MSI MPG Ai1600TS PCIE5

Serial Number -

Lab ID MS16003107

Certification ID 263107

Test Result Report ID: 26PS3107A

Certificate Issue Date: Feb 17, 2026

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	MPG Ai1600TS PCIE5
OEM/ODM	CWT
Serial Number	-
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	100-240

Rated Current (Arms)	10-15
Rated Frequency (Hz)	50-60
Rated Power (W)	1600
Operating Temperature (Continuous Full Load) (°C)	0 - 40
Type	ATX12V
Cable Design	Fully Modular
Warranty	12 years
Cybenetics Measurements	
Dimensions (W x H x D)	150 x 85 x 190mm
Weight	2.32 kg (5.11 lb)
Cooling	135mm Hydro Dynamic Bearing Fan (PLA13525S12H)
Semi-Passive Operation	✓ (selectable)
Cybenetics Testing Information	
Lab ID	MS16003107
Date of receipt	Jan 7, 2026
Testing Date	Feb 12, 2026
Report Issued Date	Feb 17, 2026
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 (600mm)	1	1	18-22AWG	Tinned Copper
4+4 pin EPS12V (650mm)	1	1	18AWG	Tinned Copper
8 pin EPS12V (650mm)	1	1	18AWG	Tinned Copper
6+2 pin PCIe (600mm+150mm)	1	2	18AWG	Tinned Copper
6+2 pin PCIe (600mm)	5	5	18AWG	Tinned Copper

Modular Cables				
12+4 pin PCIe (600mm) (600W)	2	2	16-24AWG	Tinned Copper
SATA (500mm+150mm+150mm+150mm)	2	8	18AWG	Tinned Copper
4-pin Molex (500mm+150mm+150mm+150mm)	1	4	18AWG	Tinned Copper
USB 2.0 9-pin Header(610mm)	1	1	24-28AWG	-
AC Power Cord (1390mm) - C19 coupler	1	1	14AWG	-

Protection Features

Under Voltage Protection	✓
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	133.33	3	0
	Watts	120		1599.96	15	0
Total Max. Power (W)		1600				

Parts Description

General Data	
Manufacturer (OEM)	CWT
PCB Type	Double-Sided
Primary Side	
Transient Filter	5x Y caps, 2x X caps, 2x CM chokes, 1x MOV
Inrush Protection	NTC Thermistor SCK-25150 (15 Ohm @ 25°C) & Relay
Bridge Rectifier	2x WeEn WNB2560M (600V, 25A @ 127°C)

APFC MOSFETs	2x Toshiba TK040N60Z1 (650V, 52A @ 25°C, Rds(on): 0.040 Ohm) 2x Toshiba TW015N65C (650V, 100A @ 25°C, Rds(on): 0.016 Ohm) 1x Sync Power SPN5003 (reducing no load consumption)
APFC Boost Diode	2x Vishay VS-3C10ET07T-M3 (650V, 10A @ 147°C)
Bulk Cap(s)	2x Rubycon (420V, 680uF, 2000h @ 105°C, MXE) 1x Rubycon (420V, 470uF, 2000h @ 105°C, MXE)
Main Switchers	4x Alpha & Omega AOTF29S50 (600V, 18A @ 100°C, Rds(on): 0.15 Ohm)
Digital Controller	2x Texas Instruments UCD3138A
IC Driver	2x Novosense NSi6602B-DSWR
Topology	Primary side: Semi-Digital, Interleaved PFC, Full-Bridge & LLC Resonant converter Secondary side: Synchronous Rectification & DC-DC converters
Secondary Side	
+12V MOSFETs	16x Infineon ISC010N06NM5 (60V, 233A @ 100°C, Rds(on): 1.05mOhm)
5V & 3.3V	DC-DC Converters: 4x UBIQ Semi QN3107M6N (30V, 70A @ 100°C, Rds(on): 2.6mOhm) PWM Controller(s): UPI-Semi uP3861P
Filtering Capacitors	Electrolytic: 5x Nippon Chemi-Con (@ 105°C, W) 3x Rubycon (4-10,000h @ 105°C, YXJ) 3x Rubycon (6-10,000h @ 105°C, ZLH) Polymer: 36x Nippon Chemi-con, 13x Nichicon FPCAP
Supervisor IC	IN1S3151-SAG
Fan Controller / Micro Controller	Nuvoton M252SD2AE
Fan Model	Power Logic PLA13525S12H (135mm, 12V, 0.56A, Fluid Dynamic Bearing Fan)
5VSB Circuit	
Rectifier	1x Leadtrend LD8926AA1 Synchronous Rectification IC
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)	91.071%
Average Noise Output (>1450 Load Combinations)	19.50dBA
Average PF (>1450 Load Combinations)	0.992
Efficiency With 10W (≤500W) or 2% (>500W) Load	74.644%
Standby Power Consumption	0.0213W
Non-Accredited	
12V Ripple (Full Load)	37.54mV
5V Ripple (Full Load)	21.20mV
3.3V Ripple (Full Load)	21.60mV
5VSB Ripple (Full Load)	24.02mV
12V Load Regulation	0.73%
5V Load Regulation	0.74%
3.3V Load Regulation	0.54%
5VSB Load Regulation	1.39%
Inrush Current	12.600A

230V

Accredited	
Average Efficiency (>1450 load combinations)	92.665%
Average Noise Output (>1450 Load Combinations)	19.63dBA
Average PF (>1450 Load Combinations)	0.942
Efficiency With 10W (≤500W) or 2% (>500W) Load	75.011%
Standby Power Consumption	0.0939W

Non-Accredited		
12V Ripple (Full Load)		40.97mV
5V Ripple (Full Load)		20.43mV
3.3V Ripple (Full Load)		20.88mV
5VSB Ripple (Full Load)		24.06mV
12V Load Regulation		0.69%
5V Load Regulation		0.74%
3.3V Load Regulation		0.30%
5VSB Load Regulation		1.37%
Inrush Current		21.230A
12V Transient Response (200%)		11.45V
5V Transient Response (200%)		4.922V
3.3V Transient Response (200%)		3.217V
5VSB Transient Response (200%)		4.885V
Hold-Up Time & PWR_OK Signal		19.60ms
AC Loss to PWR_OK Hold Up Time		17.00ms
PWR_OK Inactive to DC Loss Delay		2.60ms
PSU Timings: T1 (20% / 100%)	68.0ms	81.0ms
PSU Timings: T3 (20% / 100%)	125.0ms	125.0ms
12V OCP (28.8°C / 44.7°C)	161.20A (120.90%), 11.964V	161.00A (120.75%), 11.962V
5V OCP (28.8°C / 44.7°C)	27.6A (125.45%), 4.952V	27.6A (125.45%), 4.942V
3.3V OCP (28.8°C / 44.7°C)	27.7A (125.91%), 3.317V	27.7A (125.91%), 3.323V
5VSB OCP (28.8°C / 44.7°C)	4.7A (156.67%), 5.052V	4.5A (150.00%), 5.041V
OPP (27.72°C / 45.33°C)	121.94%	121.94%

Hold-Up Time & PWR_OK Signal

Hold-Up Time (ms)	19.6
AC Loss to PWR_OK Hold Up Time (ms)	17
PWR_OK Inactive to DC Loss Delay (ms)	2.6

Stromverbrauch im Ruhezustand

Tables

115V

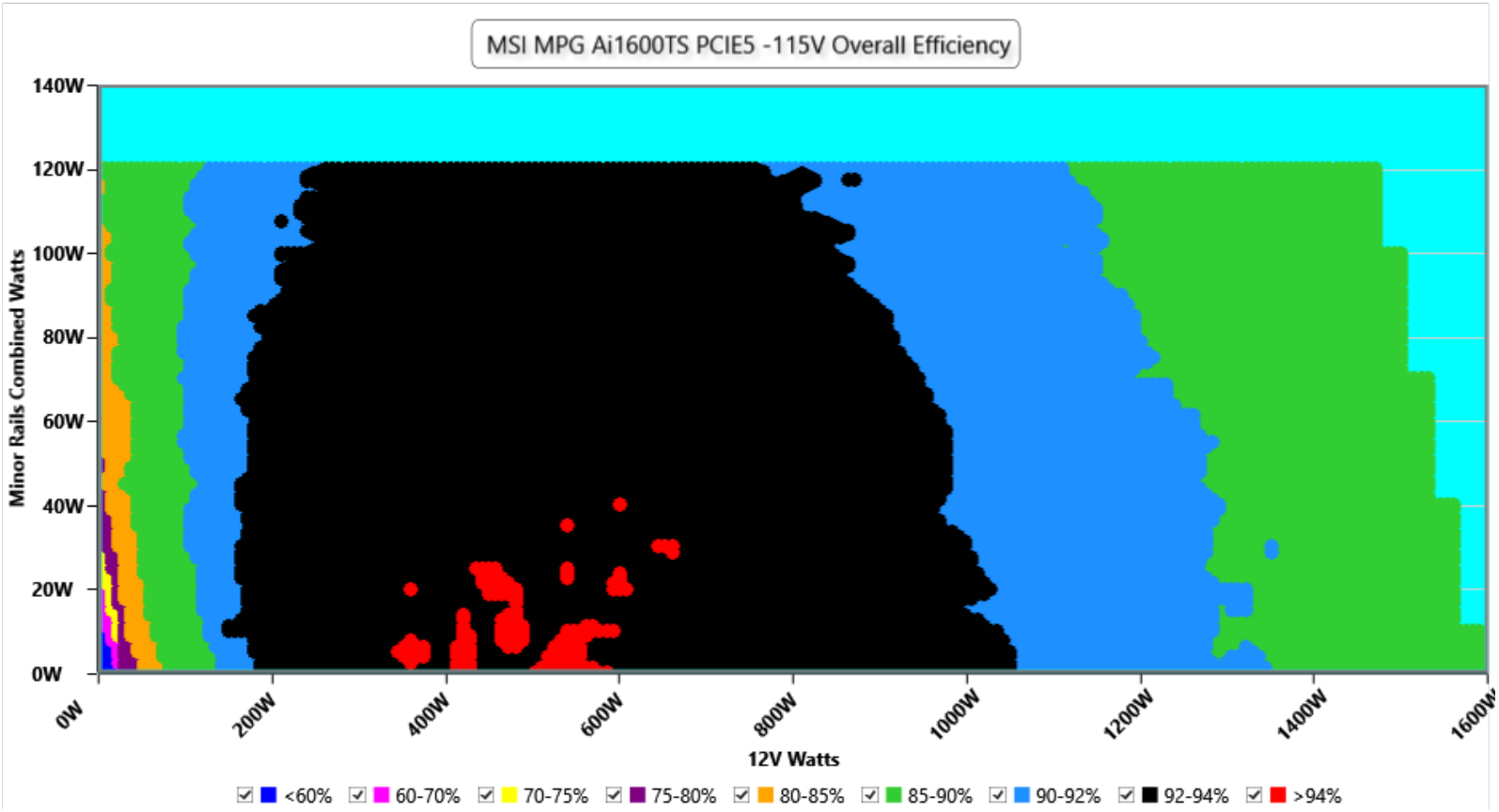
Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	115.05 V	115.02 V	113.85 V	115.06 V	116.15 V	PASS
Mains Frequency:	60.00 Hz	59.99 Hz	59.40 Hz	60.01 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.416	1.415	1.340	1.417	1.490	PASS
Mains Voltage THD:	0.13 %	0.11 %	N/A	0.16 %	2.00 %	PASS
Real Power:	0.021 W	0.006 W	N/A	0.037 W	N/A	N/A
Apparent Power:	14.927 W	14.908 W	N/A	14.947 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:	230.09 V	230.08 V	227.70 V	230.11 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:	1.415	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:	0.094 W	0.056 W	N/A	0.146 W	N/A	N/A
Apparent Power:	49.404 W	49.371 W	N/A	49.439 W	N/A	N/A
Power Factor:	0.002	N/A	N/A	N/A	N/A	N/A

Efficiency Graph

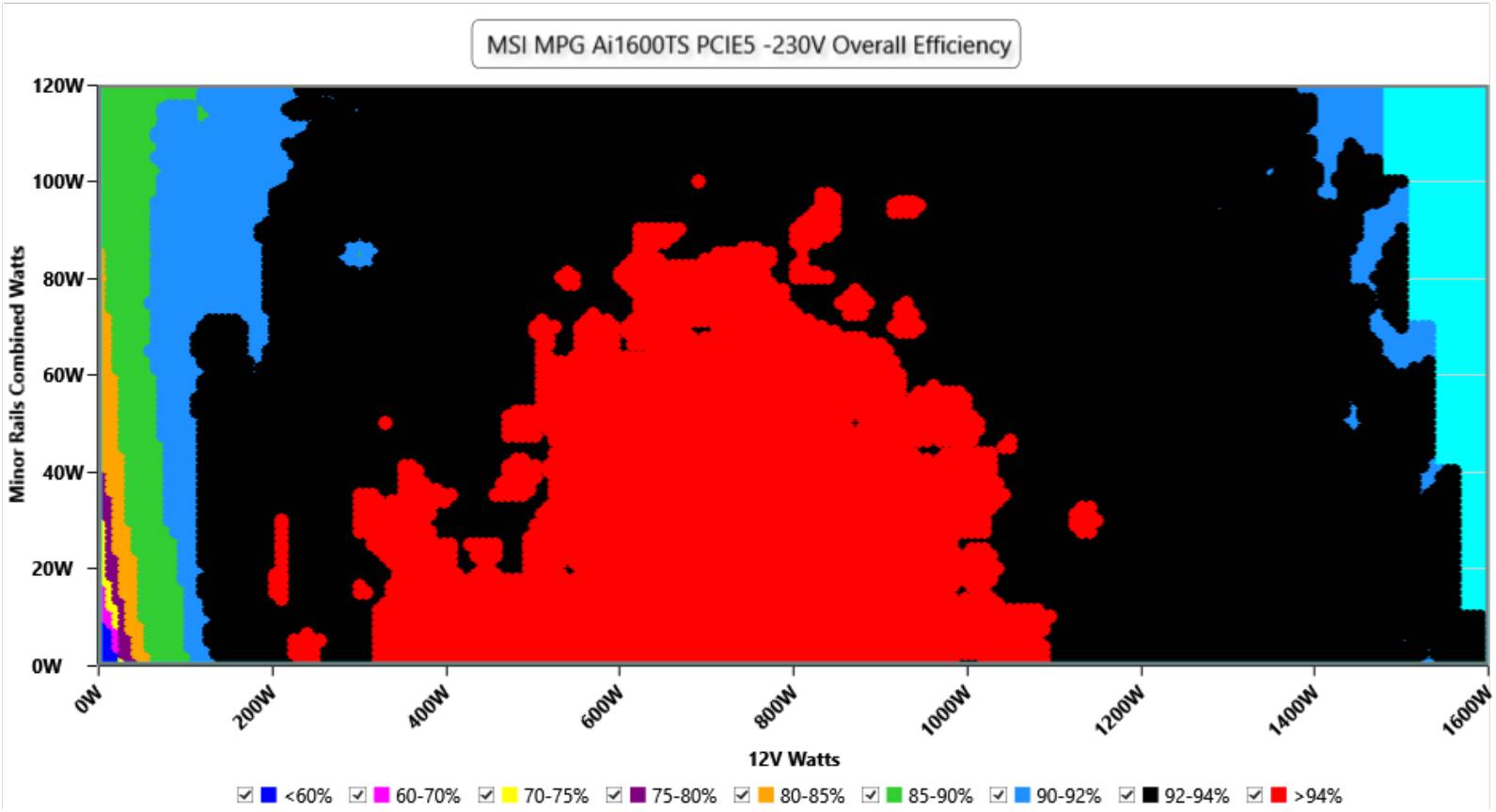
115V



INFO

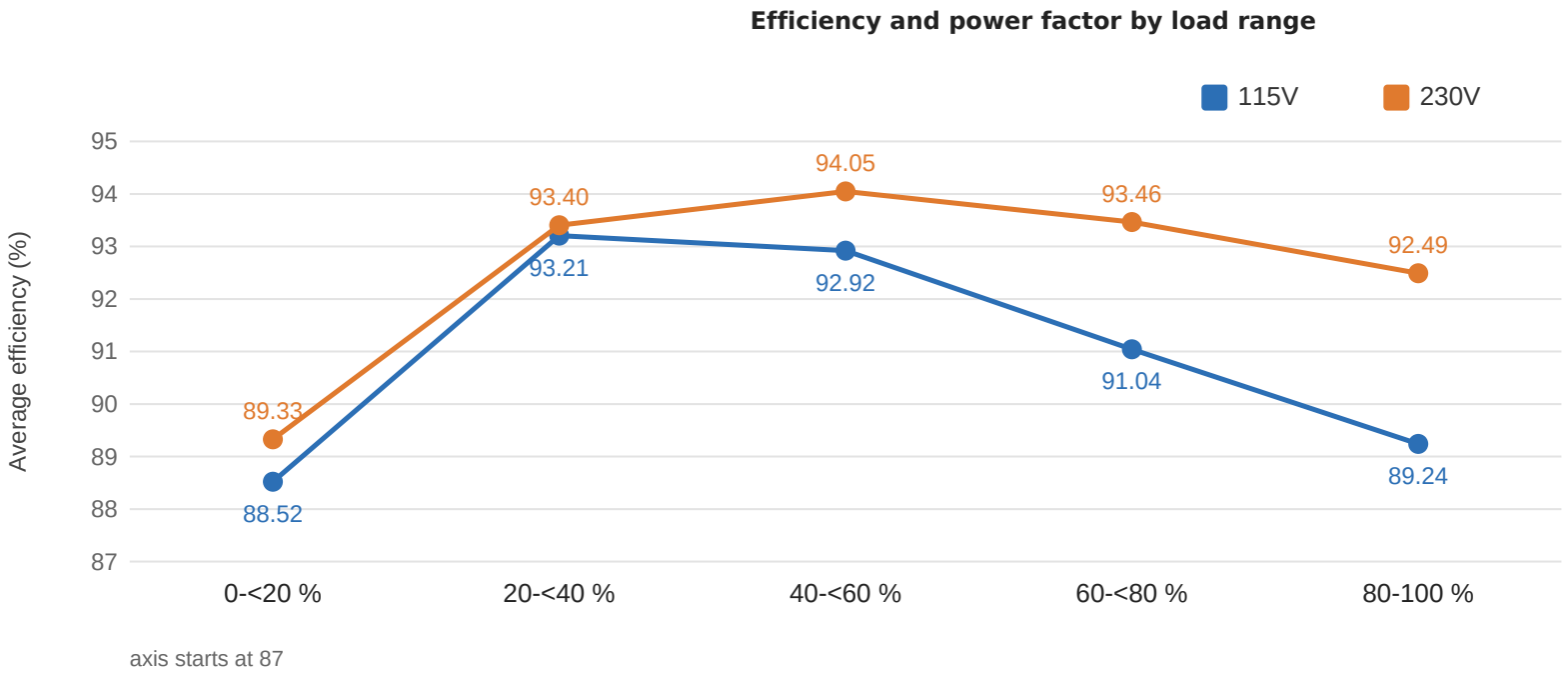
This graph depicts the PSU`s efficiency throughout its entire operational range. For the generation of the efficiency and noise graphs we set our loaders to auto mode through our custom-made software before trying thousands of possible load combinations

230V

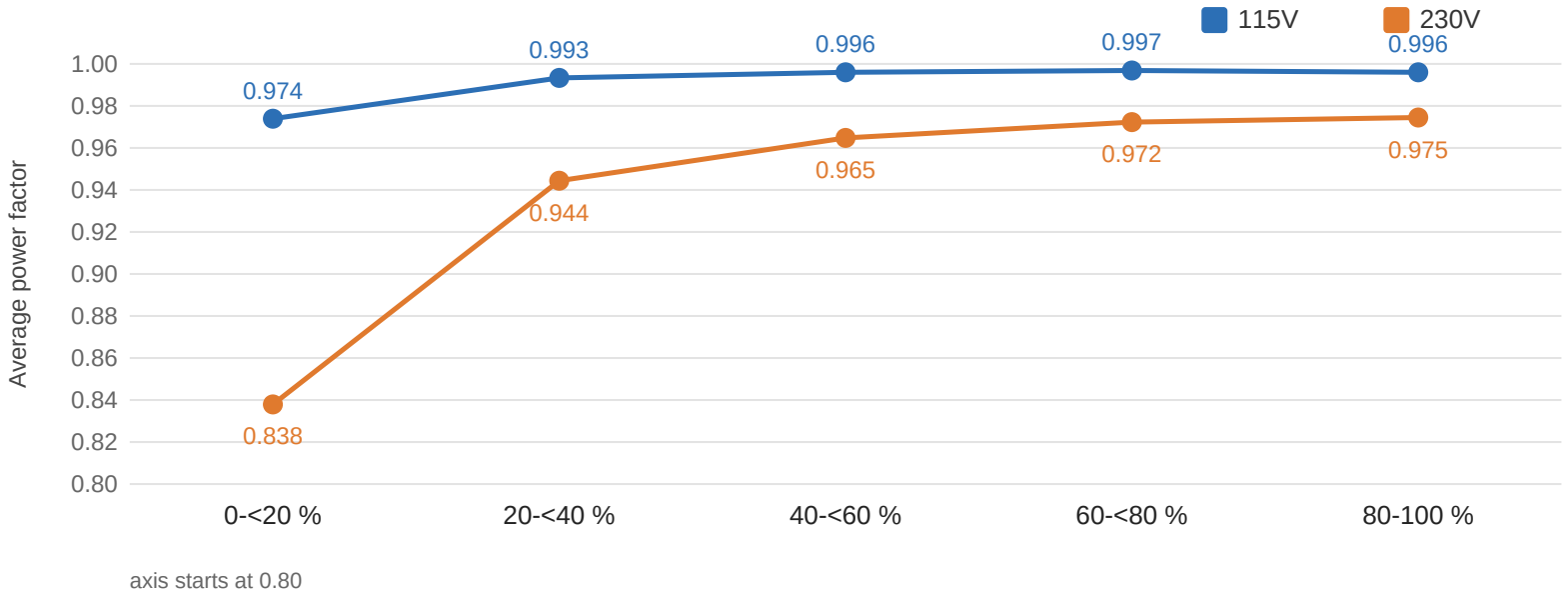


INFO

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



axis starts at 87



axis starts at 0.80

Load range	Points	Efficiency 115V	Efficiency 230V	PF 115V	PF 230V
0-<20 %	263 / 263	88.52%	89.33%	0.974	0.838
20-<40 %	320 / 320	93.21%	93.40%	0.993	0.944
40-<60 %	320 / 320	92.92%	94.05%	0.996	0.965
60-<80 %	320 / 320	91.04%	93.46%	0.997	0.972
80-100 %	325 / 325	89.24%	92.49%	0.996	0.975
70-100 % (High-Load)	485 / 485	89.64%	92.72%	0.996	0.974
All (published average)	1548 / 1548	91.07%	92.66%	0.992	0.943

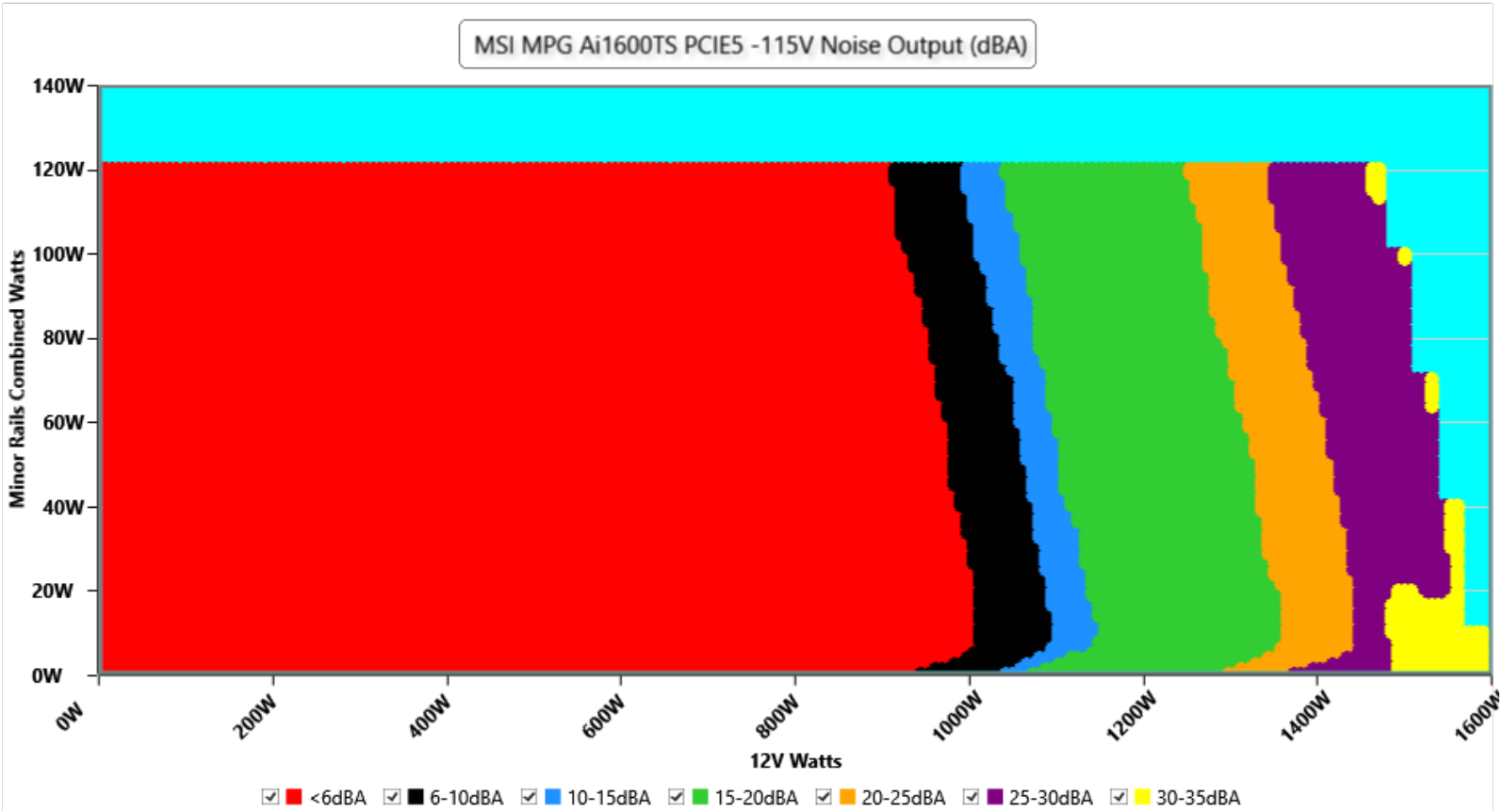
INFO

The average efficiency and power factor in five ranges of load. Calculated from the 1548 (115V) and 1548 (230V) load combinations of the certification sweep, the same data that ETA and LAMBDA use (test 0 excluded). Load is the total DC output as a share of the rated 1600 W. These are plain averages of the valid readings, as for the ETA rating, so the ranges combined give back the published averages. 1 at 230V load combination has no valid power factor reading (zero, or above the possible maximum) and is left out of that average.

Informational. Not part of the ETA or LAMBDA rating.

Noise Graph

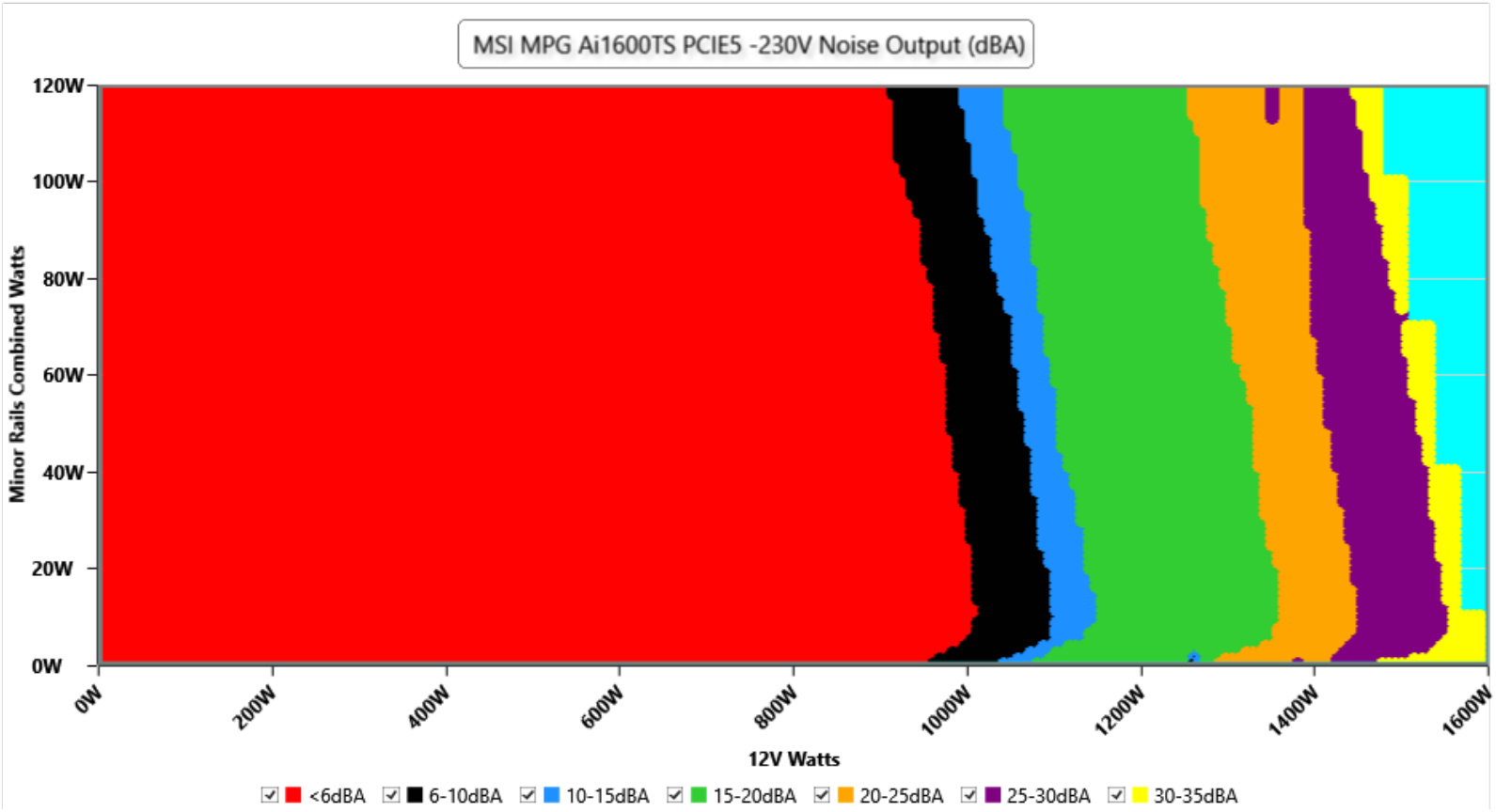
115V



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

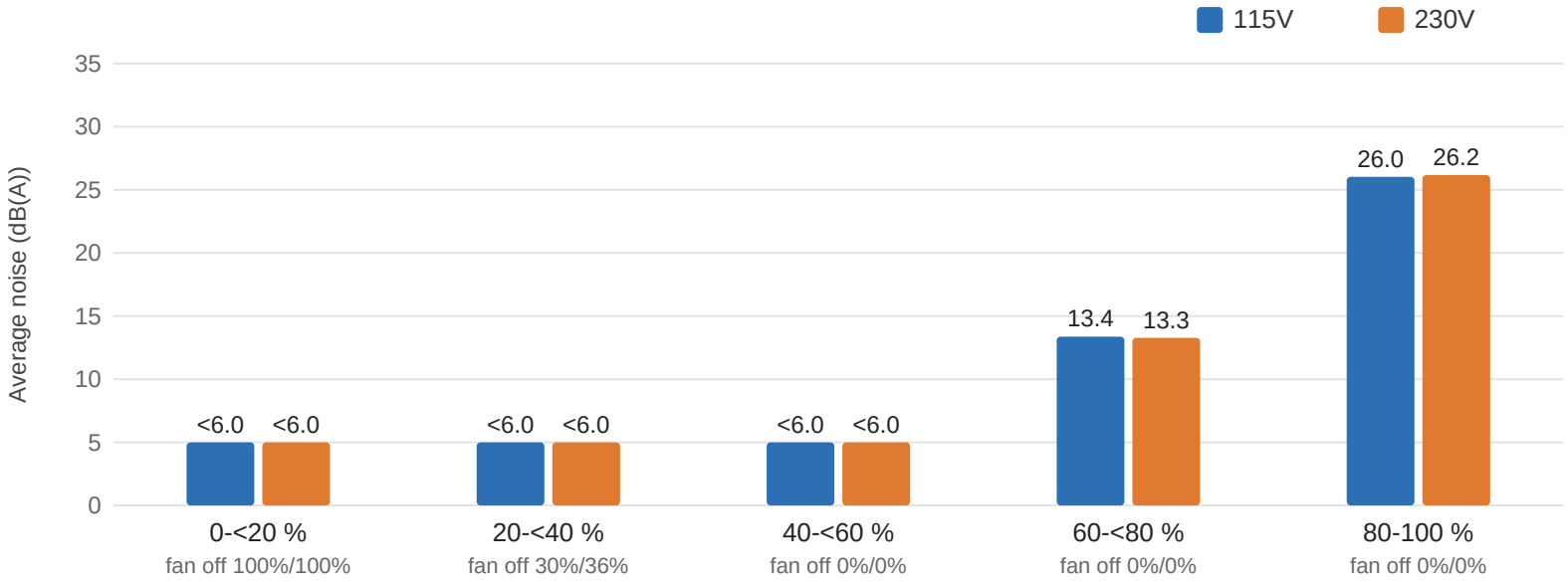
The PSU`s noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

Noise by load range

High-Load Index (70-100 % load)

Noise **24.5 dB(A)** at 115V and **24.6 dB(A)** at 230V · loudest point 32.4 dB(A)

Efficiency 89.64% / 92.72% · power factor 0.996 / 0.974 (115V / 230V)



Load range	Noise 115V avg (loudest)	Noise 230V avg (loudest)	Fan off 115V / 230V
0-<20 %	<6.0 (<6.0)	<6.0 (<6.0)	100% / 100%
20-<40 %	<6.0 (<6.0)	<6.0 (<6.0)	30% / 36%
40-<60 %	<6.0 (<6.0)	<6.0 (<6.0)	0% / 0%
60-<80 %	13.4 (19.7)	13.3 (19.7)	0% / 0%
80-100 %	26.0 (31.0)	26.2 (32.4)	0% / 0%
70-100 % (High-Load)	24.5 (31.0)	24.6 (32.4)	0% / 0%
All (published average)	19.6 (31.0)	19.7 (32.4)	23% / 24%

INFO

The average noise in five ranges of load, the share of points with the fan stopped (semi-passive operation), and the High-Load Index: the same figures for all points at 70 % of the rated output and above. Calculated from the 1548 (115V) and 1548 (230V) load combinations of the certification sweep, the same data that ETA and LAMBDA use (test 0 excluded). Load is the total DC output as a share of the rated 1600 W. Noise is averaged on the energy scale, as for LAMBDA, so the ranges combined give back the published average noise. Each load combination is held for about five seconds; the stabilized readings at fixed loads are under "Noise under high ambient temperature". Below 6 dB(A), the floor of our sound meter, the table and the chart show <6.0. In the averages a stopped fan counts as 5 dB(A),

as in the published average.

Informational. Not part of the ETA or LAMBDA rating.

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) · 31.4 °C	0 RPM · <6.0 dB(A) · 45.4 °C	fan off in both
20%	0 RPM · <6.0 dB(A) · 32.4 °C	0 RPM · <6.0 dB(A) · 45.5 °C	fan off in both
50%	441 RPM · 8.7 dB(A) · 30.8 °C	458 RPM · <6.0 dB(A) · 42.1 °C	-
100%	1195 RPM · 30.9 dB(A) · 30.6 °C	1486 RPM · 37.3 dB(A) · 45.3 °C	**+6.4 dB(A)**

230V

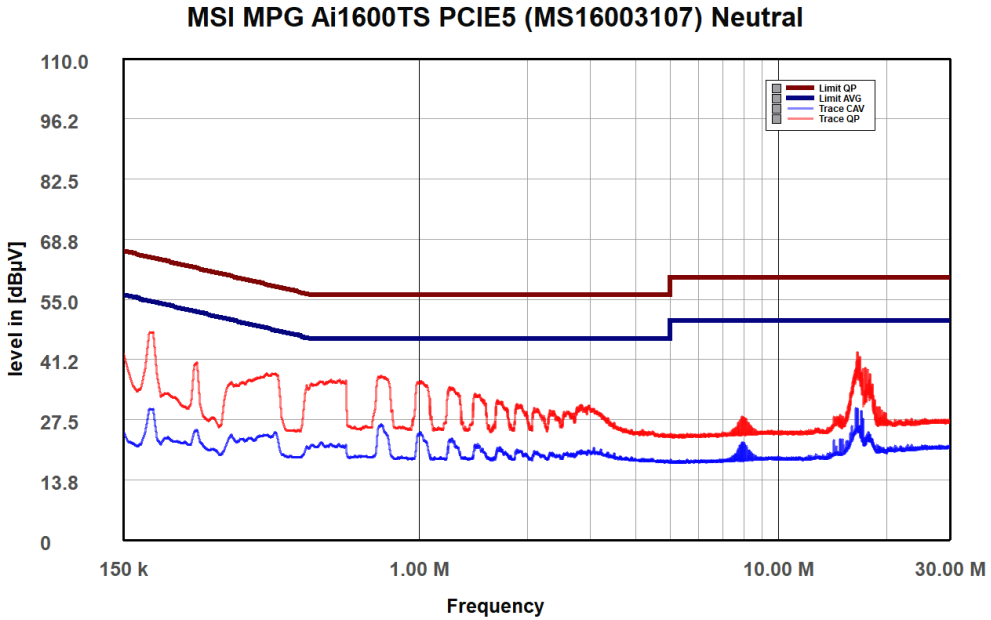
Load	Normal ambient fan · noise · intake	High ambient fan · noise · intake	Noise change
10%	0 RPM · <6.0 dB(A) · 36.6 °C	0 RPM · <6.0 dB(A) · 42.2 °C	fan off in both
20%	0 RPM · <6.0 dB(A) · 36.2 °C	0 RPM · <6.0 dB(A) · 43.3 °C	fan off in both
50%	439 RPM · 9.1 dB(A) · 30.8 °C	462 RPM · <6.0 dB(A) · 42.4 °C	-
100%	1199 RPM · 30.9 dB(A) · 30.4 °C	1490 RPM · 37.4 dB(A) · 47.0 °C	**+6.5 dB(A)**

INFO

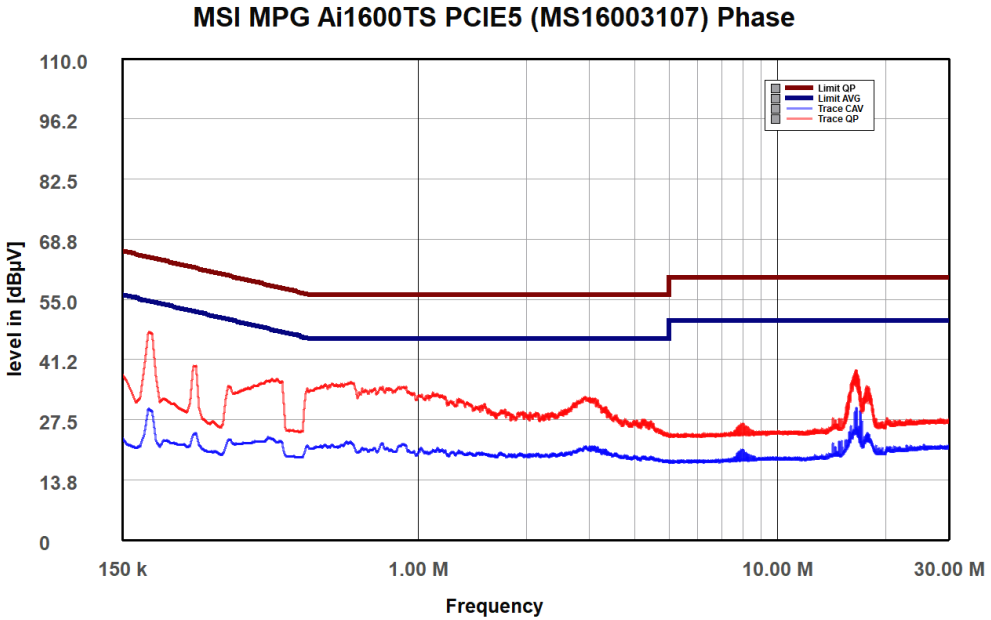
Fan speed, noise and the measured intake temperature at 10, 20, 50 and 100 % load, from the two load regulation tests: at normal ambient (about 30-32 °C) and at high ambient (about 40-47 °C). These are stabilized readings at fixed loads, not averages over the certification sweep, so they are indicative 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.

Conducted Emissions EN 55032 & CISPR 32



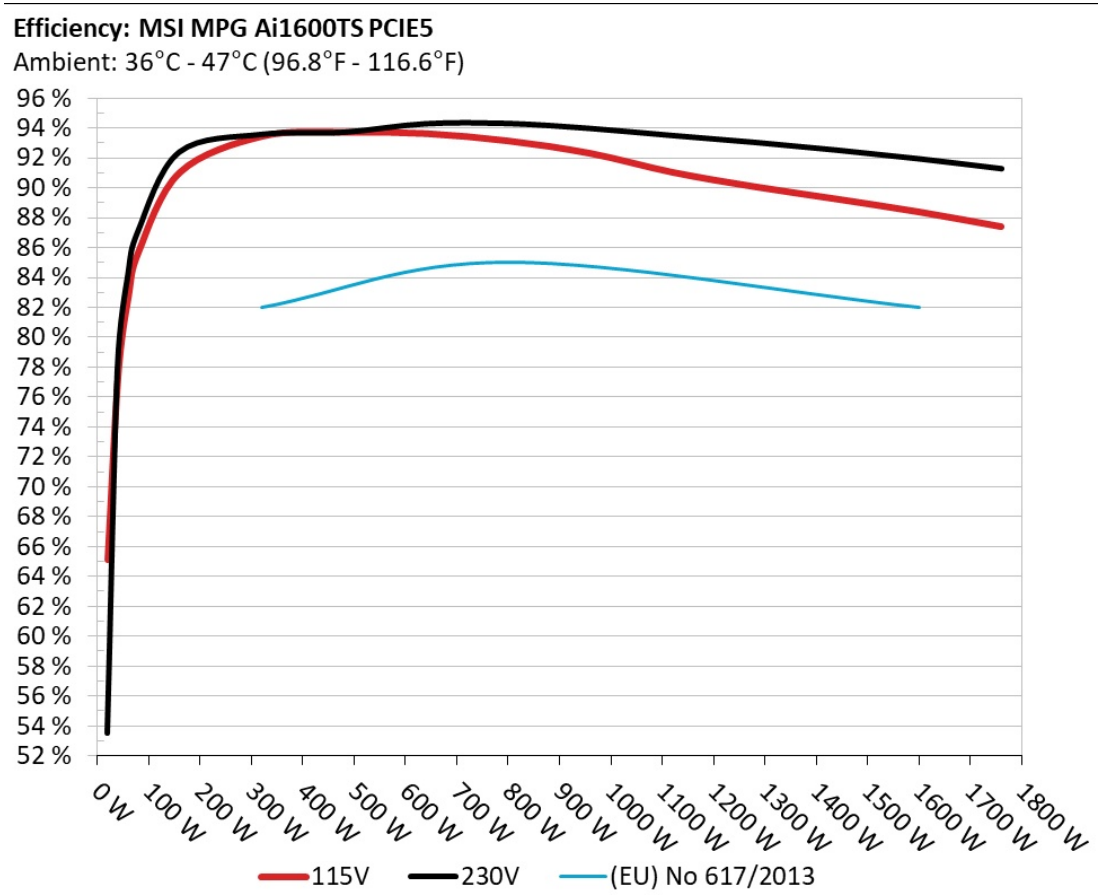
NEUTRAL



PHASE

Indicative Performance

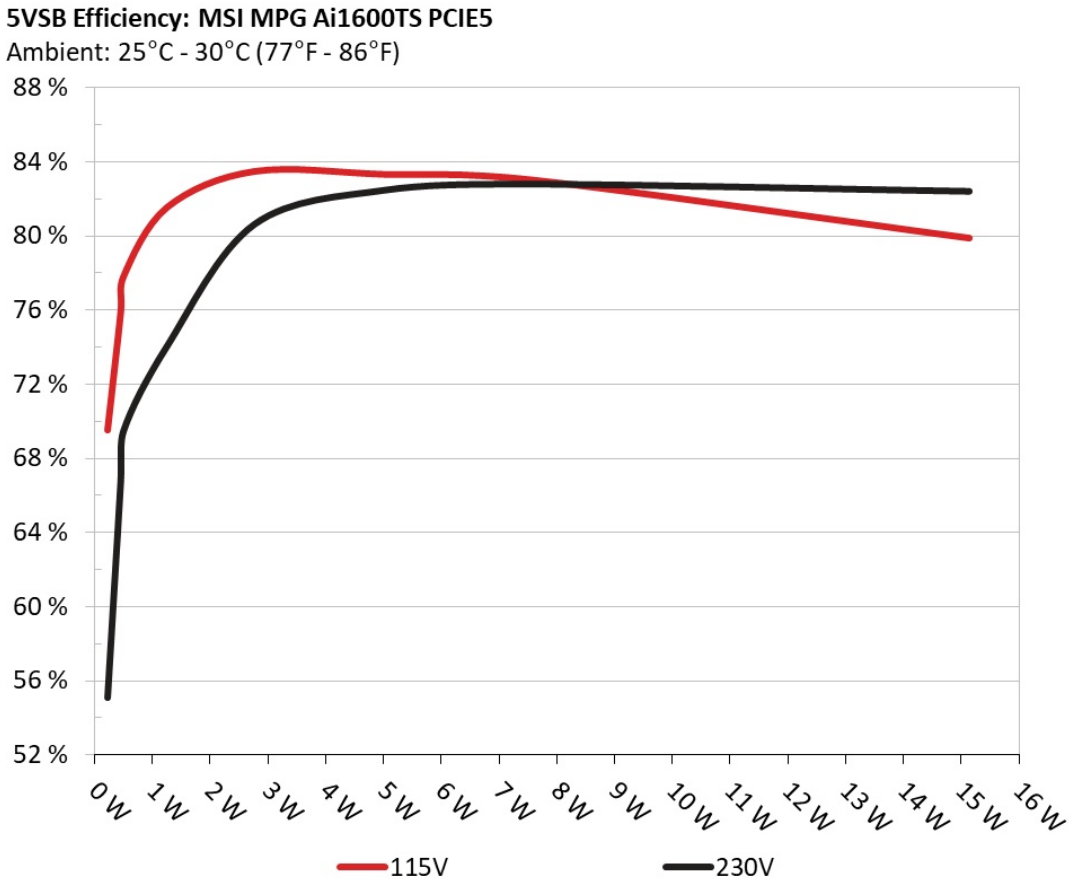
Efficiency under high ambient temperature



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**	0.227W	69.543%	0.022
	5.034V	0.326W		114.88V
2	**0.09A**	0.453W	75.895%	0.04
	5.034V	0.596W		114.88V
3	**0.55A**	2.771W	83.508%	0.2
	5.037V	3.318W		114.88V
4	**1A**	5.04W	83.345%	0.315
	5.039V	6.047W		114.87V
5	**1.5A**	7.563W	83.052%	0.401
	5.041V	9.107W		114.87V
6	**3.001A**	15.147W	79.91%	0.525
	5.048V	18.954W		114.87V

230V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	**0.045A**	0.227W	55.064%	0.008
	5.034V	0.413W		229.92V
2	**0.09A**	0.453W	66.705%	0.013
	5.034V	0.68W		229.92V
3	**0.55A**	2.77W	80.612%	0.065
	5.036V	3.436W		229.91V
4	**1A**	5.039W	82.461%	0.112
	5.038V	6.112W		229.92V
5	**1.5A**	7.562W	82.781%	0.162
	5.041V	9.135W		229.92V
6	**3.001A**	15.144W	82.391%	0.283
	5.047V	18.382W		229.91V

Protection Features

OCP (Normal @ 28.8°C)	12V: 161.2A (120.9%), 11.964V 5V: 27.6A (125.45%), 4.952V 3.3V: 27.7A (125.91%), 3.317V 5VSB: 4.7A (156.67%), 5.052V
OCP (Hot @ 44.7°C)	12V: 161A (120.75%), 11.962V 5V: 27.6A (125.45%), 4.942V 3.3V: 27.7A (125.91%), 3.323V 5VSB: 4.5A (150%), 5.041V
OPP (Normal @ 27.7°C)	1951.12W (121.94%)
OPP (Hot @ 45.3°C)	1951.11W (121.94%)
OTP	✓ (141°C @ 12V Heatsink)
SCP	12V to Earth: ✓ 5V to Earth: ✓ 3.3V to Earth: ✓ 5VSB 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%	**11.480A**	**1.982A**	**1.981A**	**0.994A**	160.008	91.02%	0	<6.0	45.37°C	0.983
	12.057V	5.045V	3.332V	5.031V	175.826				40.21°C	114.82V
20%	**23.993A**	**2.975A**	**2.973A**	**1.195A**	319.981	93.44%	0	<6.0	45.53°C	0.99
	12.048V	5.041V	3.331V	5.024V	342.432				40.57°C	114.77V
30%	**36.804A**	**3.473A**	**3.47A**	**1.395A**	479.206	93.717%	457	<6.0	41.28°C	0.994
	12.041V	5.039V	3.329V	5.02V	511.292				51.86°C	114.72V
40%	**49.735A**	**3.972A**	**3.967A**	**1.596A**	639.612	93.621%	458	<6.0	41.72°C	0.996
	12.032V	5.036V	3.327V	5.014V	683.175				53.73°C	114.66V
50%	**62.284A**	**4.969A**	**4.962A**	**1.798A**	799.358	93.137%	458	<6.0	42.05°C	0.996
	12.023V	5.032V	3.326V	5.007V	858.305				57.14°C	114.61V
60%	**74.918A**	**5.968A**	**5.958A**	**2A**	959.841	92.302%	460	<6.0	42.55°C	0.996
	12.014V	5.028V	3.324V	4.999V	1039.846				60.59°C	114.54V
70%	**87.472A**	**6.968A**	**6.954A**	**2.204A**	1119.587	91.036%	639	9.8	43.25°C	0.997
	12.009V	5.024V	3.322V	4.991V	1229.813				62.39°C	114.48V
80%	**100.150A**	**7.969A**	**7.951A**	**2.308A**	1279.613	90.073%	824	18.6	43.82°C	0.996
	11.999V	5.019V	3.32V	4.983V	1420.648				65.59°C	114.41V
90%	**113.175A**	**8.474A**	**8.439A**	**2.413A**	1439.404	89.25%	1215	31.4	44.57°C	0.996
	11.989V	5.015V	3.318V	4.975V	1612.815				67.88°C	114.35V
100%	**126.027A**	**8.977A**	**8.955A**	**3.019A**	1599.415	88.389%	1486	37.3	45.33°C	0.996
	11.979V	5.012V	3.316V	4.969V	1809.555				68.12°C	114.28V
110%	**138.848A**	**9.984A**	**10.043A**	**3.025A**	1760.022	87.405%	1801	42.5	46.57°C	0.995
	11.968V	5.008V	3.315V	4.96V	2013.626				68.55°C	114.19V
CL1	**0.117A**	**14.388A**	**14.292A**	**0A**	121.312	84.03%	467	<6.0	42.61°C	0.982
	12.048V	5.018V	3.337V	5.02V	144.371				60.89°C	114.82V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
CL2	**0.116A**	**21.887A**	**0A**	**0A**	111.311	82.913%	464	<6.0	41.97°C	0.982
	12.051V	5.022V	3.303V	5.025V	134.269				58.03°C	114.82V
CL3	**0.116A**	**0A**	**21.621A**	**0A**	73.985	76.305%	462	<6.0	41.31°C	0.945
	12.053V	5.014V	3.357V	5.024V	96.97				55.39°C	114.84V
CL4	**133.462A**	**0A**	**0A**	**0A**	1599.941	88.968%	1255	32.6	47.03°C	0.996
	11.988V	5.027V	3.309V	4.97V	1798.433				63.86°C	114.3V

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%	**11.482A**	**1.984A**	**1.982A**	**0.994A**	160.009	92.358%	0	<6.0	42.23°C	0.836
	12.054V	5.04V	3.329V	5.029V	173.044				40.22°C	229.87V
20%	**23.995A**	**2.978A**	**2.974A**	**1.195A**	319.98	93.54%	0	<6.0	43.3°C	0.933
	12.047V	5.037V	3.328V	5.021V	342.094				40.81°C	229.85V
30%	**36.802A**	**3.477A**	**3.471A**	**1.395A**	479.209	93.682%	465	<6.0	41.19°C	0.94
	12.042V	5.034V	3.328V	5.019V	511.615				54.84°C	229.81V
40%	**49.724A**	**3.976A**	**3.968A**	**1.596A**	639.61	94.252%	463	<6.0	41.72°C	0.959
	12.034V	5.031V	3.326V	5.012V	678.607				55.27°C	229.79V
50%	**62.266A**	**4.972A**	**4.961A**	**1.798A**	799.351	94.272%	462	<6.0	42.41°C	0.965
	12.026V	5.029V	3.326V	5.005V	847.913				56.18°C	229.76V
60%	**74.924A**	**5.974A**	**5.957A**	**2A**	959.955	93.936%	670	12.2	42.82°C	0.97
	12.015V	5.023V	3.324V	4.995V	1021.915				59.89°C	229.73V
70%	**87.473A**	**6.973A**	**6.95A**	**2.205A**	1119.577	93.468%	638	9.8	43.46°C	0.975
	12.009V	5.02V	3.324V	4.99V	1197.739				58.52°C	229.7V
80%	**100.150A**	**7.974A**	**7.944A**	**2.308A**	1279.602	93.009%	821	18.5	43.64°C	0.973
	11.999V	5.016V	3.323V	4.982V	1375.743				59.38°C	229.68V
90%	**113.172A**	**8.479A**	**8.429A**	**2.413A**	1439.395	92.491%	1168	30.3	45.88°C	0.975
	11.989V	5.012V	3.322V	4.975V	1556.306				60.38°C	229.65V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
100%	**126.031A**	**8.984A**	**8.944A**	**3.02A**	1599.408	91.91%	1490	37.4	46.97°C	0.976
	11.979V	5.009V	3.32V	4.968V	1740.109				61.95°C	229.61V
110%	**138.851A**	**9.99A**	**10.028A**	**3.025A**	1760.016	91.25%	1828	42.8	48.01°C	0.977
	11.967V	5.005V	3.32V	4.959V	1928.749				63.57°C	229.59V
CL1	**0.117A**	**14.396A**	**14.256A**	**0A**	121.303	85.828%	463	<6.0	40.31°C	0.812
	12.049V	5.015V	3.346V	5.021V	141.339				56.4°C	229.87V
CL2	**0.116A**	**21.897A**	**0A**	**0A**	111.306	84.513%	461	<6.0	42.82°C	0.799
	12.052V	5.019V	3.3V	5.025V	131.696				54.5°C	229.87V
CL3	**0.115A**	**0A**	**21.581A**	**0A**	73.983	77.231%	461	<6.0	43.04°C	0.736
	12.053V	5.013V	3.364V	5.024V	95.809				53.66°C	229.88V
CL4	**133.466A**	**0A**	**0A**	**0A**	1599.934	92.464%	1258	32.7	44.3°C	0.976
	11.988V	5.025V	3.306V	4.97V	1730.345				56.98°C	229.62V

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**	**0.199A**	20.001	65.122%	0	<6.0	40.78°C	0.79
	12.066V	5.049V	3.334V	5.038V	30.729				36.01°C	114.87V
40W	**2.710A**	**0.693A**	**0.693A**	**0.298A**	40.002	77.471%	0	<6.0	41.46°C	0.885
	12.064V	5.049V	3.334V	5.036V	51.644				37.05°C	114.85V
60W	**4.190A**	**0.891A**	**0.891A**	**0.397A**	60.003	82.739%	0	<6.0	42.09°C	0.924
	12.062V	5.048V	3.333V	5.035V	72.521				38.04°C	114.86V
80W	**5.664A**	**1.089A**	**1.089A**	**0.497A**	79.949	85.723%	0	<6.0	43.19°C	0.941
	12.061V	5.048V	3.333V	5.034V	93.254				39.13°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	**1.232A**	**0.496A**	**0.496A**	**0.199A**	20.017	53.552%	0	<6.0	41.27°C	0.271
	12.062V	5.046V	3.33V	5.036V	29.664				36.92°C	229.89V
40W	**2.712A**	**0.694A**	**0.694A**	**0.298A**	40.01	78.106%	0	<6.0	42.15°C	0.567
	12.060V	5.045V	3.329V	5.035V	51.302				37.4°C	229.89V
60W	**4.190A**	**0.892A**	**0.892A**	**0.397A**	60.006	84.143%	0	<6.0	42.43°C	0.664
	12.059V	5.044V	3.329V	5.033V	71.315				38.24°C	229.88V
80W	**5.666A**	**1.09A**	**1.09A**	**0.497A**	79.954	87.101%	0	<6.0	40.73°C	0.724
	12.059V	5.043V	3.329V	5.032V	91.795				39.17°C	229.88V

The results above are not used in the certification process

Ripple Measurements

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	26.44mV	18.99mV	19.91mV	15.39mV	Pass
20% Load	30.89mV	19.19mV	19.08mV	15.75mV	Pass
30% Load	33.09mV	20.01mV	18.83mV	16.47mV	Pass
40% Load	36.52mV	19.76mV	19.09mV	18.06mV	Pass
50% Load	40.46mV	20.37mV	19.39mV	17.50mV	Pass
60% Load	37.08mV	19.50mV	20.16mV	18.06mV	Pass
70% Load	32.78mV	20.02mV	20.06mV	19.65mV	Pass
80% Load	33.86mV	20.32mV	20.57mV	20.83mV	Pass
90% Load	36.11mV	20.37mV	20.93mV	21.70mV	Pass
100% Load	37.54mV	21.20mV	21.60mV	24.02mV	Pass
110% Load	39.48mV	20.01mV	20.78mV	24.94mV	Pass
Crossload1	25.32mV	20.73mV	22.52mV	15.65mV	Pass
Crossload2	26.08mV	20.89mV	18.73mV	14.88mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
Crossload3	26.18mV	20.58mV	21.55mV	17.04mV	Pass
Crossload4	37.69mV	20.01mV	20.16mV	17.14mV	Pass

The results above are not used in the certification process

230V

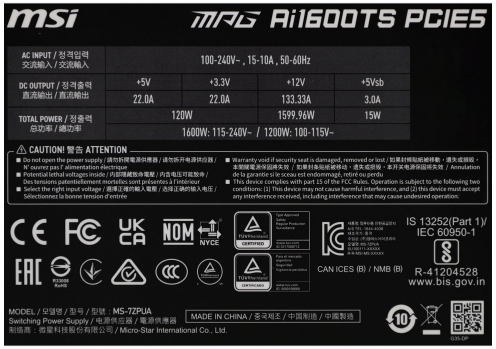
Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	29.41mV	20.12mV	20.16mV	16.52mV	Pass
20% Load	29.82mV	22.07mV	21.75mV	17.65mV	Pass
30% Load	26.95mV	20.58mV	20.37mV	17.86mV	Pass
40% Load	29.76mV	21.86mV	21.70mV	18.68mV	Pass
50% Load	32.27mV	21.81mV	22.37mV	18.57mV	Pass
60% Load	33.86mV	21.66mV	22.11mV	18.47mV	Pass
70% Load	34.57mV	20.27mV	20.57mV	20.52mV	Pass
80% Load	36.31mV	20.89mV	22.16mV	20.68mV	Pass
90% Load	37.13mV	20.27mV	21.03mV	21.60mV	Pass
100% Load	40.97mV	20.43mV	20.88mV	24.06mV	Pass
110% Load	43.01mV	22.32mV	21.09mV	25.45mV	Pass
Crossload1	32.94mV	24.38mV	23.65mV	18.01mV	Pass
Crossload2	29.72mV	21.81mV	19.91mV	17.24mV	Pass
Crossload3	24.81mV	20.01mV	21.91mV	15.45mV	Pass
Crossload4	39.84mV	19.86mV	20.01mV	17.19mV	Pass

The results above are not used in the certification process

MSI MPG Ai1600TS PCIE5



Top side



Power specifications label



Fan



PSU Internals

Cybenetics bietet freiwillige Zertifizierungsprogramme für Netzteile – ETA für Effizienz, LAMBDA für Lautstärke und SAFE für Sicherheit und korrekten Betrieb – sowie für Kühlprodukte mit DELTA für die Schalldämmung von Gehäusen und PHI für Luftstrom und statischen Druck von Lüftern

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