MSI MEG Ai1600T PCIE5

Serial Number C24013089517

Lab ID MS16002700

Certification ID 252700

Test Result Report ID: 24PS2700A

Certificate Issue Date: Jan 9, 2025

Scheme: ETA-EMI PSU

115V



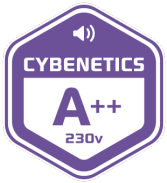
230V



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	MEG Ai1600T PCIE5
OEM/ODM	CWT
Serial Number	C24013089517
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)	
Type	ATX12V
Cable Design	Fully Modular
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
Cooling	135mm Dual Ball Bearing Fan (ZFB132512H)
Semi-Passive Operation	✓ (selectable)
Cybenetics Testing Information	
Lab ID	MS16002700
Date of receipt	Dec 28, 2024
Testing Date	Jan 7, 2025
Report Issued Date	Jan 9, 2025
DUT Notes	Very relaxed fan speed profile and no fan failure protection.
Engineer Name	Okeke Ugochukwu Onyedikachukwu
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	16-22AWG	No
4+4 pin EPS12V (750mm)	2	2	16AWG	No
6+2 pin PCIe (600mm)	5	5	16AWG	No
6+2 pin PCIe (600mm+150mm)	2	4	18AWG	No

12+4 pin PCIe (600mm) (600W)	2	2	16-24AWG	No
SATA (500mm+150mm+150mm+150mm)	2	8	18AWG	No
4-pin Molex (500mm+150mm+150mm+150mm)	2	8	18AWG	No
9-pin USB connector (610mm)	1	1	24-28AWG	No
AC Power Cord (1350mm) - C19 coupler	1	1	17AWG	-

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	133.33	3	0.3
	Watts	120		1599.6	15	3.6
Total Max. Power (W)		1600				

Parts Description

General Data	
Manufacturer (OEM)	CWT
Platform	CTF
PCB Type	Double-Sided
Primary Side	
Transient Filter	4x Y caps, 2x X caps, 2x CM chokes, 1x MOV
Inrush Protection	1x NTC Thermistor SCK-25150 (15 Ohm) & Relay
Bridge Rectifier(s)	1x WeEn WNB2560M (600V, 25A @ 127°C)

APFC MOSFETs	4x (AC Rectification) + 2x Infineon IMW65R050M2H (650V, 27A @ 100°C, Rds(on): 62mOhm) & 1x Sync Power SPN5003 FET (for reduced no-load consumption)
APFC Boost Diode	2x Vishay VS-3C10ET07T-M3 (650V, 10A @ 140°C)
Bulk Cap(s)	2x Nippon Chemi-con (420V, 770uF each or 1,540uF combined, 2,000h @ 105°C,KHE)
Main Switchers	4x Alpha & Omega AOTF29S50L (500V, 18A @ 100°C, Rds(on): 0.15Ohm)
IC Driver	2x Novosense NSi6602
Digital Controller	2x Texas Instruments UCD3138A
Topology	Primary side: Semi-Digital, Interleaved Bridgeless PFC, Full-Bridge & LLC Resonant converter Secondary side: Synchronous Rectification & DC-DC converters
Secondary Side	
+12V MOSFETs	12x
5V & 3.3V	DC-DC Converters: 4x UBIQ QN3107M6N (30V, 70A @ 100°C, Rds(on): 2.6mOhm) PWM Controller(s):
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: 21x Nippon Chemi-Con, 21x FPCAP
Supervisor IC	IN1S3151-SAG
Fan Controller	Nuvoton M032LD2AE
Fan Model	ZIC ZFB132512H AAP4 (135mm, 12V, 0.45A, Dual Ball 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)	91.556%
Average Noise Output (>1450 Load Combinations)	10.78dBA
Average PF (>1450 Load Combinations)	0.993
Efficiency With 10W (≤500W) or 2% (>500W) Load	75.442%
Standby Power Consumption	0.0287W
Non-Accredited	
12V Ripple (Full Load)	32.94mV
5V Ripple (Full Load)	13.83mV
3.3V Ripple (Full Load)	21.03mV
5VSB Ripple (Full Load)	17.75mV
12V Load Regulation	0.41%
5V Load Regulation	0.72%
3.3V Load Regulation	1.41%
5VSB Load Regulation	0.96%
Inrush Current	11.780A

230V

Accredited	
Average Efficiency (>1450 load combinations)	93.218%
Average Noise Output (>1450 Load Combinations)	9.37dBA
Average PF (>1450 Load Combinations)	0.955
Efficiency With 10W (≤500W) or 2% (>500W) Load	77.498%
Standby Power Consumption	0.0979W
Non-Accredited	
12V Ripple (Full Load)	33.50mV
5V Ripple (Full Load)	14.45mV
3.3V Ripple (Full Load)	21.56mV

5VSB Ripple (Full Load)		17.47mV
12V Load Regulation		0.42%
5V Load Regulation		0.70%
3.3V Load Regulation		1.38%
5VSB Load Regulation		1.02%
Inrush Current		28.850A
12V Transient Response (200%)		11.39V
5V Transient Response (200%)		4.913V
3.3V Transient Response (200%)		3.131V
5VSB Transient Response (200%)		4.859V
Hold-Up Time & PWR_OK Signal		21.30ms
AC Loss to PWR_OK Hold Up Time		16.30ms
PWR_OK Inactive to DC Loss Delay		5.00ms
PSU Timings: T1 (20% / 100%)	87.0ms	91.0ms
PSU Timings: T3 (20% / 100%)	123.0ms	123.0ms
12V OCP (28.9°C / 45.4°C)	163.00A (122.25%), 12.065V	162.20A (121.65%), 12.063V
5V OCP (28.9°C / 45.4°C)	28.9A (131.36%), 4.983V	28.9A (131.36%), 4.968V
3.3V OCP (28.9°C / 45.4°C)	28.6A (130.00%), 3.272V	28.6A (130.00%), 3.265V
5VSB OCP (28.9°C / 45.4°C)	4.8A (160.00%), 5.076V	4.8A (160.00%), 5.073V
OPP (29.60°C / 44.41°C)	123.44%	123.44%

Hold-Up Time & PWR_OK Signal

Hold-Up Time (ms)	21.3
AC Loss to PWR_OK Hold Up Time (ms)	16.3
PWR_OK Inactive to DC Loss Delay (ms)	5

Stromverbrauch im Ruhezustand

Tables

115V

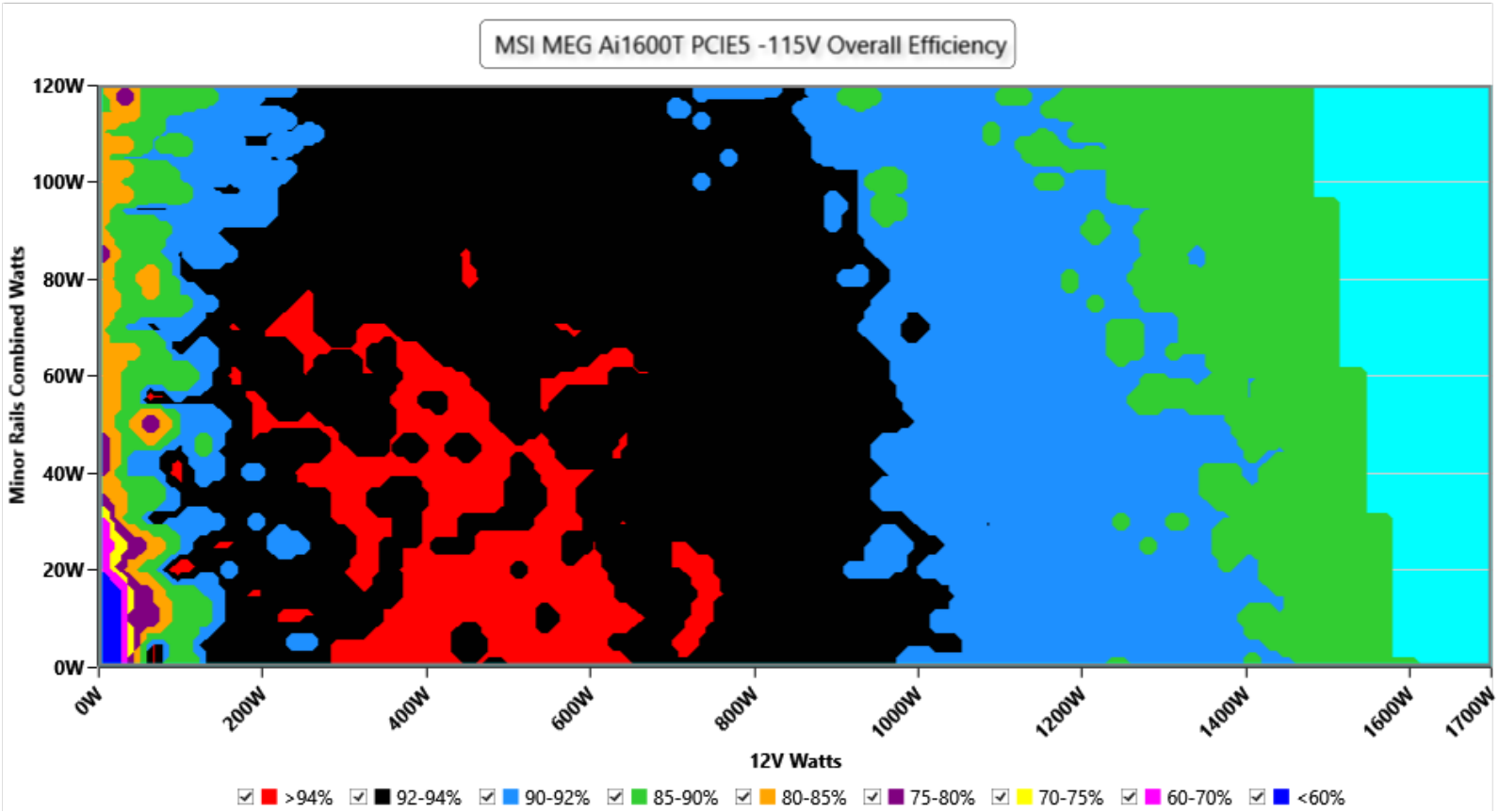
Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	115.05 V	115.01 V	113.85 V	115.09 V	116.15 V	PASS
Mains Frequency:	60.00 Hz	59.95 Hz	59.40 Hz	60.02 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.416	1.415	1.340	1.418	1.490	PASS
Mains Voltage THD:	0.13 %	0.10 %	N/A	0.16 %	2.00 %	PASS
Real Power:	0.029 W	0.011 W	N/A	0.047 W	N/A	N/A
Apparent Power:	15.845 W	15.530 W	N/A	16.173 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	230.88 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 %	0.15 %	N/A	0.27 %	2.00 %	PASS
Real Power:	0.098 W	0.060 W	N/A	0.143 W	N/A	N/A
Apparent Power:	53.178 W	52.503 W	N/A	53.840 W	N/A	N/A
Power Factor:	0.002	N/A	N/A	N/A	N/A	N/A

Efficiency Graph

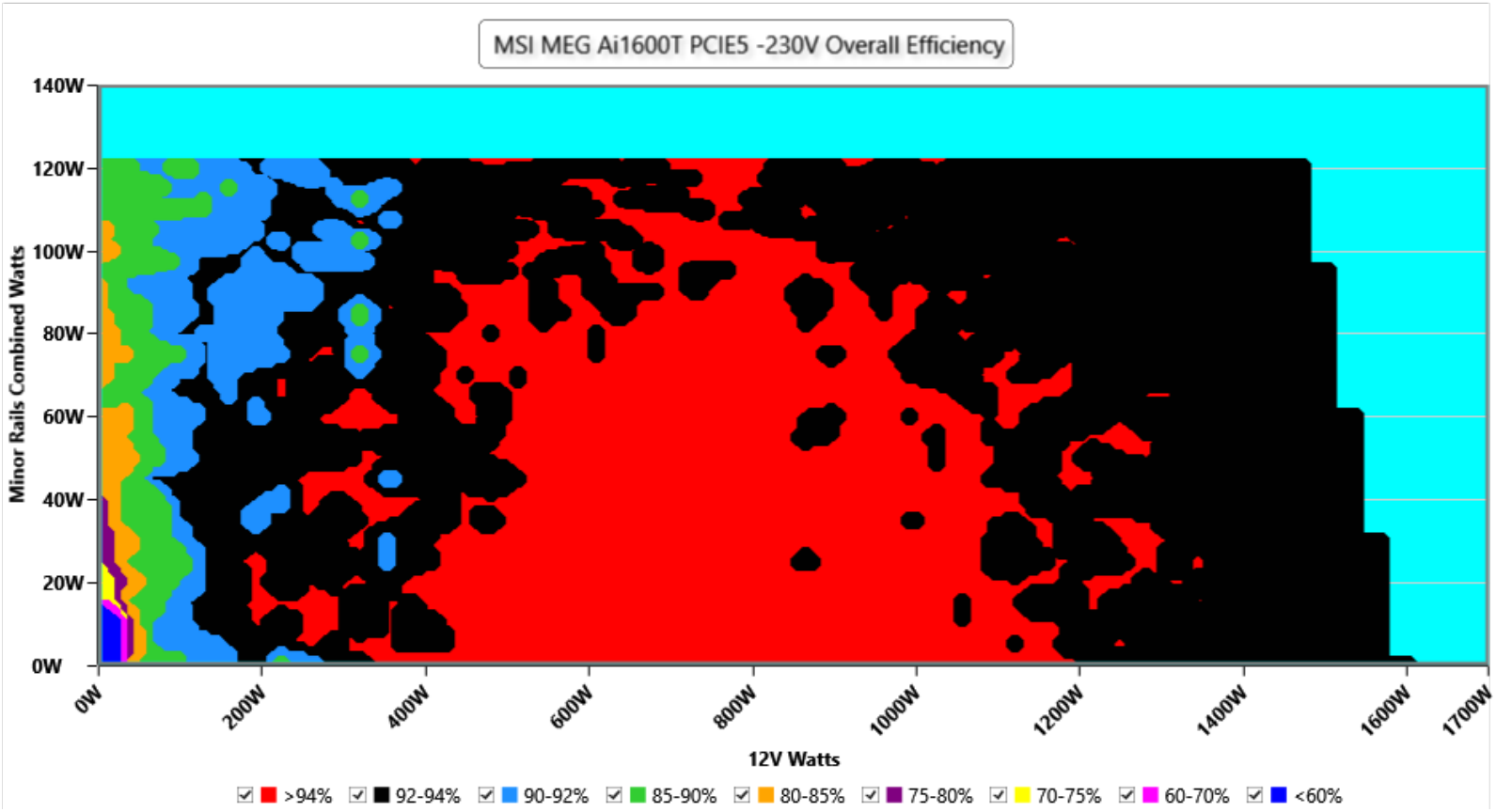
115V



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

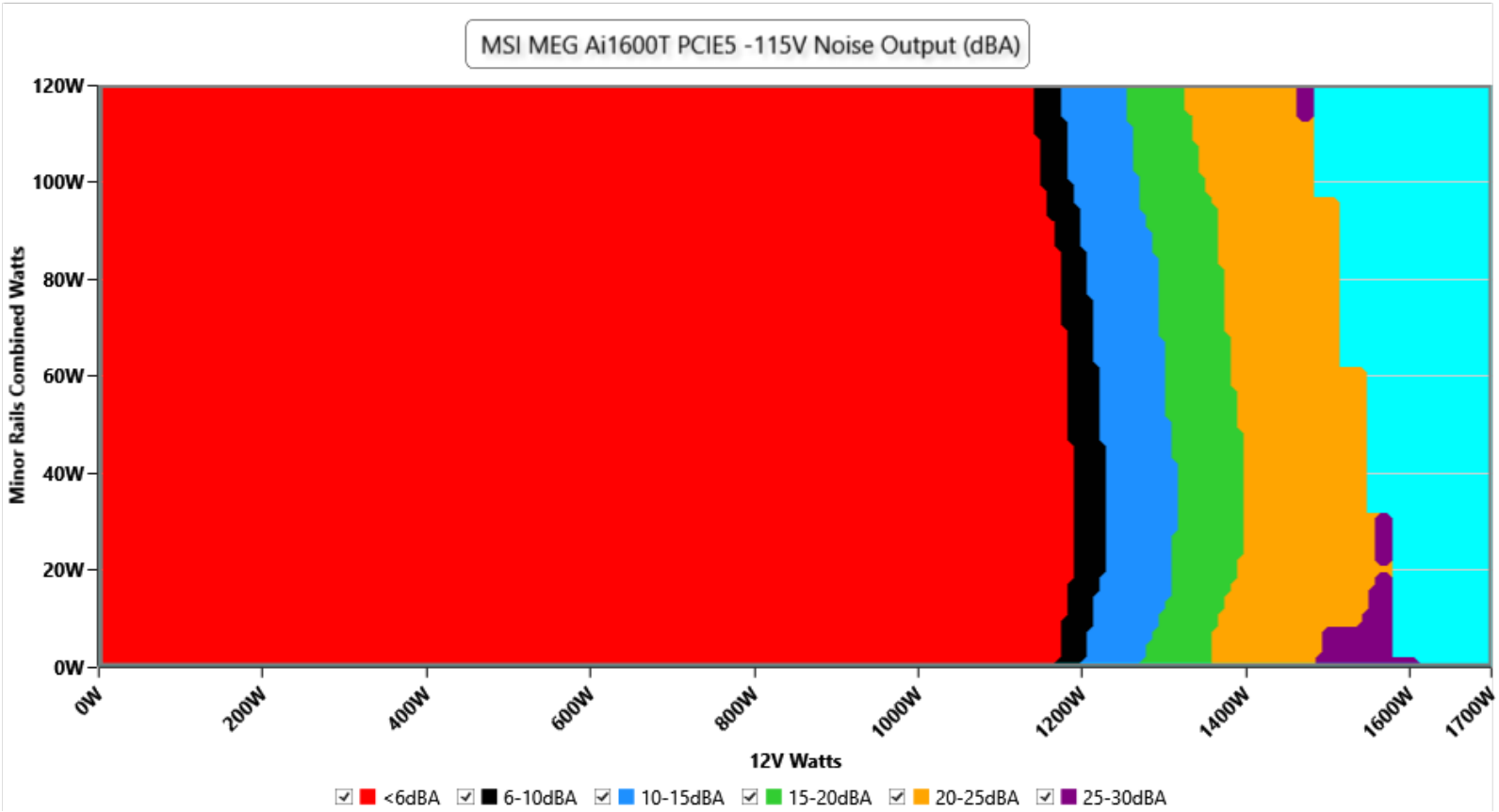


INFO

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Noise Graph

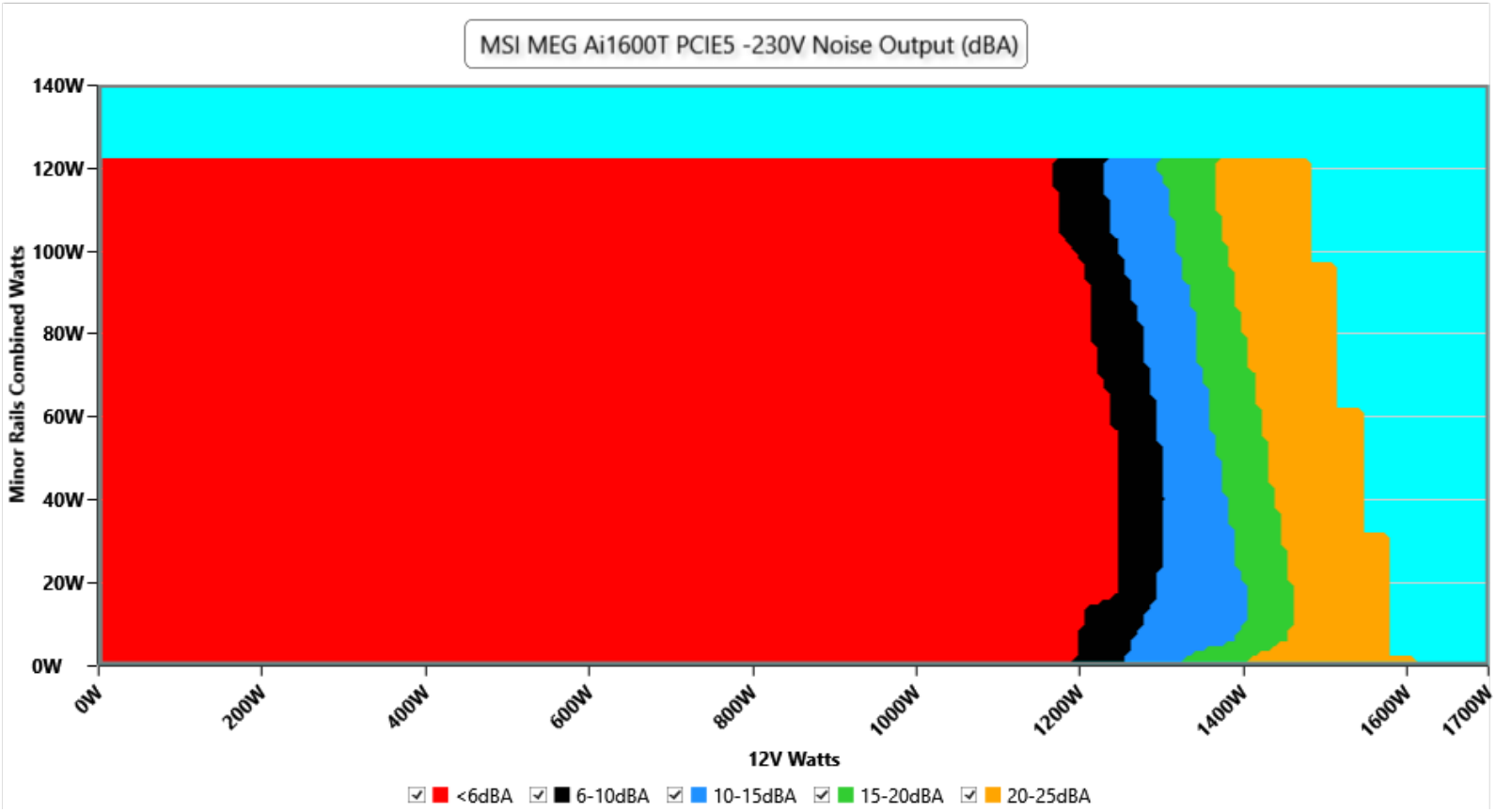
115V



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%	0 RPM · <6.0 dB(A) · 33.7 °C	0 RPM · <6.0 dB(A) · 44.9 °C	fan off in both
20%	0 RPM · <6.0 dB(A) · 32.9 °C	0 RPM · <6.0 dB(A) · 44.8 °C	fan off in both
50%	0 RPM · <6.0 dB(A) · 32.9 °C	0 RPM · <6.0 dB(A) · 46.1 °C	fan off in both
100%	975 RPM · 23.4 dB(A) · 30.3 °C	1369 RPM · 34.8 dB(A) · 45.8 °C	**+11.4 dB(A)**

230V

Load	Normal ambient fan · noise · intake	High ambient fan · noise · intake	Noise change
10%	0 RPM · <6.0 dB(A) · 31.0 °C	0 RPM · <6.0 dB(A) · 45.3 °C	fan off in both
20%	0 RPM · <6.0 dB(A) · 32.2 °C	0 RPM · <6.0 dB(A) · 45.3 °C	fan off in both
50%	0 RPM · <6.0 dB(A) · 32.9 °C	0 RPM · <6.0 dB(A) · 47.8 °C	fan off in both
100%	976 RPM · 23.4 dB(A) · 30.2 °C	1376 RPM · 34.7 dB(A) · 45.8 °C	**+11.3 dB(A)**

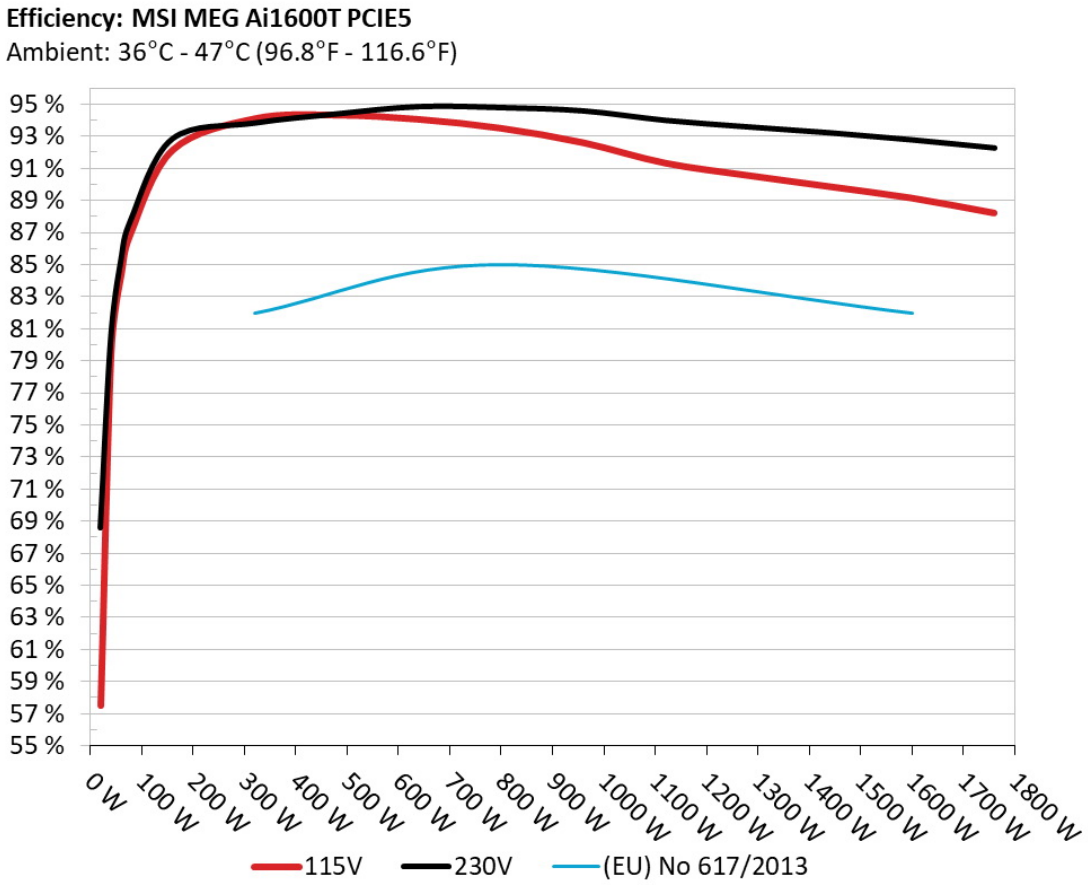
INFO

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

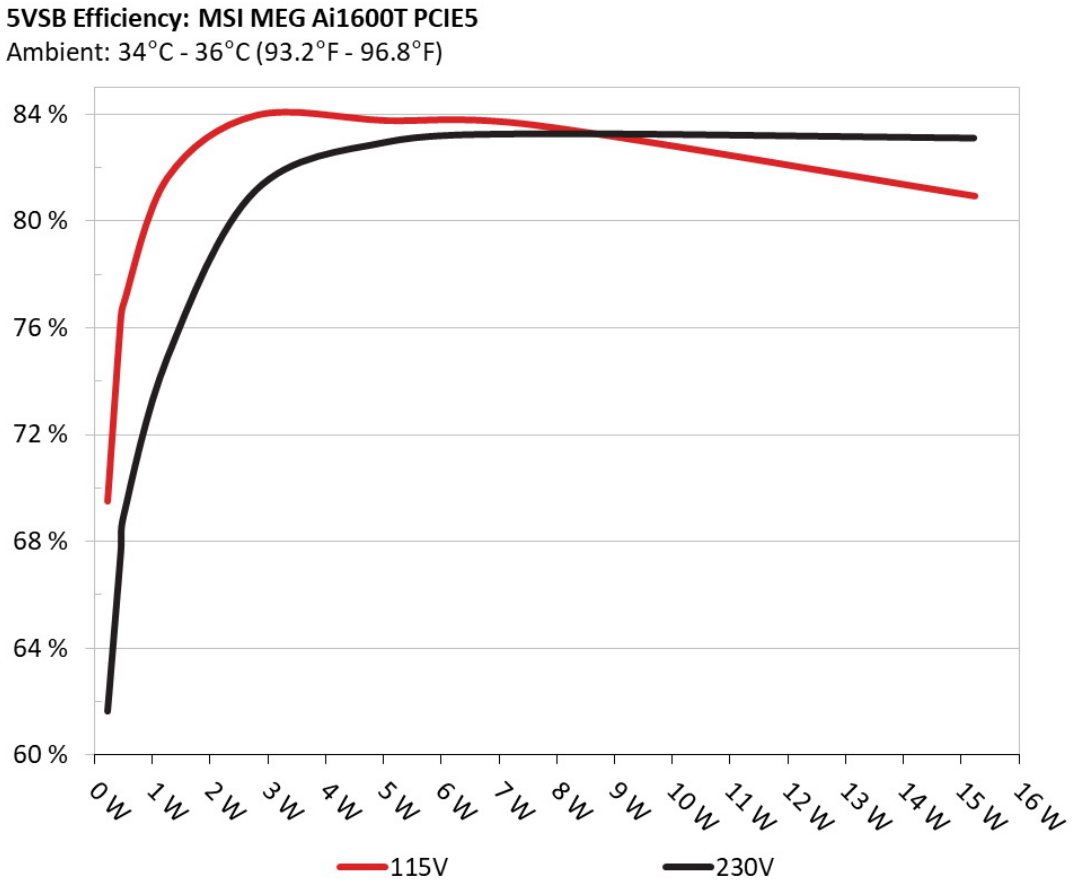
Efficiency under high ambient temperature



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**	0.228W	69.508%	0.021
	5.062V	0.328W		114.87V
2	**0.09A**	0.456W	76.33%	0.039
	5.062V	0.597W		114.88V
3	**0.55A**	2.785W	83.935%	0.198
	5.065V	3.319W		114.87V
4	**1A**	5.067W	83.746%	0.315
	5.068V	6.051W		114.88V
5	**1.5A**	7.605W	83.581%	0.403
	5.07V	9.1W		114.87V
6	**3A**	15.232W	80.924%	0.523
	5.078V	18.823W		114.87V

230V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	**0.045A**	0.228W	61.636%	0.007
	5.06V	0.369W		229.94V
2	**0.09A**	0.456W	67.589%	0.013
	5.061V	0.675W		229.95V
3	**0.55A**	2.785W	81.134%	0.064
	5.063V	3.433W		229.95V
4	**1A**	5.066W	82.96%	0.111
	5.066V	6.107W		229.95V
5	**1.5A**	7.602W	83.266%	0.16
	5.068V	9.13W		229.95V
6	**3A**	15.22W	83.106%	0.278
	5.073V	18.324W		229.93V

Protection Features

OCP (Normal @ 28.9°C)	12V: 163A (122.25%), 12.065V 5V: 28.9A (131.36%), 4.983V 3.3V: 28.6A (130%), 3.272V 5VSB: 4.8A (160%), 5.076V
OCP (Hot @ 45.4°C)	12V: 162.2A (121.65%), 12.063V 5V: 28.9A (131.36%), 4.968V 3.3V: 28.6A (130%), 3.265V 5VSB: 4.8A (160%), 5.073V
OPP (Normal @ 29.6°C)	1975.03W (123.44%)
OPP (Hot @ 44.4°C)	1975.04W (123.44%)
OTP	✓ (106°C @ Heat Sink)
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%	**11.452A**	**1.985A**	**2A**	**0.989A**	159.996	92.145%	0	<6.0	44.87°C	0.984
	12.084V	5.037V	3.3V	5.054V	173.668				40.47°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
20%	**23.928A**	**2.98A**	**3.004A**	**1.189A**	319.96	94.101%	0	<6.0	44.75°C	0.99
	12.080V	5.034V	3.295V	5.048V	339.93				40.51°C	114.77V
30%	**36.696A**	**3.479A**	**3.509A**	**1.389A**	479.173	94.32%	0	<6.0	45.58°C	0.995
	12.075V	5.03V	3.291V	5.041V	508.126				41.08°C	114.72V
40%	**49.572A**	**3.979A**	**4.016A**	**1.589A**	639.576	94.057%	0	<6.0	45.73°C	0.997
	12.071V	5.027V	3.287V	5.035V	679.987				41.66°C	114.66V
50%	**62.057A**	**4.978A**	**5.028A**	**1.79A**	799.308	93.502%	0	<6.0	46.13°C	0.998
	12.067V	5.022V	3.282V	5.027V	854.901				42.41°C	114.6V
60%	**74.627A**	**5.978A**	**6.042A**	**1.989A**	959.791	92.598%	410	<6.0	42.59°C	0.999
	12.060V	5.019V	3.277V	5.028V	1036.456				58.12°C	114.54V
70%	**87.136A**	**6.979A**	**7.059A**	**2.19A**	1119.51	91.328%	451	<6.0	43.49°C	0.999
	12.055V	5.016V	3.273V	5.024V	1225.842				61.39°C	114.47V
80%	**99.722A**	**7.981A**	**8.079A**	**2.292A**	1279.526	90.56%	813	18.9	43.99°C	0.998
	12.050V	5.011V	3.268V	5.018V	1412.905				64.01°C	114.42V
90%	**112.652A**	**8.484A**	**8.579A**	**2.394A**	1439.321	89.863%	1132	28.6	44.86°C	0.998
	12.044V	5.009V	3.263V	5.013V	1601.707				63.08°C	114.34V
100%	**125.401A**	**8.987A**	**9.111A**	**2.994A**	1599.33	89.146%	1369	34.8	45.84°C	0.998
	12.038V	5.007V	3.259V	5.01V	1794.046				61.92°C	114.28V
110%	**138.092A**	**9.991A**	**10.229A**	**2.998A**	1759.927	88.216%	1680	40.1	46.5°C	0.997
	12.032V	5.004V	3.255V	5.003V	1995.102				62.44°C	114.19V
CL1	**0.116A**	**14.404A**	**14.516A**	**0A**	121.308	85.717%	392	<6.0	40.14°C	0.979
	12.081V	5.012V	3.286V	5.049V	141.784				59.59°C	114.82V
CL2	**0.116A**	**22.017A**	**0A**	**0A**	111.335	83.999%	393	<6.0	41.76°C	0.978
	12.085V	4.993V	3.294V	5.054V	132.624				56.54°C	114.83V
CL3	**0.115A**	**0A**	**22.179A**	**0A**	73.984	76.384%	0	<6.0	42.81°C	0.93
	12.083V	5.013V	3.273V	5.049V	96.927				40.08°C	114.84V
CL4	**132.821A**	**0A**	**0A**	**0.001A**	1599.909	89.597%	1030	25.8	45.27°C	0.998
	12.045V	5.01V	3.265V	5.001V	1785.887				62.67°C	114.29V

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%	**11.452A**	**1.985A**	**2A**	**0.989A**	159.993	92.831%	0	<6.0	45.25°C	0.865
	12.085V	5.037V	3.299V	5.054V	172.407				40.41°C	229.93V
20%	**23.928A**	**2.981A**	**3.005A**	**1.189A**	319.957	93.824%	0	<6.0	45.32°C	0.949
	12.080V	5.033V	3.295V	5.047V	341.052				40.57°C	229.9V
30%	**36.695A**	**3.48A**	**3.51A**	**1.389A**	479.177	94.387%	0	<6.0	46.32°C	0.956
	12.076V	5.029V	3.291V	5.04V	507.663				41.25°C	229.87V
40%	**49.568A**	**3.98A**	**4.017A**	**1.59A**	639.578	94.848%	0	<6.0	46.62°C	0.973
	12.072V	5.025V	3.286V	5.033V	674.305				41.52°C	229.85V
50%	**62.050A**	**4.981A**	**5.029A**	**1.791A**	799.319	94.786%	0	<6.0	47.77°C	0.979
	12.068V	5.02V	3.281V	5.026V	843.218				42.05°C	229.82V
60%	**74.617A**	**5.981A**	**6.044A**	**1.989A**	959.797	94.578%	407	<6.0	42.83°C	0.982
	12.062V	5.017V	3.276V	5.027V	1014.877				54.32°C	229.8V
70%	**87.133A**	**6.981A**	**7.061A**	**2.19A**	1119.516	93.99%	451	<6.0	43.03°C	0.984
	12.055V	5.015V	3.272V	5.024V	1191.048				55.45°C	229.77V
80%	**99.725A**	**7.981A**	**8.08A**	**2.292A**	1279.535	93.583%	821	18.9	43.72°C	0.983
	12.049V	5.012V	3.267V	5.018V	1367.217				56.01°C	229.75V
90%	**112.657A**	**8.484A**	**8.58A**	**2.394A**	1439.325	93.215%	1087	27.4	44.2°C	0.984
	12.044V	5.009V	3.263V	5.013V	1544.227				55.72°C	229.72V
100%	**125.401A**	**8.987A**	**9.112A**	**2.995A**	1599.335	92.775%	1376	34.7	45.75°C	0.984
	12.038V	5.007V	3.259V	5.009V	1724.119				56.52°C	229.69V
110%	**138.086A**	**9.992A**	**10.231A**	**2.999A**	1759.932	92.269%	1719	40.5	46.06°C	0.985
	12.033V	5.004V	3.254V	5.002V	1907.551				57.19°C	229.66V
CL1	**0.116A**	**14.406A**	**14.519A**	**0A**	121.31	86.304%	392	<6.0	40.45°C	0.802
	12.082V	5.012V	3.285V	5.049V	140.769				55.19°C	229.94V
CL2	**0.116A**	**22.017A**	**0A**	**0A**	111.338	84.616%	391	<6.0	41.03°C	0.812
	12.086V	4.993V	3.294V	5.054V	131.755				53.48°C	229.94V
CL3	**0.115A**	**0A**	**22.171A**	**0A**	73.987	76.805%	0	<6.0	41.88°C	0.739
	12.083V	5.014V	3.274V	5.049V	96.475				36.79°C	229.94V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
CL4	**132.829A**	**0A**	**0A**	**0.001A**	1599.912	93.173%	1028	25.8	45.75°C	0.984
	12.044V	5.011V	3.267V	5V	1717.182				56.27°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	**1.229A**	**0.496A**	**0.499A**	**0.198A**	20.005	57.487%	0	<6.0	37.84°C	0.807
	12.087V	5.043V	3.305V	5.057V	36.304				36.57°C	114.86V
40W	**2.704A**	**0.694A**	**0.699A**	**0.297A**	40.001	79.468%	0	<6.0	39.78°C	0.864
	12.087V	5.042V	3.304V	5.058V	50.308				37.19°C	114.86V
60W	**4.180A**	**0.893A**	**0.899A**	**0.395A**	59.999	84.458%	0	<6.0	42.26°C	0.903
	12.088V	5.041V	3.303V	5.057V	71.098				38.35°C	114.85V
80W	**5.652A**	**1.091A**	**1.099A**	**0.494A**	79.941	87.09%	0	<6.0	42.4°C	0.926
	12.087V	5.04V	3.303V	5.056V	91.857				39.24°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	**1.230A**	**0.496A**	**0.499A**	**0.198A**	20.006	68.608%	0	<6.0	38.5°C	0.398
	12.087V	5.042V	3.304V	5.06V	29.323				36.4°C	229.95V
40W	**2.704A**	**0.694A**	**0.699A**	**0.296A**	39.998	80.283%	0	<6.0	43.25°C	0.553
	12.088V	5.041V	3.304V	5.059V	49.892				37.96°C	229.95V
60W	**4.180A**	**0.893A**	**0.899A**	**0.395A**	59.998	85.264%	0	<6.0	41.18°C	0.652
	12.088V	5.041V	3.303V	5.058V	70.259				38.97°C	229.94V
80W	**5.651A**	**1.091A**	**1.099A**	**0.494A**	79.938	87.843%	0	<6.0	45.02°C	0.723
	12.088V	5.04V	3.302V	5.057V	91.094				39.43°C	229.94V

The results above are not used in the certification process

Ripple Measurements

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	12.06mV	8.81mV	10.39mV	8.05mV	Pass
20% Load	14.74mV	9.07mV	11.69mV	8.57mV	Pass
30% Load	17.89mV	9.38mV	11.12mV	9.09mV	Pass
40% Load	21.70mV	9.53mV	12.15mV	10.48mV	Pass
50% Load	23.00mV	10.15mV	13.19mV	10.84mV	Pass
60% Load	21.34mV	10.56mV	14.12mV	11.20mV	Pass
70% Load	23.10mV	16.79mV	18.82mV	12.96mV	Pass
80% Load	25.93mV	19.99mV	21.98mV	13.63mV	Pass
90% Load	27.48mV	13.14mV	18.62mV	14.30mV	Pass
100% Load	32.94mV	13.83mV	21.03mV	17.75mV	Pass
110% Load	34.16mV	14.31mV	22.13mV	17.55mV	Pass
Crossload1	14.51mV	10.38mV	13.55mV	8.10mV	Pass
Crossload2	11.96mV	15.25mV	11.48mV	7.79mV	Pass
Crossload3	12.99mV	9.63mV	14.33mV	7.64mV	Pass
Crossload4	32.81mV	13.55mV	21.09mV	13.90mV	Pass

The results above are not used in the certification process

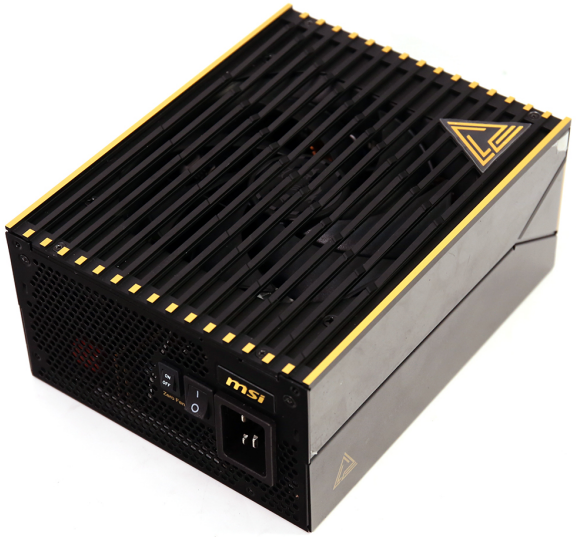
230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	12.74mV	9.12mV	10.29mV	8.00mV	Pass
20% Load	13.66mV	9.43mV	11.74mV	8.83mV	Pass
30% Load	16.39mV	10.20mV	12.20mV	9.45mV	Pass
40% Load	18.41mV	10.15mV	13.08mV	9.91mV	Pass
50% Load	20.88mV	10.41mV	14.84mV	10.63mV	Pass
60% Load	21.14mV	16.38mV	18.41mV	11.20mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
70% Load	23.66mV	19.78mV	19.91mV	12.39mV	Pass
80% Load	25.68mV	20.15mV	21.93mV	13.57mV	Pass
90% Load	26.55mV	13.03mV	18.72mV	15.64mV	Pass
100% Load	33.50mV	14.45mV	21.56mV	17.47mV	Pass
110% Load	36.06mV	14.11mV	22.76mV	18.69mV	Pass
Crossload1	16.31mV	11.20mV	13.69mV	8.33mV	Pass
Crossload2	12.37mV	15.30mV	11.22mV	8.36mV	Pass
Crossload3	13.35mV	8.91mV	14.17mV	7.74mV	Pass
Crossload4	33.40mV	13.52mV	20.88mV	13.94mV	Pass

The results above are not used in the certification process

MSI MEG Ai1600T PCIE5



Top side



Power specifications label

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