GIGABYTE™

Gigabyte GP-UD1600PM PG5

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Lab ID GB16003305

Certification ID 263305

Test Result Report ID: 26PS3305A

Certificate Issue Date: Jun 16, 2026

115V

Scheme: ETA-EMI PSU



115V



Scheme: LAMBDA PSU



Aristeidis Bitziopoulos, Certification Body General Manager

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	Gigabyte
Model	GP-UD1600PM PG5
OEM/ODM	Guangzhou Pansheng Electronic Technology Co., Ltd
Serial Number	-
Product Specifications	
Manufacturer-Provided Information	
□□□□ (Vrms)	100-240
□□□□ (Arms)	7.5-15
□□□□ (Hz)	50-60

□□□□ (W)	1600
Operating Temperature (Continuous Full Load) (°C)	0 - 50
□□	ATX12V
□□□□	Fully Modular
Warranty	10 years
Cybenetics Measurements	
Dimensions (W x H x D)	150 x 85 x 190mm
Weight	2.48 kg (5.47 lb)
□□	140mm Dual Ball Bearing Fan (PLA14025B12H)
□□□□□	✓
Cybenetics Testing Information	
Lab ID	GB16003305
Date of receipt	May 6, 2026
Testing Date	May 29, 2026
Report Issued Date	Jun 16, 2026
□□□□□	The Power OK signal is inaccurate.
Engineer Name	Ioannis Kalyviotis
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

□□□□ (Non-accredited measurements)

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□□	□□□□	□□□□□□	**Gauge**	**Cable Type**
ATX □□ 20+4 pin (600mm)	1	1	16-22AWG	Tinned Copper
4+4 pin EPS 12V □□ (650mm)	2	2	16AWG	Tinned Copper
6+2pin PCIe□□ (650mm+150mm)	4	8	16AWG	Tinned Copper
6+2pin PCIe□□ (650mm)	2	2	16AWG	Tinned Copper
2x 8 pin PCIe (700mm)	4	4	18AWG	Tinned Copper
12+4 pin PCIe (700mm) (600W)	2	2	16-28AWG	Tinned Copper
SATA□□ (650mm+150mm+150mm+150mm)	2	8	18AWG	Tinned Copper

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4-pin Molex (600mm+150mm+150mm) / FDD (+150mm)	2	6 / 2	18AWG	Tinned Copper

Protection Features(Manufacturer)

Over Power Protection	✓
Over Current (+12V) Protection	✓
Over Temperature Protection	✓
Short Circuit Protection	✓
Surge Protection	✓
Inrush Current Protection	✓
Fan Failure Protection	✗

□□□□

□		3.3V	5V	12V	5VSB	-12V
□□□□	□□	30	30	133.3	3.5	0.8
	□	150		1600	17.5	9.6
□□□□□ (W)		1600				

Parts Description

General Data	
Manufacturer (OEM)	Guangzhou Pansheng Electronic Technology Co., Ltd
PCB Type	Double-Sided
Primary Side	
Transient Filter	8x Y caps, 5x X caps, 2x CM chokes, 1x MOV
Inrush Protection	NTC Thermistor MF72-15D25 (15 Ohm @ 25°C) & Relay
Bridge Rectifier	2x Willas RS2505M (600V, 25A @ 100°C)
APFC MOSFETs	2x CR Micro CRJQ80N65F (650V, 29A @ 100°C, Rds(on): 0.90Ohm)
APFC Boost Diode	2x CR Micro CRXI12D065G2 (650V, 12A @ 163°C)
Bulk Cap(s)	2x Nippon Chemi-con (420V, 880µF, 2000h @ 105°C, KHE) 1x Nippon Chemi-con (450V, 390µF, 2000h @ 105°C, KMZ)

Main Switchers	4x Great Power GP47S60YERD (600V, 47A @ 100°C, Rds(on): 0.81Ohm)
APFC Controller	Champion CU6510VC Champion CM03AX (reducing no load consumption)
Resonant Controller	Champion CU6901VACC
IC Driver	2x Skyworks Si8233BD
Topology	Primary side: APFC, Full-Bridge & LLC Resonant Converter Secondary side: [12V] Synchronous Rectification & [Minor Rails] DC-DC converters
Secondary Side	
+12V MOSFETs	16x
5V & 3.3V	DC-DC Converters: 8x Alpha and Omega Semiconductor PWM Controller(s): 2x ON Semi NCP5230
Filtering Capacitors	Electrolytic: 2x Rubycon (@ 105°C, ZLH) 1x Rubycon (@ 105°C, YXJ) 1x Nippon Chemi-con (@ 105°C, KZE) 2x Nippon Chemi-con (@ 105°C, W) Polymer: 8x AP-CON 2x FP-CAP 69x
Supervisor IC	Weltrend WT7502R
Fan Model	Power Logic PLA14025B12H (140mm, 12V, 0.50A, Dual Ball Bearing Fan)
5VSB Circuit	
Rectifier	2x PANJIT SVM1045V2B (45V, 10A)
Standby PWM Controller	Chipown PN8160

Test Results

Temperature & Compliance Info

□□□ (°C /°F)	28-32 / 82.4-89.6
□□ ErP Lot3/6□□	✓
□□ (EU) No 617/2013□□	✓

ALPM (Alternative Low Power Mode) compatible	✓

Performance Summary 115V

Accredited	
□□□□ (>1450 load combinations)	89.416%
Average Noise Output (>1450 Load Combinations)	38.54dBA
PF□□□ (>1450 Load Combinations)	0.983
Efficiency With 10W (≤500W) or 2% (>500W) Load	67.480%
□□□□□□	0.0270W
Non-Accredited	
12V Ripple (Full Load)	52.99mV
5V Ripple (Full Load)	28.84mV
3.3V Ripple (Full Load)	39.86mV
5VSB Ripple (Full Load)	22.22mV
12V Load Regulation	0.20%
5V Load Regulation	0.84%
3.3V Load Regulation	1.22%
5VSB Load Regulation	1.77%
Inrush Current	18.260A

□□□□ & PG□□

Hold-Up Time (ms)	28.5
AC Loss to PWR_OK Hold Up Time (ms)	32.5
PWR_OK Inactive to DC Loss Delay (ms)	-4

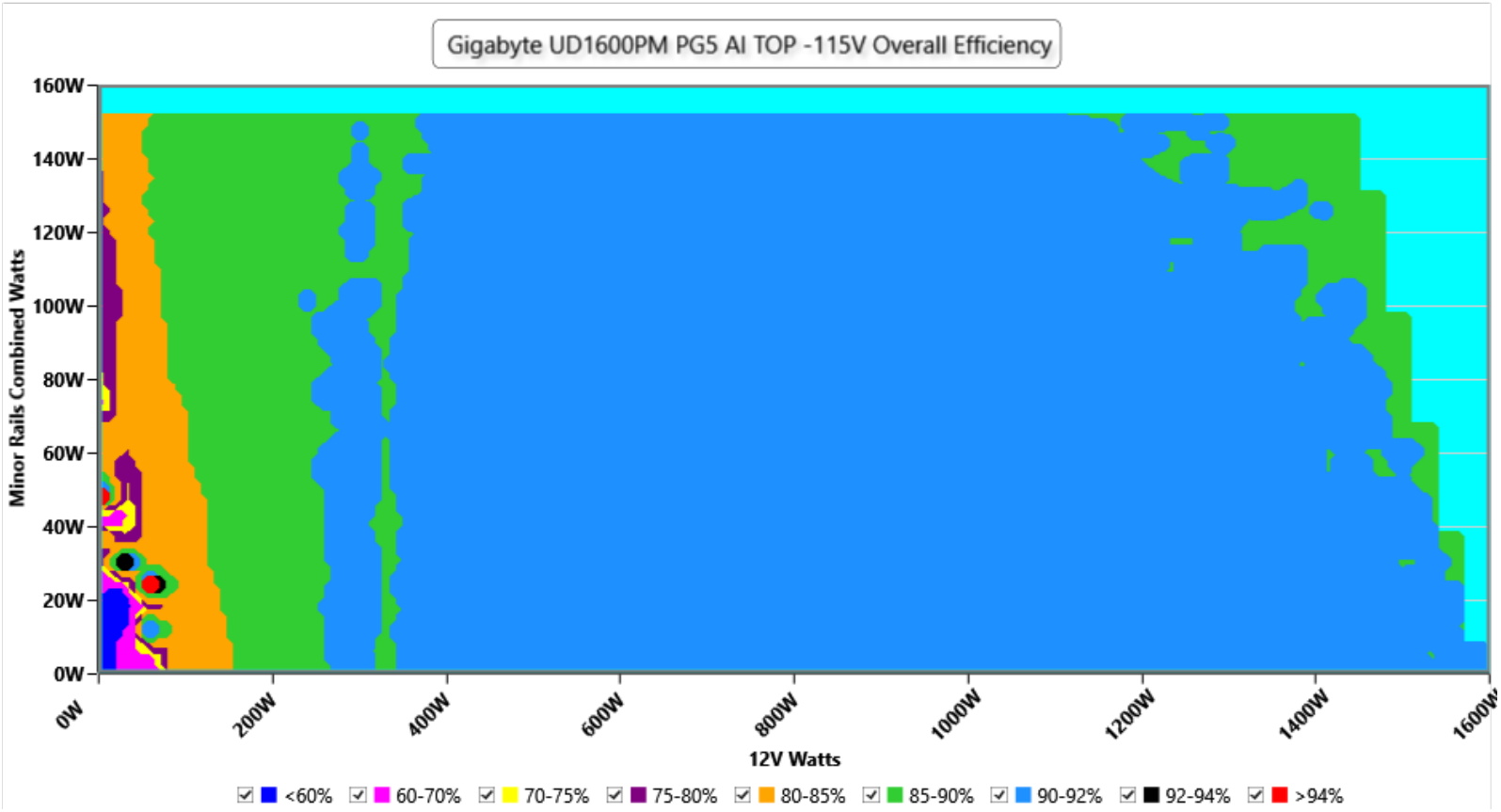
□□□□

Tables 115V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result

Mains Voltage RMS:	114.99 V	114.97 V	113.85 V	115.02 V	116.15 V	PASS
Mains Frequency:	60.00 Hz	60.00 Hz	59.40 Hz	60.01 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.416	1.416	1.340	1.417	1.490	PASS
Mains Voltage THD:	0.13 %	0.11 %	N/A	0.16 %	2.00 %	PASS
Real Power:	0.027 W	0.011 W	N/A	0.042 W	N/A	N/A
Apparent Power:	24.967 W	24.938 W	N/A	24.999 W	N/A	N/A
Power Factor:	0.001	N/A	N/A	N/A	N/A	N/A

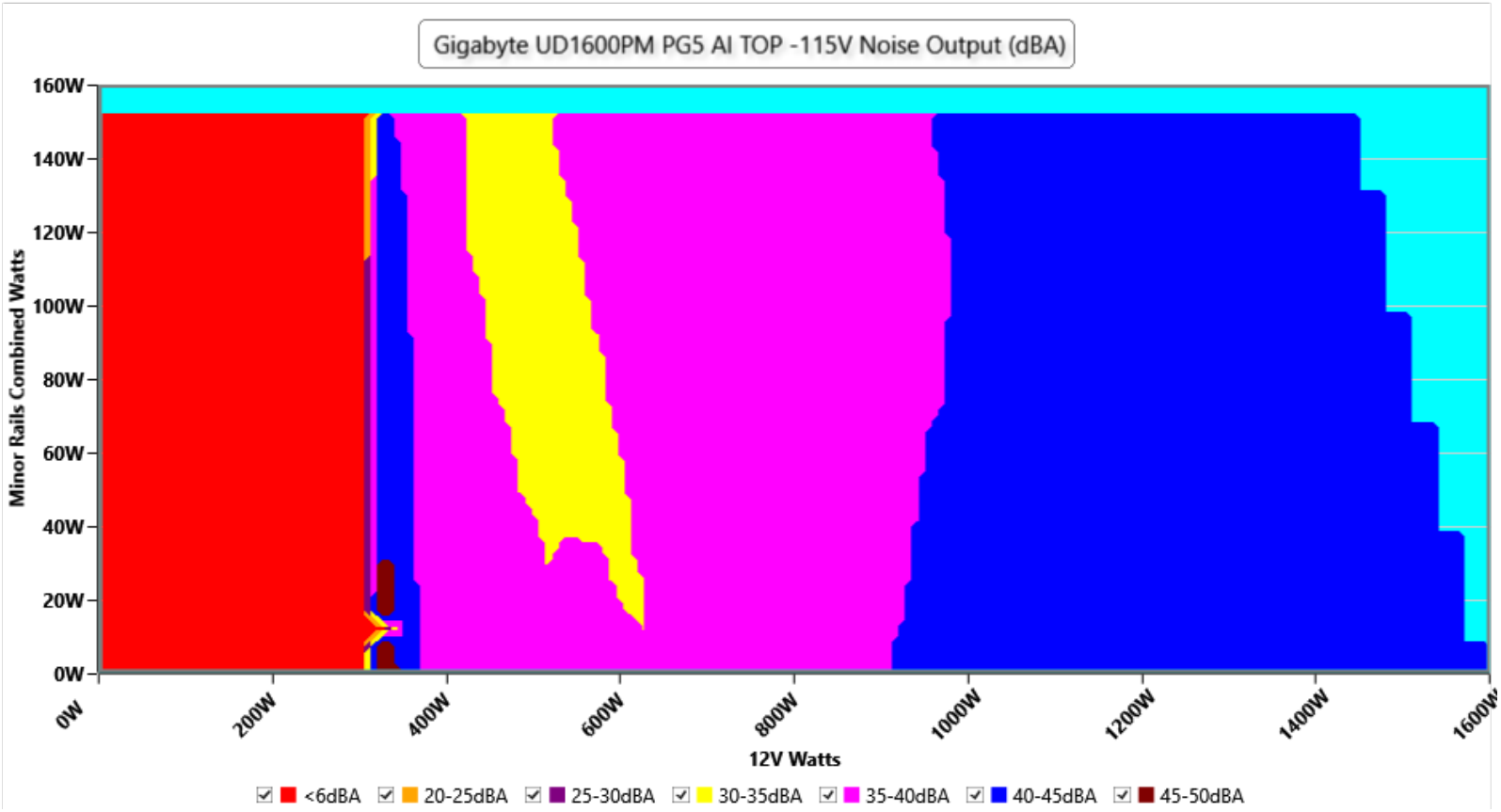
115V



□□

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

115V



□□

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

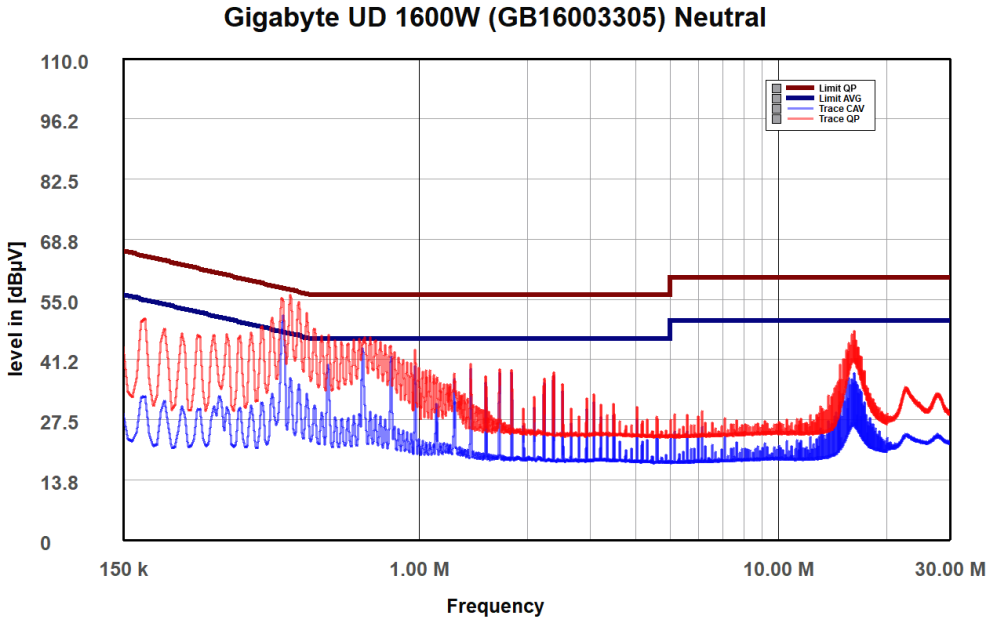
Load	Normal ambient fan · noise · intake	High ambient fan · noise · intake	Noise change
10%	0 RPM · <6.0 dB(A) · 39.3 °C	0 RPM · <6.0 dB(A) · 41.2 °C	fan off in both
20%	0 RPM · <6.0 dB(A) · 38.6 °C	0 RPM · <6.0 dB(A) · 42.6 °C	fan off in both
50%	1097 RPM · 37.3 dB(A) · 30.6 °C	1370 RPM · 42.2 dB(A) · 42.2 °C	**+4.9 dB(A)**
100%	1295 RPM · 40.9 dB(A) · 30.6 °C	1730 RPM · 47.2 dB(A) · 45.4 °C	**+6.3 dB(A)**

INFO

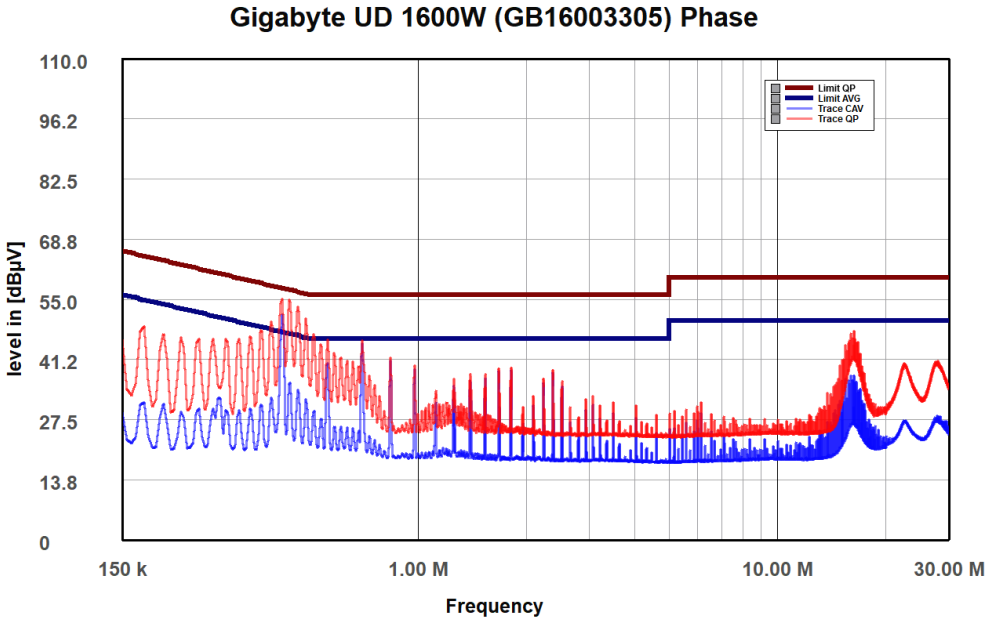
Fan speed, noise and the measured intake temperature at 10, 20, 50 and 100 % load, from the two load regulation tests: at normal ambient (about 30-32 °C) and at high ambient (about 40-47 °C). These are stabilized readings at fixed loads, not averages over the certification sweep, so they are indicative of how the fan behaves when it is hot. "<6.0" is the floor of our sound meter, 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.

Conducted Emissions EN 55032 & CISPR 32

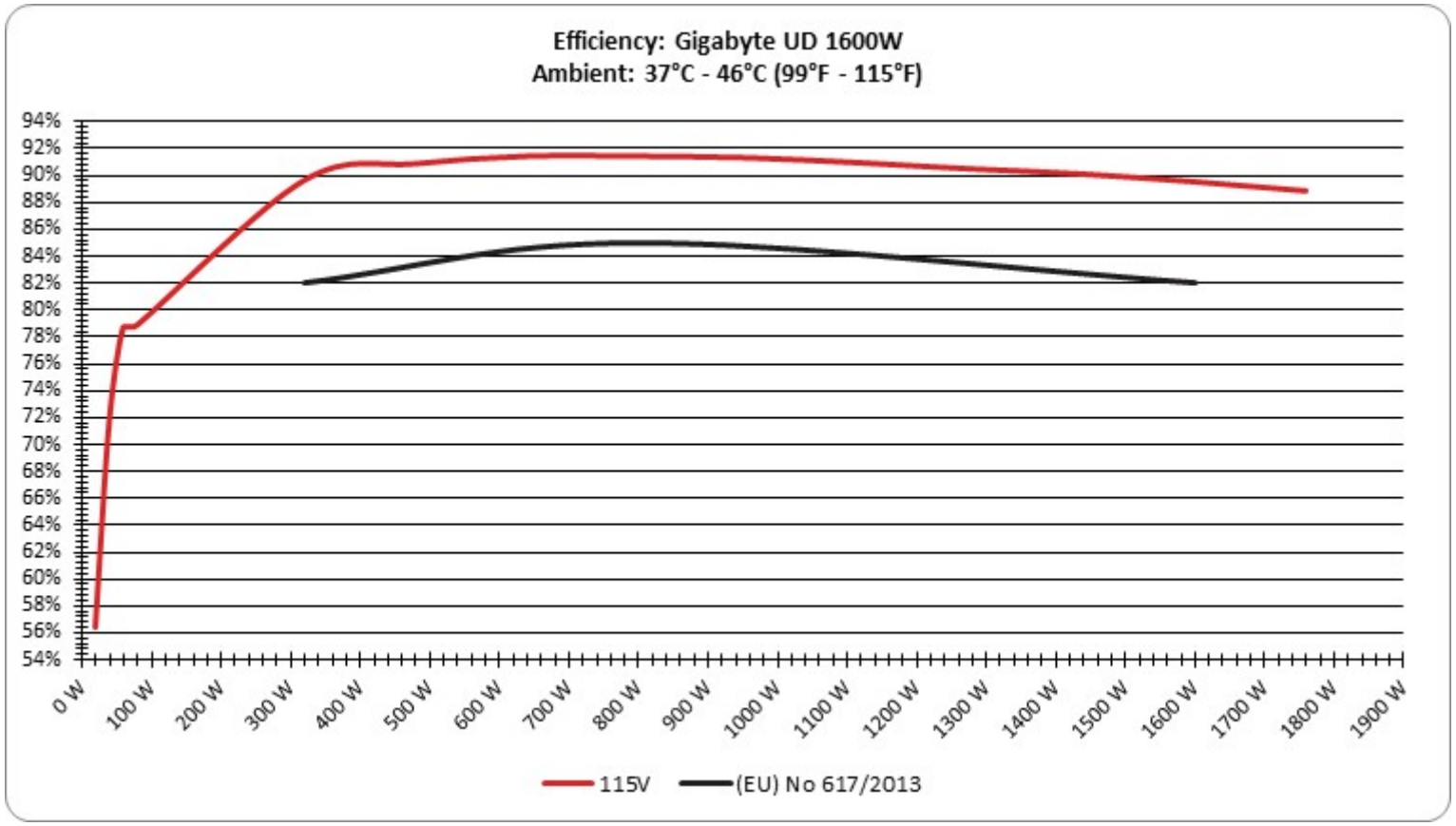


NEUTRAL



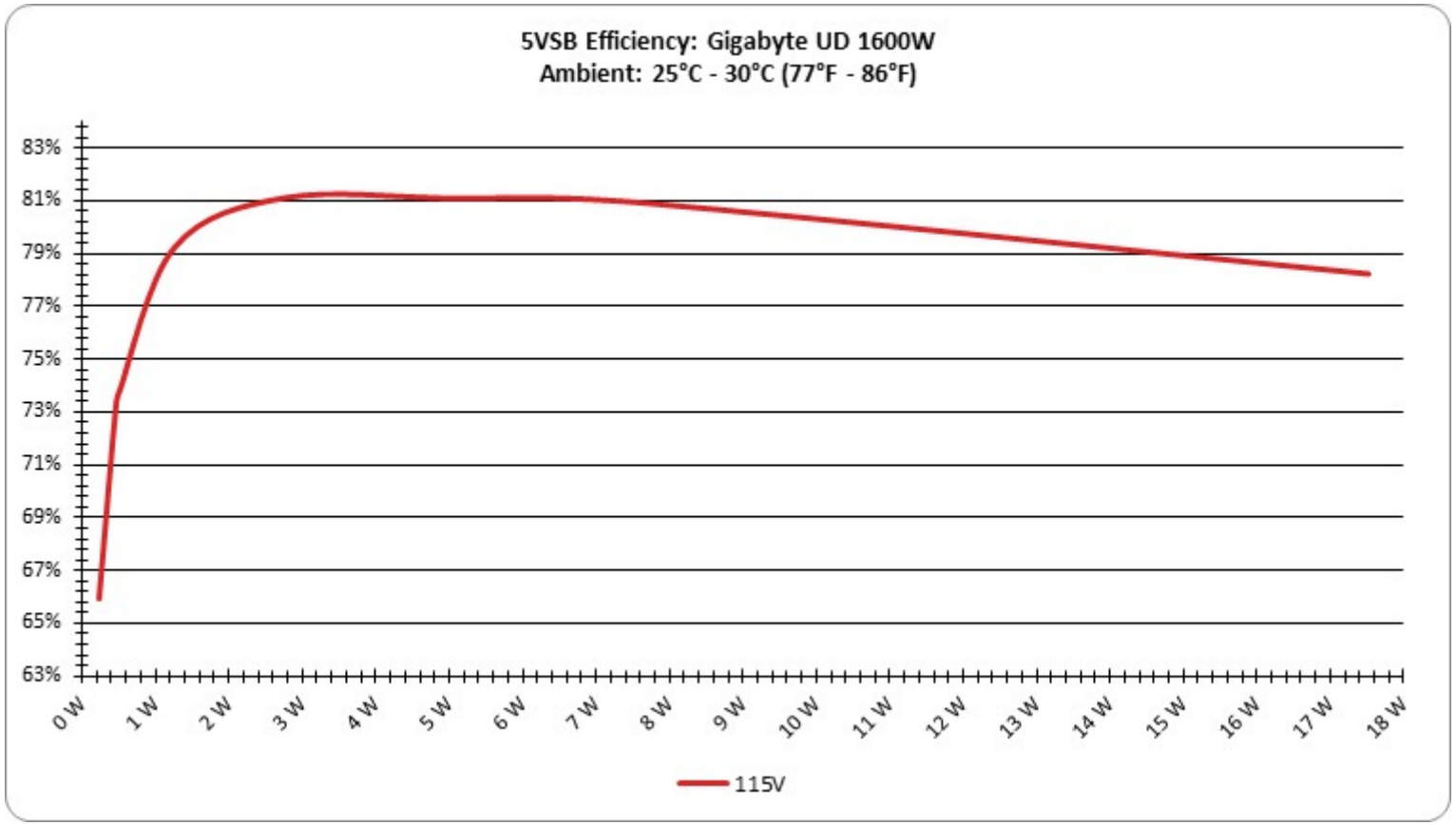
PHASE

Indicative Performance



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□□□□



□□

This graph depicts the efficiency levels of the 5VSB rail with 115V and 230V input

□□□□ □□ 5Vsb □□ (ErP Lot3/6 & CEC) 115V

□□ #	5VSB	DC/AC (□)	□□	PF/AC □□
1	**0.045A**	0.228W	65.961%	0.014
	5.053V	0.346W		114.89V

2	**0.09A**	0.455W	73.2%	0.025
	5.053V	0.622W		114.89V
3	**0.1A**	0.505W	73.793%	0.027
	5.052V	0.685W		114.89V
4	**0.25A**	1.263W	79.249%	0.063
	5.05V	1.594W		114.88V
5	**0.55A**	2.776W	81.102%	0.131
	5.047V	3.423W		114.87V
6	**1A**	5.041W	81.068%	0.224
	5.041V	6.218W		114.87V
7	**1.5A**	7.552W	80.921%	0.307
	5.034V	9.333W		114.87V
8	**3.5A**	17.522W	78.225%	0.489
	5.006V	22.4W		114.86V

Protection Features

OCP (Normal @ 28.0°C)	12V: 178.10A (133.61%), 11.993V 5V: 45.7A (152.33%), 4.978V 3.3V: 39.8A (132.67%), 3.287V 5VSB: 4.8A (137.14%), 4.989V
OCP (Hot @ 42.2°C)	12V: 183.80A (137.88%), 12.011V 5V: 42.6A (142.00%), 4.978V 3.3V: 38.6A (128.67%), 3.287V 5VSB: 4.8A (137.14%), 4.989V
OPP (Normal @ 28.1°C)	2130.71W (133.17%)
OPP (Hot @ 42.1°C)	2173.09W (135.82%)
OTP	✓ (135°C @ Secondary Side)
SCP	12V to Earth: ✓ 5V to Earth: ✓ 3.3V to Earth: ✓ 5VSB to Earth: ✓ -12V to Earth: ✓
PWR_OK	Inaccurate

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)

10-110%□□□□ 115V

□□	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
10%	**11.504A**	**1.987A**	**1.986A**	**0.993A**	159.983	83.727%	0	<6.0	41.22°C	0.951
	12.029V	5.033V	3.323V	5.037V	191.065				40.13°C	114.83V
20%	**24.016A**	**2.983A**	**2.983A**	**1.194A**	319.936	89.655%	0	<6.0	42.56°C	0.97
	12.035V	5.028V	3.318V	5.025V	356.879				40.61°C	114.78V
30%	**36.839A**	**3.483A**	**3.485A**	**1.395A**	479.102	90.894%	1333	41.5	41.12°C	0.989
	12.027V	5.025V	3.315V	5.017V	527.104				43.41°C	114.71V
40%	**49.772A**	**3.983A**	**3.987A**	**1.597A**	639.512	91.449%	1190	39.0	41.83°C	0.993
	12.021V	5.021V	3.311V	5.01V	699.312				45.21°C	114.65V
50%	**62.290A**	**4.984A**	**4.991A**	**1.8A**	799.265	91.452%	1370	42.2	42.19°C	0.995
	12.021V	5.016V	3.306V	5.002V	873.968				45.32°C	114.61V
60%	**74.889A**	**5.986A**	**5.997A**	**2A**	959.742	91.332%	1407	42.8	42.74°C	0.996
	12.017V	5.012V	3.302V	4.996V	1050.861				45.64°C	114.55V
70%	**87.410A**	**6.99A**	**7.007A**	**2.205A**	1119.497	90.958%	1486	43.8	43.44°C	0.997
	12.017V	5.008V	3.297V	4.989V	1230.801				46.87°C	114.48V
80%	**100.020A**	**7.994A**	**8.009A**	**2.306A**	1279.532	90.507%	1546	44.7	43.78°C	0.997
	12.014V	5.003V	3.296V	4.985V	1413.774				48.74°C	114.43V
90%	**112.947A**	**8.5A**	**8.504A**	**2.408A**	1439.335	90.123%	1634	45.8	44.57°C	0.998
	12.013V	4.999V	3.292V	4.984V	1597.094				50.97°C	114.35V

100%	**125.496A**	**9.008A**	**9.031A**	**3.524A**	1599.47	89.55%	1730	47.2	45.36°C	0.998
	12.010V	4.995V	3.288V	4.966V	1786.23				53.02°C	114.29V
110%	**138.162A**	**10.018A**	**10.139A**	**3.526A**	1760.088	88.87%	1836	48.4	46.25°C	0.998
	12.010V	4.991V	3.284V	4.963V	1980.557				58.11°C	114.21V
CL1	**0.117A**	**18.029A**	**18.045A**	**0A**	151.286	79.64%	0	<6.0	54.74°C	0.933
	12.041V	5.008V	3.302V	5.053V	189.967				40.8°C	114.82V
CL2	**0.116A**	**29.964A**	**0A**	**0A**	151.174	78.842%	0	<6.0	54.09°C	0.938
	12.046V	4.999V	3.315V	5.053V	191.751				40.18°C	114.82V
CL3	**0.115A**	**0A**	**30.042A**	**0A**	100.38	73.832%	0	<6.0	55.05°C	0.903
	12.043V	5.024V	3.295V	5.056V	135.968				40.93°C	114.84V
CL4	**133.193A**	**0A**	**0A**	**0A**	1599.941	89.826%	1670	46.3	45.23°C	0.998
	12.012V	5.009V	3.299V	5.017V	1781.208				48.37°C	114.31V

The results above are not used in the certification process

20-80□□□□□ 115V

□□	**12V**	**5V**	**3.3V**	**5VSB**	**DC/AC (□)**	□□	□□□□ **(RPM)**	□□□□□□□ **(dB[A])**	□□ **(□□ /□□)**	**PF/AC □□**
20W	**1.237A**	**0.496A**	**0.496A**	**0.198A**	20.011	59.29%	0	<6.0	41.87°C	0.424
	12.015V	5.037V	3.328V	5.054V	33.75				36.37°C	114.86V
40W	**2.720A**	**0.695A**	**0.694A**	**0.297A**	40.003	71.68%	0	<6.0	38.27°C	0.645
	12.018V	5.036V	3.327V	5.052V	56.245				37.08°C	114.86V
60W	**4.204A**	**0.893A**	**0.893A**	**0.396A**	59.999	78.703%	0	<6.0	39.03°C	0.721
	12.021V	5.036V	3.327V	5.049V	80.07				38.86°C	114.85V
80W	**5.681A**	**1.092A**	**1.091A**	**0.495A**	79.934	78.891%	0	<6.0	39.66°C	0.832
	12.023V	5.035V	3.326V	5.048V	102.537				39.18°C	114.85V

The results above are not used in the certification process

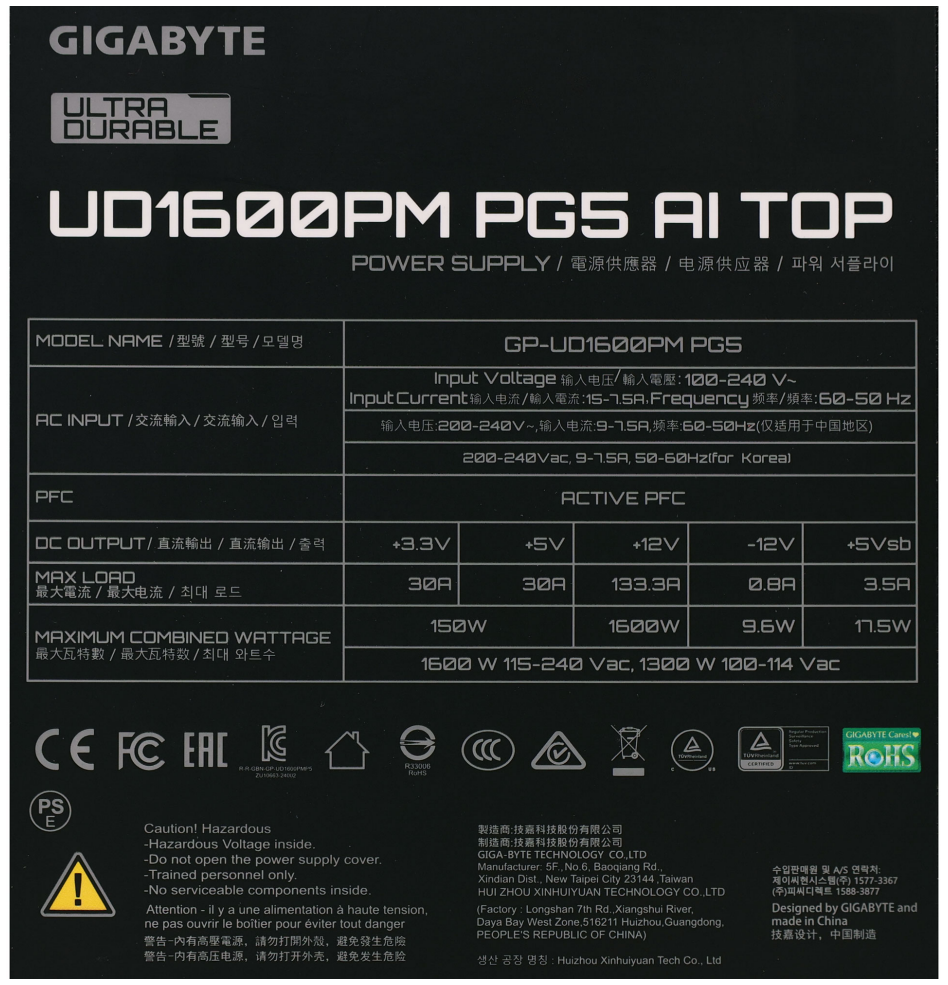
□□□□ **115V**

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	35.54mV	30.18mV	25.34mV	21.65mV	Pass
20% Load	23.58mV	28.84mV	44.48mV	23.55mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
30% Load	35.19mV	25.04mV	34.53mV	15.39mV	Pass
40% Load	43.01mV	30.18mV	48.33mV	18.47mV	Pass
50% Load	32.63mV	28.17mV	45.71mV	19.55mV	Pass
60% Load	35.04mV	25.76mV	31.75mV	19.24mV	Pass
70% Load	35.70mV	33.87mV	36.07mV	22.11mV	Pass
80% Load	39.53mV	43.73mV	32.44mV	24.48mV	Pass
90% Load	37.34mV	42.34mV	35.15mV	26.73mV	Pass
100% Load	52.99mV	28.84mV	39.86mV	22.22mV	Pass
110% Load	38.36mV	26.74mV	35.91mV	22.83mV	Pass
Crossload1	28.80mV	34.59mV	38.07mV	24.48mV	Pass
Crossload2	25.42mV	33.05mV	35.30mV	23.50mV	Pass
Crossload3	24.70mV	28.95mV	37.66mV	23.45mV	Pass
Crossload4	60.35mV	20.78mV	38.68mV	18.47mV	Pass

The results above are not used in the certification process









Gigabyte GP-UD1600PM PG5

Top side

Power specifications label

Fan

PSU Internals

本测试报告中包含的所有数据和图表均可在以下条件下由任何人使用：使用过程需提及测试结果由
在任何情况下都应提供原始测试结果文档的网站链接

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