	4.993V	411.934				46.25°C	114.78V
	20.784A	**0.391A**	**0.282A**	**0.129A**	490.414	91.006%	402	<6.0	41.64°C	0.27
	12.122V	5.049V	3.352V	5.025V	538.882				47.19°C	114.87V
	47.754A	**4.971A**	**4.946A**	**1.813A**	624.917	90.235%	446	7.2	42.45°C	0.987
	12.028V	5.029V	3.336V	4.964V	692.542				48.46°C	114.69V
	57.460A	**5.971A**	**5.942A**	**2A**	749.329	89.45%	931	28.6	42.65°C	0.989
	12.002V	5.025V	3.333V	4.95V	837.71				49.15°C	114.65V
	67.284A	**6.973A**	**6.941A**	**2.229A**	874.73	88.549%	1348	39.4	43.35°C	0.991
	11.975V	5.02V	3.329V	4.935V	987.85				50.41°C	114.59V
	77.135A	**7.973A**	**7.94A**	**2.336A**	999.515	87.556%	1799	46.1	43.91°C	0.992
	11.949V	5.016V	3.325V	4.922V	1141.58				52.02°C	114.54V
	87.373A	**8.478A**	**8.43A**	**2.444A**	1124.929	86.537%	2187	50.2	44.69°C	0.993
	11.931V	5.012V	3.322V	4.909V	1299.946				53.83°C	114.5V
	97.312A	**8.984A**	**8.95A**	**3.072A**	1249.771	85.405%	2186	50.2	45.47°C	0.994
	11.921V	5.008V	3.319V	4.882V	1463.341				55.47°C	114.43V
	107.009A	**9.99A**	**10.036A**	**3.079A**	1374.37	84.289%	2188	50.3	46.34°C	0.995
	11.925V	5.005V	3.318V	4.872V	1630.544				57.21°C	114.38V
	0.114A	**14.382A**	**14.31A**	**0A**	121.275	79.997%	402	<6.0	40.76°C	0.972
	12.131V	5.019V	3.333V	5.013V	151.602				48.89°C	114.87V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
	0.114A	**21.963A**	**0A**	**0A**	111.294	77.247%	403	<6.0	41.38°C	0.972
	12.144V	5.005V	3.345V	5.017V	144.075				48.17°C	114.88V
	0.114A	**0A**	**21.762A**	**0A**	73.992	72.183%	403	<6.0	41.59°C	0.961
	12.147V	5.02V	3.336V	5.017V	102.509				48.27°C	114.89V
	104.773A	**0A**	**0A**	**0A**	1249.551	86.095%	2192	50.3	45.4°C	0.994
	11.926V	5.028V	3.336V	4.969V	1451.368				53.12°C	114.45V

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
	8.520A	**1.982A**	**1.972A**	**1.001A**	124.972	85.996%	399	<6.0	40.43°C	0.907
	12.133V	5.046V	3.347V	4.994V	145.329				44.65°C	229.86V
	18.074A	**2.976A**	**2.961A**	**1.206A**	249.987	91.009%	400	<6.0	40.56°C	0.95
	12.122V	5.041V	3.344V	4.978V	274.684				45.2°C	229.84V
	28.003A	**3.474A**	**3.457A**	**1.403A**	374.502	92.483%	401	<6.0	41.38°C	0.965
	12.087V	5.038V	3.341V	4.991V	404.941				46.39°C	229.82V
	38.019A	**3.974A**	**3.954A**	**1.608A**	499.658	92.728%	401	<6.0	41.77°C	0.971
	12.058V	5.034V	3.339V	4.977V	538.838				47.32°C	229.8V
	47.747A	**4.973A**	**4.948A**	**1.815A**	625.008	92.442%	598	14.1	42°C	0.976
	12.032V	5.028V	3.336V	4.961V	676.108				48.09°C	229.78V
	57.467A	**5.974A**	**5.945A**	**2.001A**	749.402	91.998%	954	29.3	42.97°C	0.978
	12.002V	5.023V	3.331V	4.946V	814.579				49.55°C	229.75V
	67.298A	**6.975A**	**6.945A**	**2.232A**	874.823	91.391%	1319	38.8	43.03°C	0.98
	11.973V	5.019V	3.327V	4.93V	957.217				50.21°C	229.74V
	77.163A	**7.975A**	**7.945A**	**2.339A**	999.585	90.72%	1739	45.3	43.69°C	0.982
	11.946V	5.015V	3.323V	4.916V	1101.835				51.85°C	229.71V
	87.415A	**8.48A**	**8.435A**	**2.447A**	1124.993	89.979%	2195	50.3	44.1°C	0.984
	11.926V	5.011V	3.32V	4.903V	1250.279				53.18°C	229.68V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
	97.380A	**8.986A**	**8.956A**	**3.077A**	1249.798	89.255%	2197	50.4	45.54°C	0.985
	11.914V	5.007V	3.317V	4.876V	1400.248				55.56°C	229.66V
	107.202A	**9.998A**	**10.053A**	**3.085A**	1374.411	88.35%	2199	50.4	46.72°C	0.986
	11.904V	5V	3.313V	4.863V	1555.647				57.64°C	229.63V
	0.116A	**14.41A**	**14.325A**	**0A**	121.304	80.502%	406	<6.0	40.92°C	0.913
	12.144V	5.01V	3.33V	5.01V	150.689				46.72°C	229.86V
	0.115A	**22.002A**	**0A**	**0A**	111.305	77.889%	405	<6.0	42.17°C	0.908
	12.153V	4.996V	3.341V	5.015V	142.904				49.45°C	229.86V
	0.114A	**0A**	**21.793A**	**0A**	73.998	73.486%	404	<6.0	42.25°C	0.873
	12.154V	5.012V	3.332V	5.015V	100.694				48.78°C	229.87V
	104.854A	**0A**	**0A**	**0A**	1249.582	89.744%	2198	50.4	44.83°C	0.985
	11.918V	5.025V	3.331V	4.967V	1392.382				49.82°C	229.66V

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	0.493A	0.199A	20.002	75.393%	395	<6.0	36.73°C	0.861
	12.120V	5.054V	3.348V	5.026V	26.529				39.81°C	114.91V
40W	2.698A	0.693A	0.69A	0.299A	40.001	80.848%	396	<6.0	37.51°C	0.926
	12.115V	5.053V	3.348V	5.021V	49.48				40.83°C	114.9V
60W	4.164A	0.891A	0.887A	0.399A	60.001	79.012%	397	<6.0	38.4°C	0.962
	12.134V	5.052V	3.349V	5.017V	75.941				42.03°C	114.9V
80W	5.630A	1.089A	1.084A	0.499A	79.952	81.204%	399	<6.0	39.43°C	0.961
	12.134V	5.05V	3.349V	5.012V	98.458				43.39°C	114.89V

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	1.225A	0.495A	0.493A	0.199A	19.999	75.34%	393	<6.0	36.57°C	0.541
	12.122V	5.054V	3.348V	5.026V	26.543				39.65°C	229.89V
40W	2.698A	0.693A	0.69A	0.299A	40	81.65%	395	<6.0	37.63°C	0.723
	12.117V	5.053V	3.348V	5.022V	48.988				40.91°C	229.88V
60W	4.164A	0.891A	0.887A	0.399A	60.001	79.401%	396	<6.0	38.64°C	0.82
	12.136V	5.052V	3.349V	5.017V	75.568				42.23°C	229.88V
80W	5.630A	1.089A	1.084A	0.499A	79.954	82.371%	397	<6.0	39.43°C	0.862
	12.136V	5.05V	3.349V	5.012V	97.065				43.28°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	13.56mV	13.49mV	11.97mV	16.42mV	Pass
20% Load	14.48mV	13.18mV	11.97mV	15.19mV	Pass
30% Load	18.97mV	13.90mV	12.23mV	16.37mV	Pass
40% Load	22.36mV	12.98mV	10.49mV	17.44mV	Pass
50% Load	17.96mV	14.51mV	13.15mV	17.34mV	Pass
60% Load	19.34mV	23.60mV	14.27mV	18.62mV	Pass
70% Load	19.80mV	26.87mV	17.65mV	20.41mV	Pass
80% Load	21.13mV	18.14mV	14.78mV	20.00mV	Pass
90% Load	21.13mV	18.39mV	15.35mV	21.28mV	Pass
100% Load	16.35mV	20.25mV	16.35mV	29.86mV	Pass
110% Load	32.86mV	21.17mV	18.44mV	32.02mV	Pass
Crossload1	15.79mV	15.54mV	13.96mV	16.95mV	Pass
Crossload2	17.55mV	22.89mV	12.79mV	15.55mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
Crossload3	18.37mV	14.51mV	18.47mV	16.11mV	Pass
Crossload4	28.64mV	18.43mV	16.26mV	30.67mV	Pass

The results above are not used in the certification process

230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	11.66mV	10.73mV	10.03mV	10.38mV	Pass
20% Load	12.38mV	11.09mV	10.33mV	10.18mV	Pass
30% Load	19.68mV	10.88mV	10.03mV	10.43mV	Pass
40% Load	16.63mV	12.52mV	10.28mV	12.17mV	Pass
50% Load	16.01mV	12.21mV	11.41mV	11.51mV	Pass
60% Load	16.42mV	24.27mV	14.17mV	11.20mV	Pass
70% Load	16.68mV	24.93mV	15.24mV	12.43mV	Pass
80% Load	19.13mV	16.55mV	14.22mV	13.81mV	Pass
90% Load	19.29mV	17.22mV	13.97mV	15.40mV	Pass
100% Load	28.39mV	18.19mV	15.85mV	18.16mV	Pass
110% Load	31.03mV	19.25mV	15.89mV	18.82mV	Pass
Crossload1	13.36mV	14.02mV	13.19mV	12.50mV	Pass
Crossload2	16.22mV	22.79mV	11.00mV	11.36mV	Pass
Crossload3	15.19mV	11.85mV	17.60mV	10.95mV	Pass
Crossload4	28.31mV	16.02mV	14.09mV	12.65mV	Pass

The results above are not used in the certification process

MSI MAG A1250GL PCIE5



Top side



Power specifications label

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