ASRock Steel Legend SL-1200G / SL-1200GW

Serial Number -

Lab ID AR12002830

Certification ID 252830

Test Result Report ID: 25PS2830A

Certificate Issue Date: Jun 2, 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	ASRock
Model	Steel Legend SL-1200G / SL-1200GW
OEM/ODM	HEC
Serial Number	-
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	7.5-15

Rated Frequency (Hz)	50-60
Rated Power (W)	1200
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 (S1352512EH-3M)
Semi-Passive Operation	✓ (selectable)
Cybenetics Testing Information	
Lab ID	AR12002830
Date of receipt	May 8, 2025
Testing Date	May 29, 2025
Report Issued Date	Jun 2, 2025
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 24 pin (590mm)	1	1	16-18AWG	No
4+4 pin EPS12V (640mm)	1	1	18AWG	No
8 pin EPS12V (640mm)	1	1	18AWG	No
6+2 pin PCIe (650mm)	3	3	16AWG	No
12+4 pin PCIe (645mm) (600W)	2	2	16-24AWG	No
SATA (450mm+120mm+120mm+120mm)	2	8	18AWG	No
SATA (445mm) / 4-pin Molex (120mm+110mm+110mm)	1	1 / 3	18AWG	No

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	25	25	100	3	0.3
	Watts	150		1200	15	3.6
Total Max. Power (W)		1200				

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)	89.875%

Average Noise Output (>1450 Load Combinations)	22.62dBA
Average PF (>1450 Load Combinations)	0.986
Efficiency With 10W (≤500W) or 2% (>500W) Load	78.869%
Standby Power Consumption	0.0455W
Non-Accredited	
12V Ripple (Full Load)	32.71mV
5V Ripple (Full Load)	23.10mV
3.3V Ripple (Full Load)	26.42mV
5VSB Ripple (Full Load)	12.24mV
12V Load Regulation	0.72%
5V Load Regulation	0.20%
3.3V Load Regulation	0.42%
5VSB Load Regulation	1.74%
Inrush Current	35.810A

230V

Accredited	
Average Efficiency (>1450 load combinations)	92.059%
Average Noise Output (>1450 Load Combinations)	22.17dBA
Average PF (>1450 Load Combinations)	0.953
Efficiency With 10W (≤500W) or 2% (>500W) Load	79.152%
Standby Power Consumption	0.1166W
Non-Accredited	
12V Ripple (Full Load)	34.08mV
5V Ripple (Full Load)	23.38mV
3.3V Ripple (Full Load)	25.63mV
5VSB Ripple (Full Load)	12.28mV
12V Load Regulation	0.74%
5V Load Regulation	0.23%
3.3V Load Regulation	0.49%
5VSB Load Regulation	1.84%
Inrush Current	64.690A

12V Transient Response (200%)		11.35V
5V Transient Response (200%)		5.054V
3.3V Transient Response (200%)		3.191V
5VSB Transient Response (200%)		5.044V
Hold-Up Time & PWR_OK Signal		16.00ms
AC Loss to PWR_OK Hold Up Time		13.10ms
PWR_OK Inactive to DC Loss Delay		2.90ms
PSU Timings: T1 (20% / 100%)	55.0ms	54.0ms
PSU Timings: T3 (20% / 100%)	125.0ms	123.0ms
12V OCP (27.0°C / 45.0°C)	138.00A (138.00%), 11.982V	137.00A (137.00%), 11.986V
5V OCP (27.0°C / 45.0°C)	30.7A (122.80%), 5.175V	30.2A (120.80%), 5.173V
3.3V OCP (27.0°C / 45.0°C)	30.9A (123.60%), 3.296V	30.4A (121.60%), 3.304V
5VSB OCP (27.0°C / 45.0°C)	4.7A (156.67%), 5.075V	4.7A (156.67%), 5.077V
OPP (29.22°C / 44.54°C)	126.76%	122.09%

Hold-Up Time & PWR_OK Signal

Hold-Up Time (ms)	16
AC Loss to PWR_OK Hold Up Time (ms)	13.1
PWR_OK Inactive to DC Loss Delay (ms)	2.9

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Tables

115V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	115.09 V	115.04 V	113.85 V	115.12 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

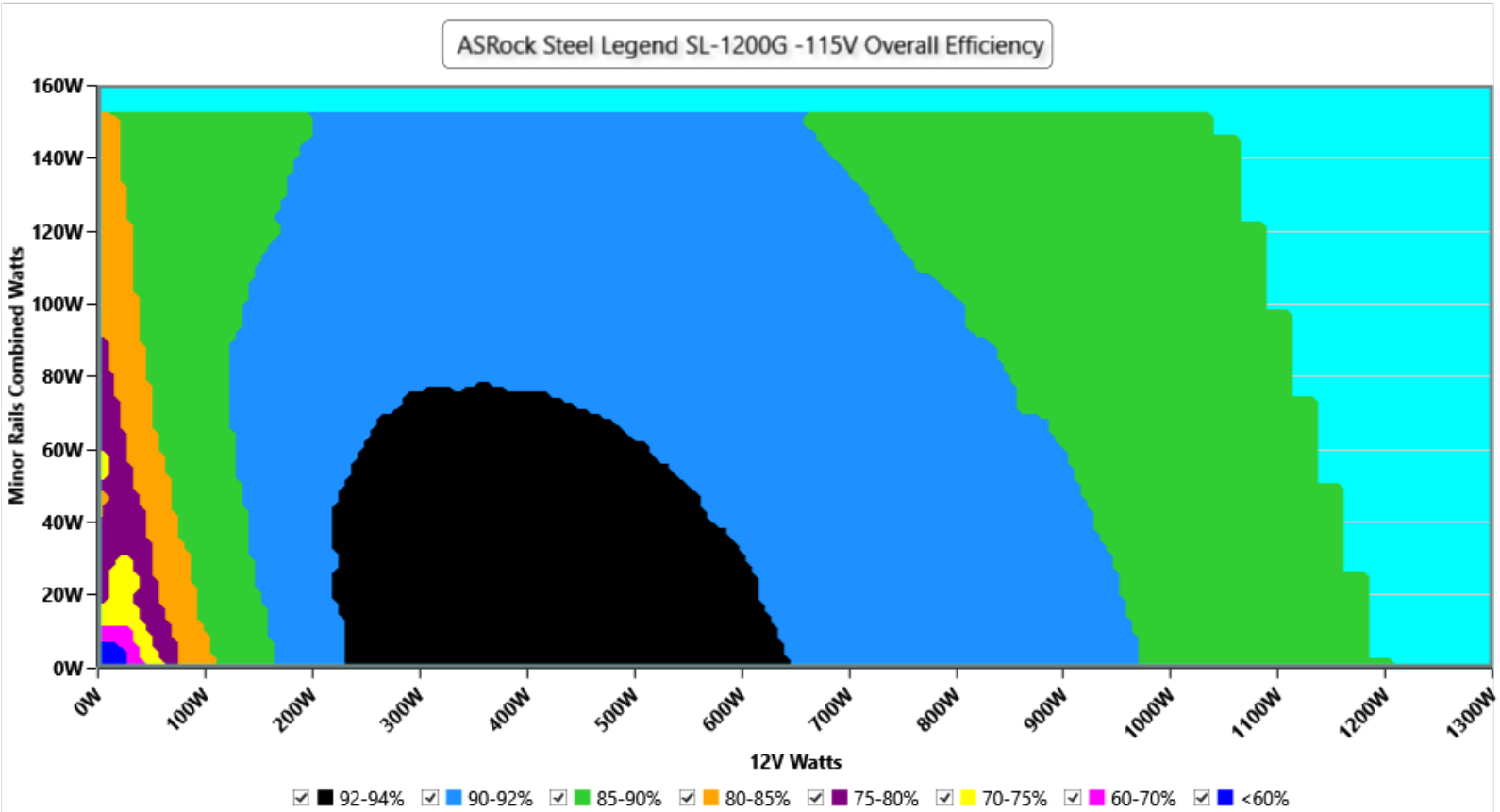
Mains Voltage THD:	0.13 %	0.09 %	N/A	0.19 %	2.00 %	PASS
Real Power:	0.046 W	-0.003 W	N/A	0.095 W	N/A	N/A
Apparent Power:	14.349 W	13.727 W	N/A	15.000 W	N/A	N/A
Power Factor:	0.005	N/A	N/A	N/A	N/A	N/A

230V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	231.03 V	230.94 V	227.70 V	231.10 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	1.417	1.340	1.419	1.490	PASS
Mains Voltage THD:	0.17 %	0.14 %	N/A	0.26 %	2.00 %	PASS
Real Power:	0.117 W	0.062 W	N/A	0.189 W	N/A	N/A
Apparent Power:	47.025 W	45.898 W	N/A	47.952 W	N/A	N/A
Power Factor:	0.002	N/A	N/A	N/A	N/A	N/A

Efficiency Graph

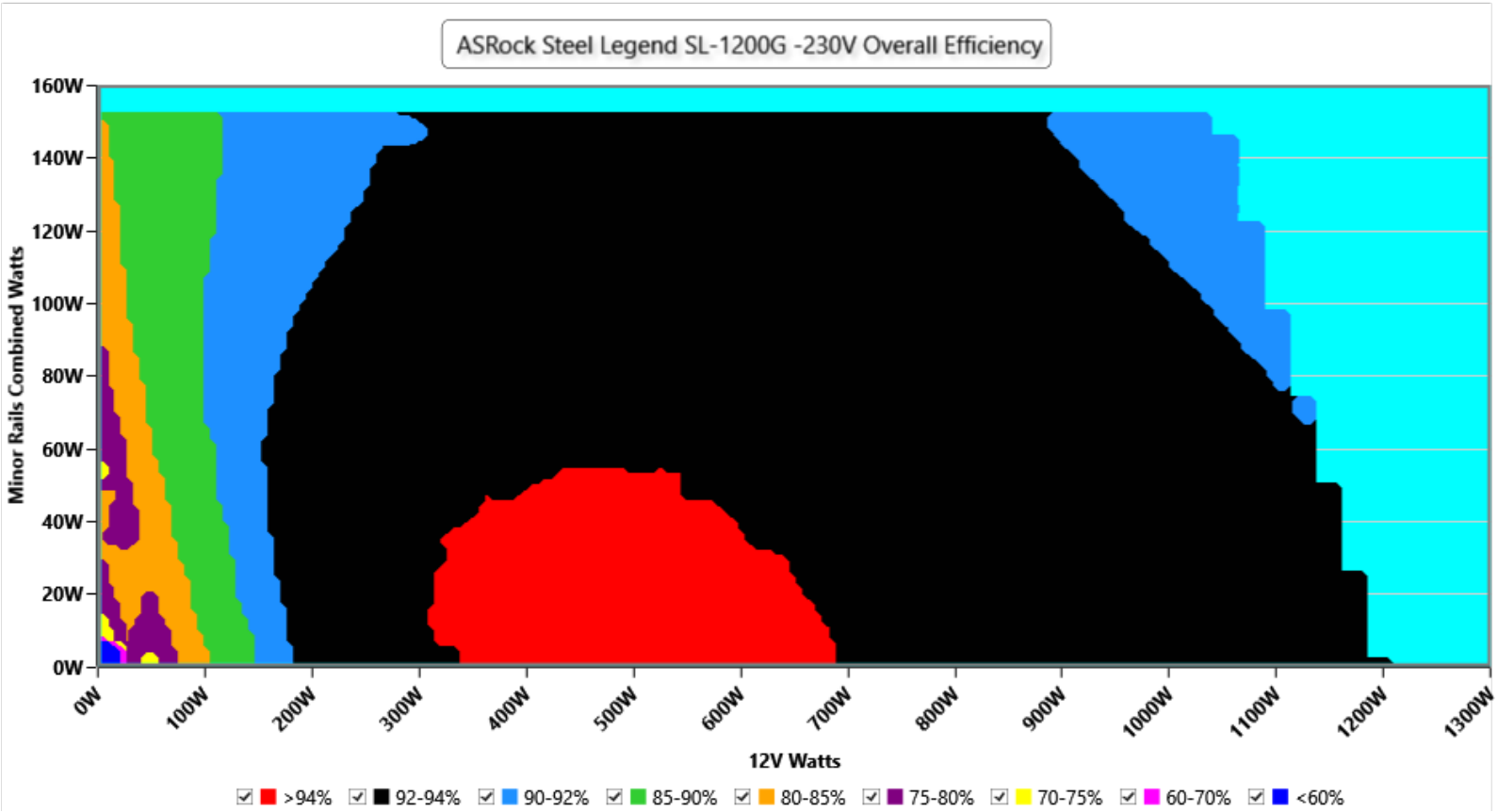
115V



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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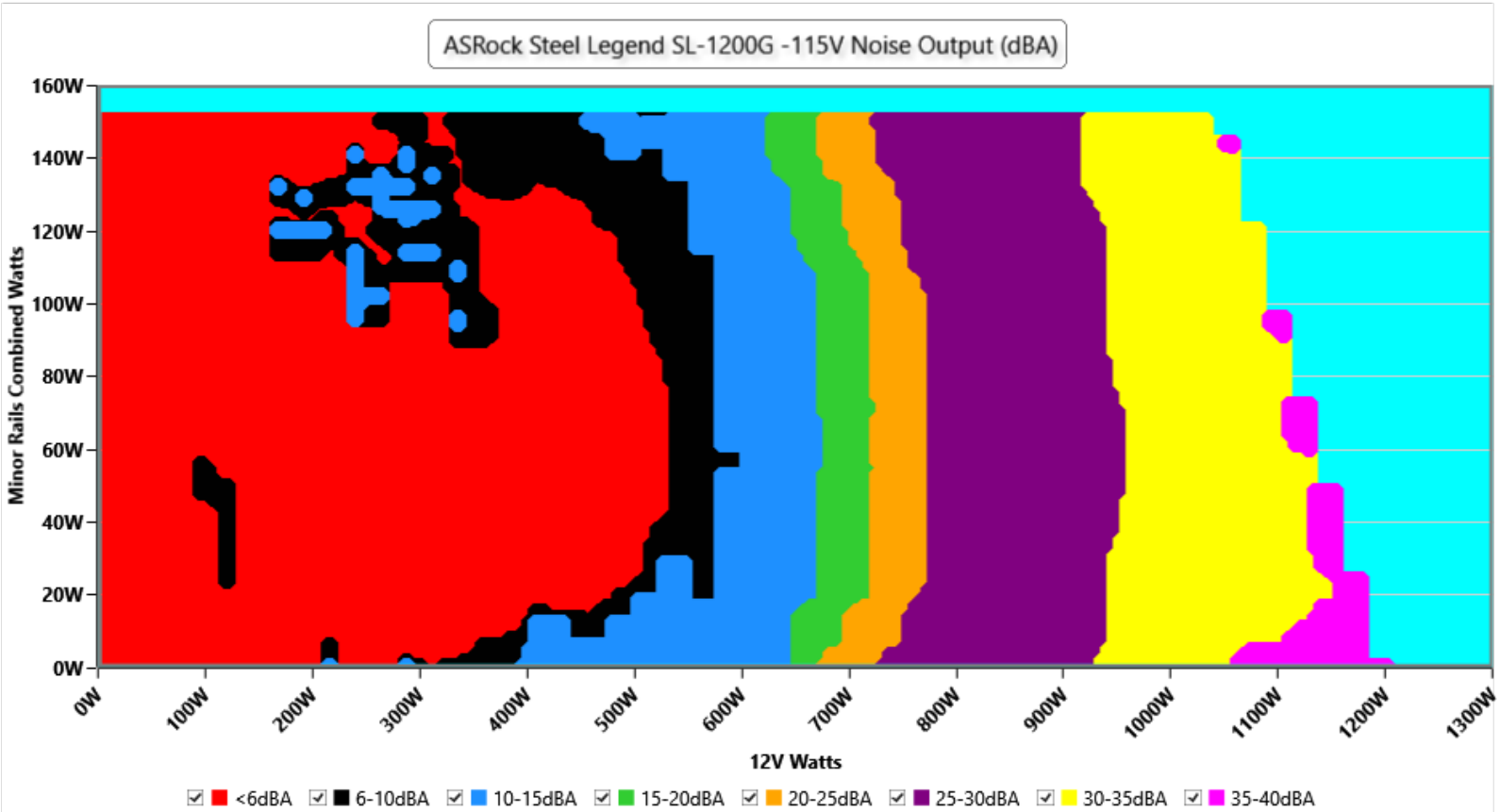
Noise Graph

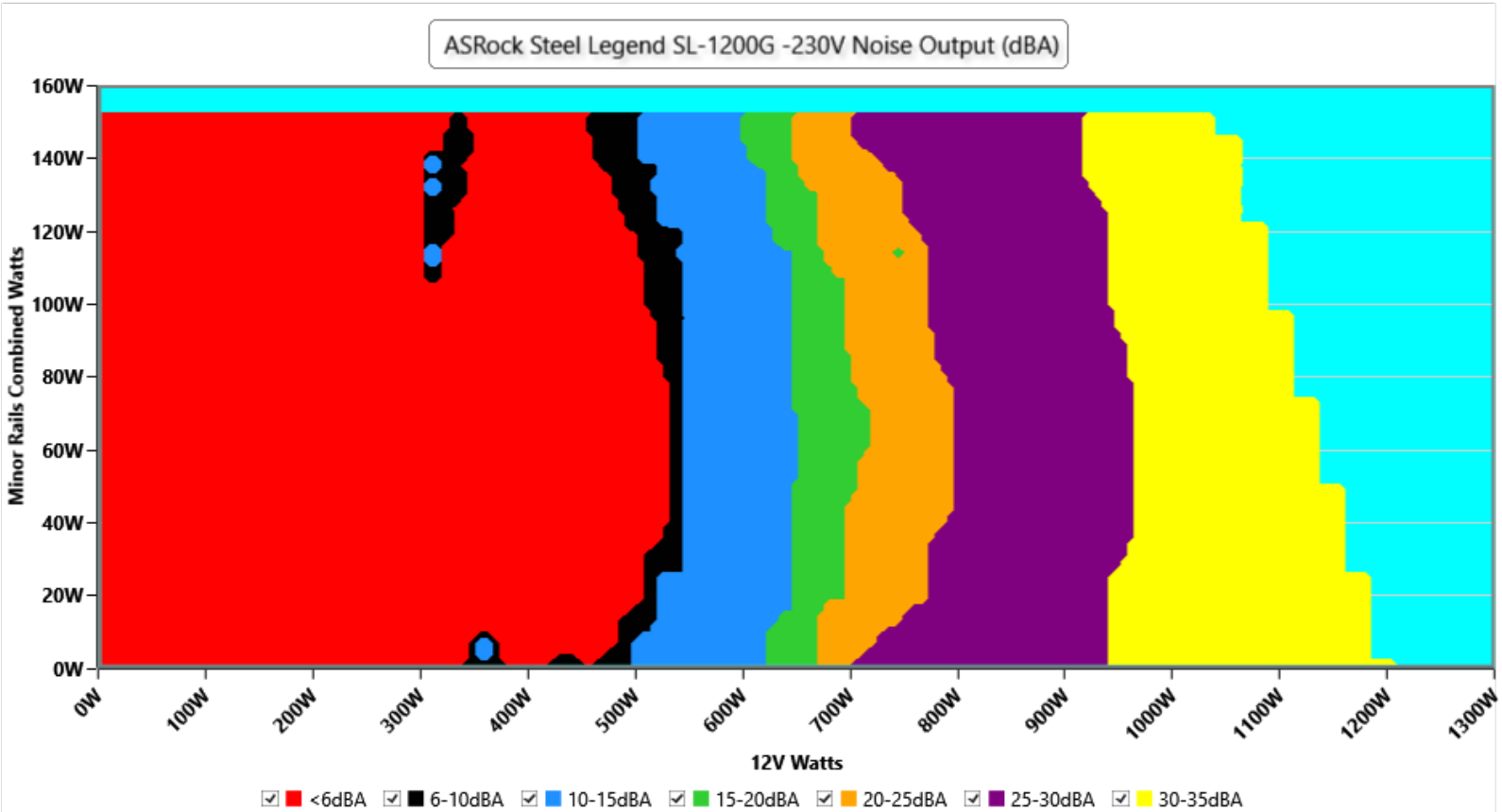
115V



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

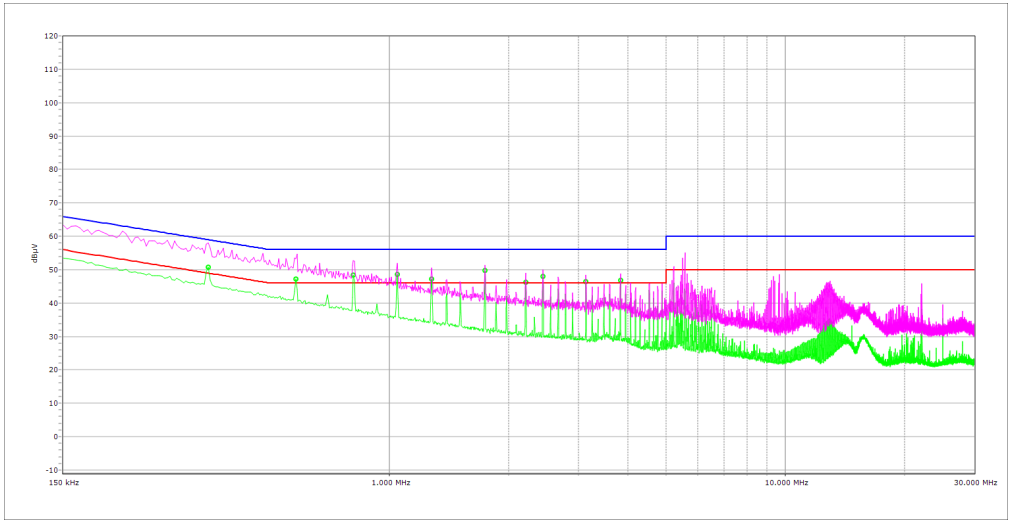
230V



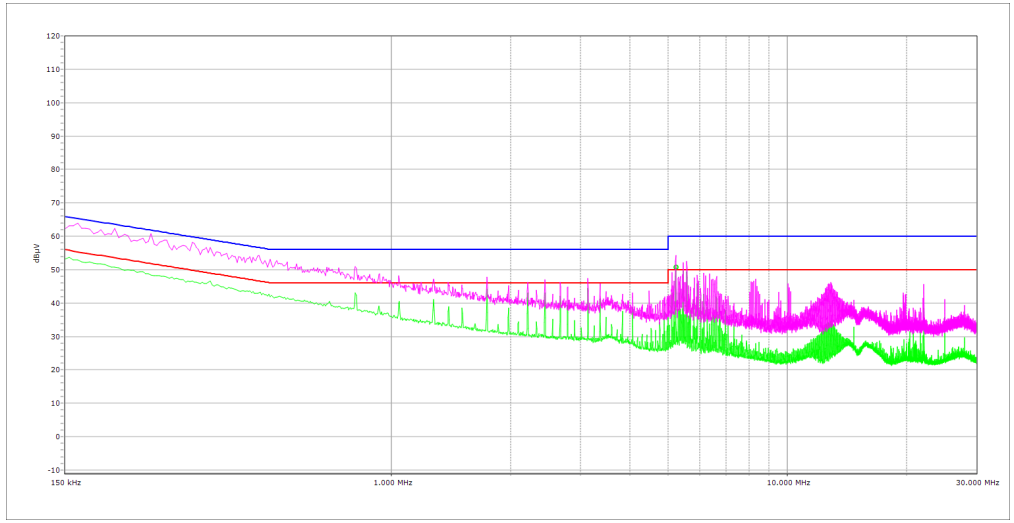
INFO

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

Conducted Emissions EN 55032 & CISPR 32



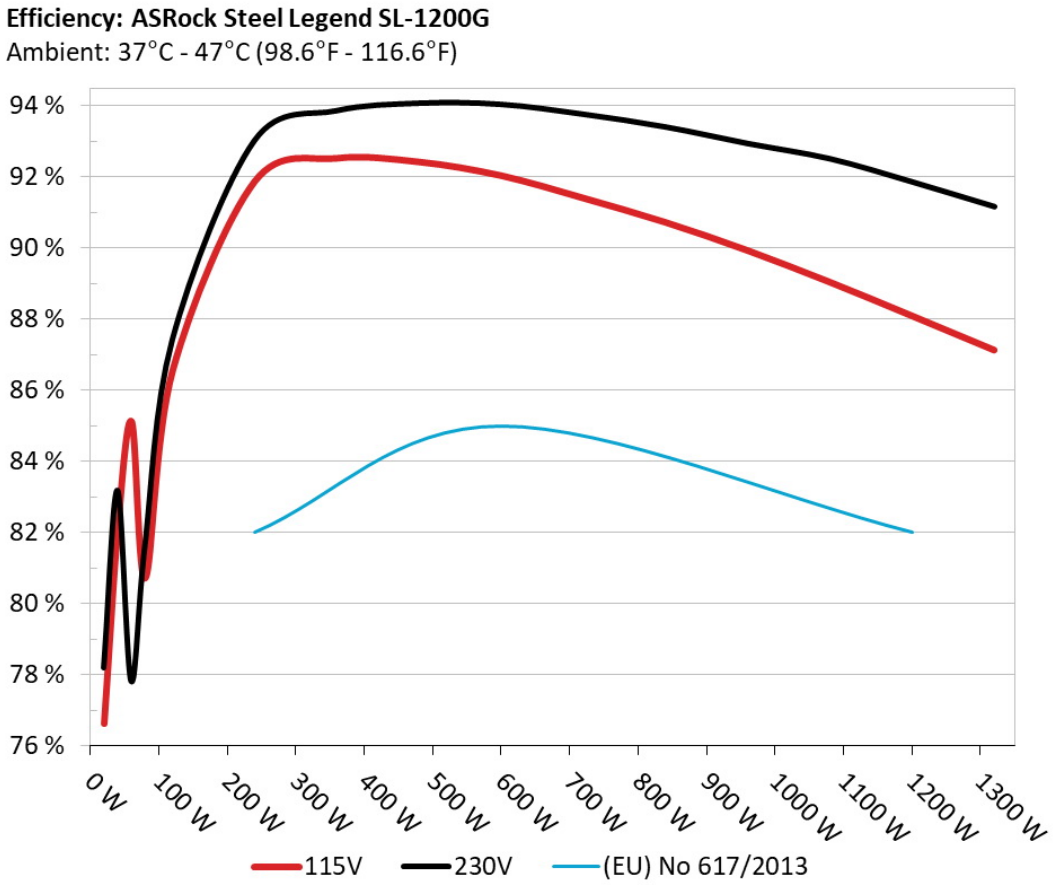
NEUTRAL



PHASE

Indicative Performance

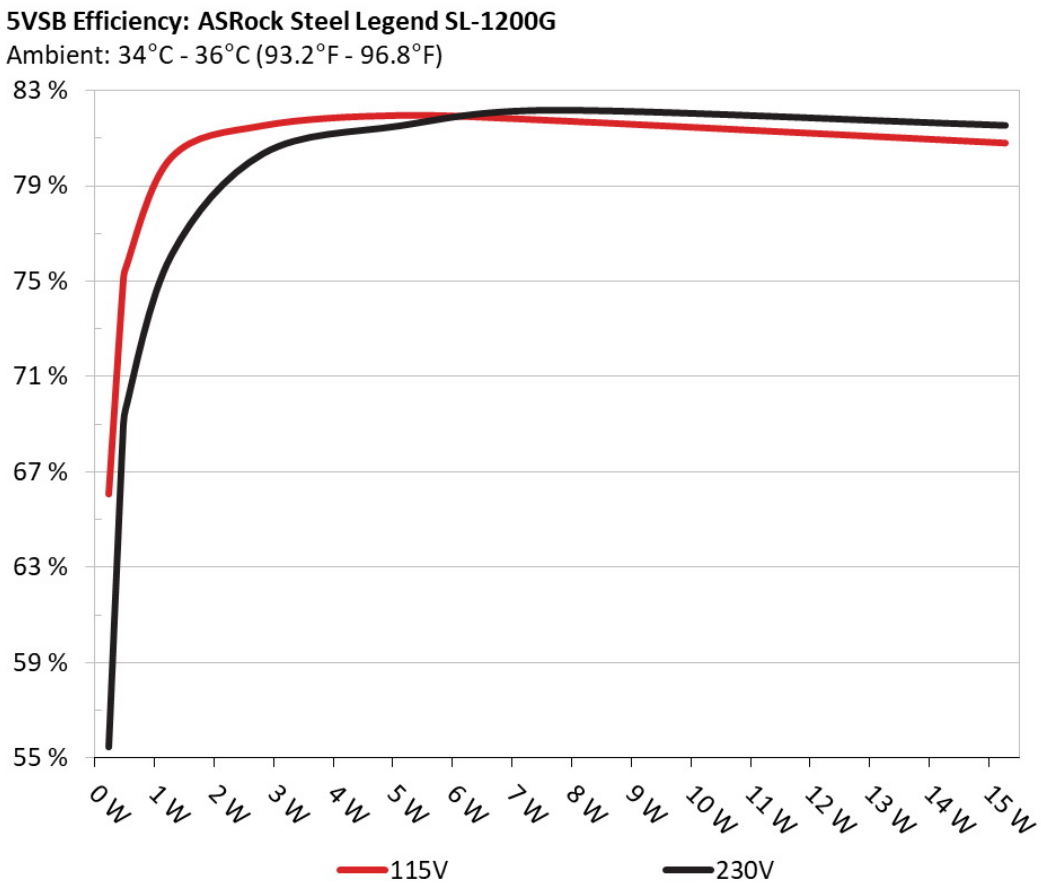
Efficiency under high ambient temperature



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**	0.231W	66.058%	0.026
	5.139V	0.35W		114.85V
2	**0.09A**	0.463W	74.629%	0.046
	5.139V	0.62W		114.85V
3	**0.55A**	2.822W	81.516%	0.219
	5.131V	3.462W		114.85V
4	**1A**	5.123W	81.946%	0.323
	5.123V	6.252W		114.83V
5	**1.5A**	7.673W	81.731%	0.381
	5.115V	9.388W		114.83V
6	**3A**	15.272W	80.785%	0.468
	5.09V	18.903W		114.83V

230V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	**0.045A**	0.231W	55.458%	0.009
	5.138V	0.419W		229.85V
2	**0.09A**	0.462W	68.267%	0.014
	5.137V	0.679W		229.84V
3	**0.55A**	2.822W	80.354%	0.072
	5.13V	3.512W		229.83V
4	**1A**	5.123W	81.522%	0.124
	5.122V	6.285W		229.83V
5	**1.5A**	7.672W	82.172%	0.175
	5.114V	9.336W		229.82V
6	**3A**	15.269W	81.536%	0.287
	5.089V	18.727W		229.82V

Protection Features

OCP (Normal @ 27.0°C)	12V: 138.00A (138.00%), 11.982V 5V: 30.7A (122.80%), 5.175V 3.3V: 30.9A (123.60%), 3.296V 5VSB: 4.7A (156.67%), 5.075V
OCP (Hot @ 45.0°C)	12V: 137.00A (137.00%), 11.986V 5V: 30.2A (120.80%), 5.173V 3.3V: 30.4A (121.60%), 3.304V 5VSB: 4.7A (156.67%), 5.077V
OPP (Normal @ 29.2°C)	1521.14W (126.76%)
OPP (Hot @ 44.5°C)	1465.12W (122.09%)
OTP	✓ (130°C @ Heat Sink)
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%	**8.170A**	**1.947A**	**1.995A**	**0.974A**	119.981	86.552%	0	<6.0	47.92°C	0.966
	12.041V	5.136V	3.309V	5.135V	138.624				40.19°C	114.81V
20%	**17.368A**	**2.921A**	**2.993A**	**1.17A**	239.933	91.871%	0	<6.0	48.78°C	0.973
	12.036V	5.135V	3.307V	5.127V	261.163				40.89°C	114.77V
30%	**26.853A**	**3.408A**	**3.493A**	**1.368A**	359.092	92.52%	0	<6.0	49.25°C	0.982
	12.030V	5.135V	3.307V	5.119V	388.126				41.33°C	114.73V
40%	**36.450A**	**3.896A**	**3.994A**	**1.566A**	479.465	92.42%	514	<6.0	41.75°C	0.988
	12.023V	5.133V	3.305V	5.111V	518.791				49.05°C	114.68V
50%	**45.661A**	**4.871A**	**4.995A**	**1.764A**	599.25	92.036%	710	12.9	24.29°C	0.991
	12.018V	5.132V	3.303V	5.102V	651.104				50.71°C	114.65V
60%	**54.940A**	**5.847A**	**5.997A**	**1.964A**	719.804	91.404%	959	23.3	42.51°C	0.993
	12.013V	5.131V	3.302V	5.093V	787.498				49.55°C	114.59V
70%	**64.161A**	**6.823A**	**7.001A**	**2.163A**	839.556	90.722%	1130	28.5	43.05°C	0.994
	12.008V	5.13V	3.3V	5.085V	925.41				51.07°C	114.56V
80%	**73.453A**	**7.798A**	**8.003A**	**2.265A**	959.55	89.931%	1249	31.8	43.86°C	0.995
	12.003V	5.13V	3.299V	5.078V	1066.986				52.88°C	114.51V
90%	**83.089A**	**8.289A**	**8.493A**	**2.367A**	1079.425	89.044%	1609	39	44.82°C	0.996
	11.998V	5.128V	3.297V	5.072V	1212.238				55.44°C	114.46V
100%	**92.520A**	**8.777A**	**9.011A**	**2.967A**	1199.454	88.095%	1885	44.2	45.73°C	0.996
	11.995V	5.127V	3.296V	5.057V	1361.547				56.03°C	114.41V
110%	**101.907A**	**9.754A**	**10.108A**	**2.97A**	1320.047	87.128%	2278	48.6	46.58°C	0.996
	11.989V	5.127V	3.294V	5.052V	1515.06				55.83°C	114.36V
CL1	**0.117A**	**17.578A**	**18.085A**	**0A**	151.315	83.669%	1035	25.9	42.75°C	0.969
	12.030V	5.138V	3.295V	5.145V	180.851				52.88°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
CL2	**0.117A**	**19.402A**	**0A**	**0A**	101.385	81.329%	713	13	42.58°C	0.963
	12.036V	5.153V	3.3V	5.151V	124.66				50.9°C	114.82V
CL3	**0.116A**	**0A**	**19.957A**	**0A**	67.391	73.268%	688	11.7	41.29°C	0.95
	12.035V	5.124V	3.307V	5.15V	91.979				49.01°C	114.82V
CL4	**99.985A**	**0A**	**0A**	**0A**	1199.993	88.743%	1704	40.8	46.09°C	0.996
	12.001V	5.129V	3.305V	5.107V	1352.228				54.59°C	114.43V

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%	**8.172A**	**1.948A**	**1.995A**	**0.974A**	120.009	87.419%	678	10.5	40.28°C	0.849
	12.041V	5.133V	3.308V	5.136V	137.306				46.01°C	229.82V
20%	**17.369A**	**2.923A**	**2.994A**	**1.17A**	239.975	93.031%	0	<6.0	43.11°C	0.925
	12.037V	5.133V	3.307V	5.128V	257.944				40.67°C	229.79V
30%	**26.863A**	**3.411A**	**3.494A**	**1.368A**	359.247	93.869%	508	<6.0	41.38°C	0.95
	12.031V	5.131V	3.306V	5.119V	382.714				47.24°C	229.77V
40%	**36.460A**	**3.9A**	**3.996A**	**1.566A**	479.621	94.083%	687	11.7	42.03°C	0.963
	12.024V	5.129V	3.304V	5.11V	509.782				47.91°C	229.75V
50%	**45.677A**	**4.875A**	**4.999A**	**1.766A**	599.357	94.051%	528	<6.0	42.49°C	0.969
	12.016V	5.128V	3.301V	5.098V	637.27				45.15°C	229.74V
60%	**54.949A**	**5.851A**	**6A**	**1.964A**	719.89	93.773%	848	19.2	42.94°C	0.975
	12.012V	5.128V	3.301V	5.091V	767.693				47.58°C	229.71V
70%	**64.164A**	**6.828A**	**7.003A**	**2.164A**	839.614	93.415%	1099	27.5	43.37°C	0.978
	12.008V	5.127V	3.299V	5.084V	898.796				49.29°C	229.69V
80%	**73.452A**	**7.803A**	**8.006A**	**2.266A**	959.598	92.948%	1232	31.3	43.63°C	0.981
	12.004V	5.126V	3.297V	5.077V	1032.398				50.61°C	229.66V
90%	**83.077A**	**8.292A**	**8.494A**	**2.367A**	1079.343	92.522%	1410	35.1	44.62°C	0.983
	11.999V	5.125V	3.296V	5.07V	1166.588				50.95°C	229.64V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
100%	**92.508A**	**8.783A**	**9.013A**	**2.967A**	1199.407	91.87%	1703	40.8	45.52°C	0.985
	11.995V	5.124V	3.295V	5.056V	1305.545				52.44°C	229.62V
110%	**101.887A**	**9.761A**	**10.111A**	**2.971A**	1320.038	91.17%	2285	48.8	46.67°C	0.986
	11.991V	5.122V	3.293V	5.05V	1447.876				53.39°C	229.6V
CL1	**0.117A**	**17.602A**	**18.089A**	**0A**	151.311	84.804%	895	20.7	41.44°C	0.89
	12.029V	5.13V	3.294V	5.144V	178.426				48.9°C	229.79V
CL2	**0.117A**	**19.425A**	**0A**	**0A**	101.385	82.183%	687	11.7	41.34°C	0.831
	12.035V	5.147V	3.299V	5.15V	123.372				48.21°C	229.8V
CL3	**0.116A**	**0A**	**19.957A**	**0A**	67.39	74.359%	666	10.3	42.38°C	0.762
	12.035V	5.124V	3.307V	5.15V	90.625				48.46°C	229.81V
CL4	**99.979A**	**0A**	**0A**	**0A**	1200.002	92.342%	1605	39	44.23°C	0.984
	12.002V	5.128V	3.304V	5.106V	1299.513				49.65°C	229.61V

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	**1.242A**	**0.487A**	**0.498A**	**0.194A**	19.995	76.62%	0	<6.0	41.59°C	0.794
	11.955V	5.137V	3.31V	5.145V	26.09				36.09°C	114.86V
40W	**2.730A**	**0.681A**	**0.698A**	**0.292A**	39.996	82.144%	0	<6.0	44.2°C	0.896
	11.972V	5.137V	3.31V	5.144V	48.693				37.59°C	114.84V
60W	**4.214A**	**0.876A**	**0.897A**	**0.389A**	59.996	85.112%	0	<6.0	42.37°C	0.929
	11.990V	5.137V	3.31V	5.143V	70.492				38.1°C	114.84V
80W	**5.672A**	**1.07A**	**1.096A**	**0.486A**	79.933	80.713%	0	<6.0	46.03°C	0.951
	12.041V	5.137V	3.31V	5.144V	99.035				39.46°C	114.83V

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	**1.242A**	**0.487A**	**0.498A**	**0.194A**	20.007	78.194%	0	<6.0	36.54°C	0.382
	11.956V	5.136V	3.311V	5.148V	25.589				36.1°C	229.83V
40W	**2.730A**	**0.681A**	**0.698A**	**0.291A**	40.006	83.184%	0	<6.0	40.87°C	0.575
	11.975V	5.136V	3.311V	5.147V	48.095				37.73°C	229.82V
60W	**4.196A**	**0.876A**	**0.897A**	**0.389A**	60.005	77.818%	0	<6.0	41.79°C	0.719
	12.042V	5.136V	3.311V	5.149V	77.109				38.77°C	229.82V
80W	**5.673A**	**1.071A**	**1.096A**	**0.486A**	79.955	81.601%	0	<6.0	44.07°C	0.782
	12.044V	5.136V	3.31V	5.146V	97.986				39.35°C	229.81V

The results above are not used in the certification process

Ripple Measurements

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	26.70mV	18.68mV	19.09mV	10.62mV	Pass
20% Load	32.07mV	18.12mV	18.57mV	10.57mV	Pass
30% Load	29.20mV	20.37mV	21.29mV	11.70mV	Pass
40% Load	27.36mV	19.14mV	19.29mV	10.78mV	Pass
50% Load	38.15mV	25.51mV	39.50mV	15.45mV	Pass
60% Load	29.05mV	22.38mV	34.06mV	11.14mV	Pass
70% Load	29.41mV	17.76mV	20.57mV	11.85mV	Pass
80% Load	30.94mV	19.71mV	21.70mV	12.16mV	Pass
90% Load	30.84mV	18.58mV	23.39mV	12.06mV	Pass
100% Load	32.71mV	23.10mV	26.42mV	12.24mV	Pass
110% Load	34.06mV	23.62mV	27.98mV	13.14mV	Pass
Crossload1	24.07mV	17.27mV	18.87mV	9.87mV	Pass
Crossload2	25.78mV	19.24mV	25.65mV	10.42mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
Crossload3	30.28mV	17.45mV	19.90mV	10.52mV	Pass
Crossload4	32.10mV	18.29mV	20.82mV	11.83mV	Pass

The results above are not used in the certification process

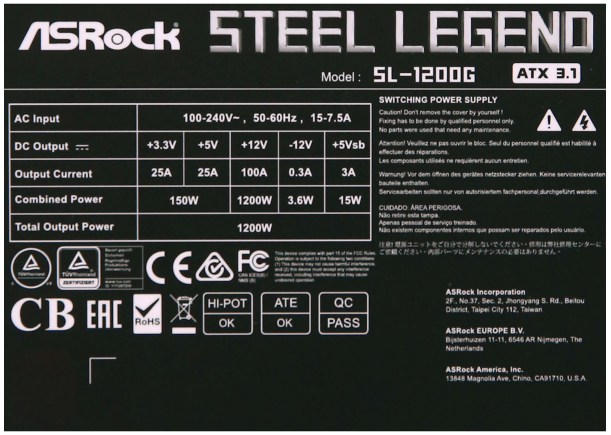
230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	30.02mV	16.78mV	16.37mV	9.34mV	Pass
20% Load	31.86mV	18.84mV	18.83mV	10.93mV	Pass
30% Load	27.88mV	21.04mV	20.78mV	10.62mV	Pass
40% Load	33.25mV	23.35mV	34.63mV	16.37mV	Pass
50% Load	29.92mV	20.53mV	24.58mV	11.39mV	Pass
60% Load	29.97mV	17.91mV	19.03mV	10.72mV	Pass
70% Load	30.23mV	19.35mV	20.78mV	11.91mV	Pass
80% Load	29.97mV	18.73mV	21.19mV	11.59mV	Pass
90% Load	33.19mV	18.73mV	21.96mV	12.16mV	Pass
100% Load	34.08mV	23.38mV	25.63mV	12.28mV	Pass
110% Load	33.15mV	23.67mV	26.66mV	11.94mV	Pass
Crossload1	26.11mV	16.51mV	18.72mV	9.86mV	Pass
Crossload2	25.01mV	19.86mV	18.06mV	10.21mV	Pass
Crossload3	30.02mV	18.73mV	20.93mV	10.21mV	Pass
Crossload4	32.18mV	18.17mV	21.31mV	10.75mV	Pass

The results above are not used in the certification process

ASRock Steel Legend SL-1200G / SL-1200GW

Top side



Power specifications label

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