

Lab ID#: GB10002008 Receipt Date: Apr 15, 2022 Test Date: Apr 28, 2022

EFFICIENCY AND NOISE LEVEL CERTIFICATIONS

Gigabyte UD1000GM PG5

Report: 22PS2008A

Report Date: Apr 28, 2022

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Brand	Gigabyte
Manufacturer (OEM)	MEIC
Series	UD
Model Number	GP-UD1000GM-PG5
Serial Number	SN22093G000030
DUT Notes	

DUT SPECIFICATIONS

Rated Voltage (Vrms)	100-240
Rated Current (Arms)	15-6.5
Rated Frequency (Hz)	60-50
Rated Power (W)	1000
Туре	ATX12V
Cooling	120mm Rifle Bearing Fan (KF1225H1H-AA)
Semi-Passive Operation	1
Cable Design	Fully Modular

TEST EQUIPMENT

Electronic Loads	Chroma 63601-5 x4 Chroma 63600-2 x2 63640-80-80 x20 63610-80-20 x2
AC Sources	Chroma 6530, Keysight AC6804B
Power Analyzers	N4L PPA1530 x2
Sound Analyzer	Bruel & Kjaer 2270 G4
Microphone	Bruel & Kjaer Type 4955-A
Data Loggers	Picoscope TC-08 x2, Labjack U3-HV x2
Tachometer	UNI-T UT372 x2
Digital Multimeter	Keysight U1273AX, Fluke 289, Keithley 2015 - THD
UPS	CyberPower OLS3000E 3kVA x2
Transformer	3kVA x2

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RESULTS	
Temperature Range (°C /°F)	30-32 / 86-89.6
ErP Lot 3/6 Ready	1
(EU) No 617/2013 Compliance	1
ALPM (Alternative Low Power Mode) compatible	1

115V		230V		
Average Efficiency	89.006%	Average Efficiency	91.336%	
Efficiency With 10W (≤500W) or 2% (>500W)	71.259	Average Efficiency 5VSB	78.113%	
Average Efficiency 5VSB	80.280%	Standby Power Consumption (W)	0.1712000	
Standby Power Consumption (W)	0.1198000	Average PF	0.954	
Average PF	0.984	Avg Noise Output	37.78 dB(A)	
Avg Noise Output	37.61 dB(A)	Efficiency Rating (ETA)	PLATINUM	
Efficiency Rating (ETA)	PLATINUM	Noise Rating (LAMBDA)	Standard+	
Noise Rating (LAMBDA)	Standard+			

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	25	25	83.3	3	0.3
	Watts	125		1000	15	3.6
Total Max. Power (W)		1000				

HOLD-UP TIME & POWER OK SIGNAL (230V)

Hold-Up Time (ms)	17
AC Loss to PWR_OK Hold Up Time (ms)	15.3
PWR_OK Inactive to DC Loss Delay (ms)	1.7

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CABLES AND CONNECTORS

Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 20+4 pin (610mm)	1	1	18AWG	No
4+4 pin EPS12V (600mm+200mm)	1	2	18AWG	No
12+4 pin PCle 5.0 (700mm)	1	1	16AWG	No
6+2 pin PCle (600mm+150mm)	2	4	18AWG	No
SATA (600mm+150mm+150mm+150mm)	2	8	18AWG	No
4-pin Molex (500mm+115mm+115mm) / FDD (+150mm)	1	3/1	18AWG	No
AC Power Cord (1400mm) - C13 coupler	1	1	16AWG	-

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General Data	-
Manufacturer (OEM)	MEIC
РСВ Туре	Double Sided
Primary Side	-
Transient Filter	4x Y caps, 2x X caps, 2x CM chokes, 1x MOV, 1x Chipown PN8200 (Discharge IC)
Inrush Protection	NTC Thermistor NTC-5D15 (5 Ohm)
Bridge Rectifier(s)	2x GBU1506 (800V, 15A @ 100°C)
APFC MOSFETs	2x NCE Power NCE65TF099 (650V, 24A @ 100°C, Rds(on): 0.1090hm)
APFC Boost Diode	1x STMicroelectronics STPSC10H065 (650V, 10A @ 135°C)
Bulk Cap(s)	1x Nippon Chemi-Con (400V, 1000uF, 2,000h @ 105°C, KMW)
Main Switchers	2x NCE Power NCE65TF099 (650V, 24A @ 100°C, Rds(on): 0.1090hm)
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	6x Nexperia PSMN1R4-40YLD (40V, 214A @ 100°C, Rds(on): 1.4mOhm)
5V & 3.3V	DC-DC Converters
Filtering Capacitors	Electrolytic: 7x Teapo (3-6,000h @ 105°C, SY), 4x Lelon (4-7,000h @ 105°C, RXW), 3x Teapo (2,000h @ 105°C, SH), 8x Lelon (4- 10,000h @ 105°C, RZW), 1x Lelon (105°C, RG) Polymer: 14x Teapo
Supervisor IC	Weltrend WT7502R (OVP, UVP, SCP, PG)
Fan Model	Jamicon KF1225H1H-AA (120mm, 12V, 0.35A, Rifle Bearing Fan)
5VSB Circuit	-
Rectifier	1x JF Semiconductor SP10U45L SBR (45V, 10A)
Standby PWM Controller	PR8109T
-12V Circuit	-
Controller	Axelite Technology AX3111

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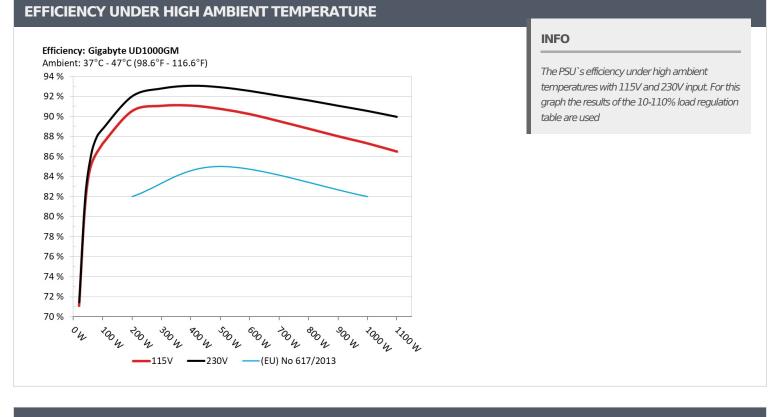
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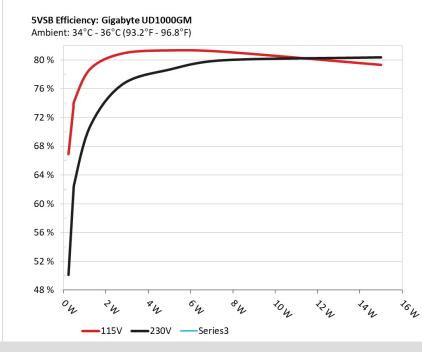


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5VSB EFFICIENCY



INFO

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

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5VSB EFFICIENCY -115V (ERP LOT 3/6 & CEC)					
Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts	
_	0.045A	0.228W	CC 0210/	0.04	
1	5.06V	0.341W	66.921%	115.15V	
2	0.09A	0.455W		0.071	
	5.059V	0.621W	73.227%	115.16V	
3	0.55A	2.778W	00.005%	0.284	
	5.05V	3.434W	80.895%	115.15V	
4	1A	5.042W	01 2100/	0.366	
	5.04V	6.199W	81.319%	115.15V	
5	1.5A	7.547W	01 1000/	0.412	
	5.03V	9.302W	81.132%	115.16V	
6	3A	15W	70 0110/	0.47	
	5V	18.913W	79.311%	115.15V	

5VSB EFFICIENCY -230V (ERP LOT 3/6 & CEC)

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.228W	50.1050/	0.016
1	5.06V	0.455W	50.135%	230.37V
2	0.09A	0.455W	61 4100/	0.026
2	5.059V	0.741W	61.418%	230.37V
3	0.55A	2.778W		0.119
	5.049V	3.627W	76.595%	230.37V
4	1A	5.042W	78.676%	0.19
	5.04V	6.409W	/8.0/0%	230.37V
5	1.5A	7.547W	70.0400/	0.248
	5.03V	9.438W	79.943%	230.37V
6	3A	15W	00.2420/	0.34
	5V	18.669W	80.343%	230.36V

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115V

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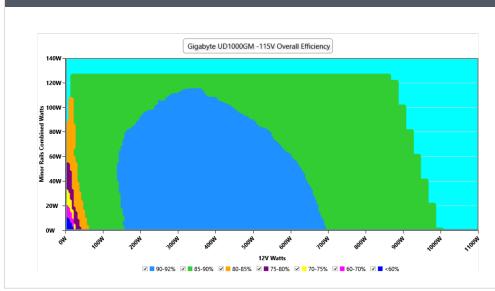
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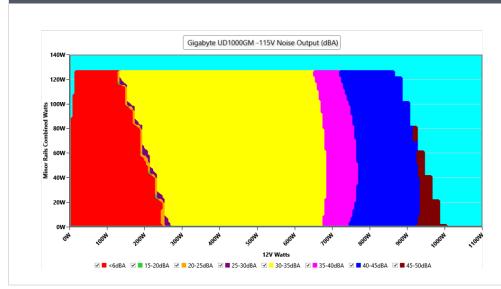
EFFICIENCY GRAPH 115V



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

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

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VAMPIRE POWER -115V

	Detailed Results										
	Average	Min	Limit Min	Max	Limit Max	Result					
Mains Voltage RMS:	115.13 V	115.11 V	113.85 V	115.15 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:	1.415	1.415	1.340	1.416	1.490	PASS					
Mains Voltage THD:	0.13 %	0.11 %	N/A	0.15 %	2.00 %	PASS					
Real Power:	0.120 W	0.029 W	N/A	4.356 W	N/A	N/A					
Apparent Power:	8.589 W	8.526 W	N/A	11.352 W	N/A	N/A					
Power Factor:	0.004	N/A	N/A	N/A	N/A	N/A					

INFO

This graph is generated by the PPA Standby Power Analysis software which takes full control of the power analyzer during the whole procedure. This application features all of the EN50564 & IEC62301 test limits for standby power software testing

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6516A1969A198A0993A10001 ${}_{7.32\%}$ ${}_{0}$ ${}_{60}$ 44.87°C096612.037V5.08V3332V5.038V114.441 ${}^{97.32\%}$ ${}^{9.55\%}$ ${}^{10.67\%}$ ${}^{13.57\%}$ ${}^{9.55\%}$ ${}^{15.57\%}$ <	Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
12.032V 5.08V 3.332V 5.038V 11.4441	100/	6.516A	1.969A	1.98A	0.993A	100.01	07.0000/			44.87°C	0.963
20% 12.037V5.073V3.325V5.03V220.81490.554%0-6.041.08°C115.130%21.954A3.454A3.479A1.394A30.01791.076%1.0853.3.341.79°C0.9812.023V5.068V3.32V5.023V329.42191.076%1.0853.3.347.64°C115.140%29.834A3.953A3.964A1.595A399.74291.101%10913.3.642.15°C0.9812.018V5.06V3.313V5.016V438.78791.01%10913.3.843.83°C115.150%3.7368A4.999A4.992A1.797A499.47690.772%11103.3.843.22°C0.98812.015V5.053V3.306V5.001V6648790.247%12163.625.037°C114.360%12.012V5.044V3.298V5.001V6649.7683.953%3.665.67°C114.370%12.002V5.036V3.292V4.993V781.5318.953%3.665.67°C114.370%12.004V5.036V3.22V4.983V1021.9128.396%2.0444.825.56°C0.99912.004V5.027V3.282V4.983V1021.9128.732%2.0444.825.51°C114.490%15.017V3.275V4.983V1021.9128.732%2.1264.875.51°C114.4911.955X3.956X3.96°C1.44.95.55°C1.44.9	10%	12.032V	5.08V	3.332V	5.038V	114.441	87.382%	0	<6.0	40.52°C	115.13V
$ \begin{array}{ c c c c c c c } \hline 12.037V & 5.073V & 3.328V & 5.03V & 22.0814 \\ \hline 12.023V & 5.068V & 3.454A & 3.479A & 1.394A & 300.017 \\ \hline 12.013V & 5.068V & 3.32V & 5.023V & 329.421 \\ \hline 12.013V & 5.068V & 3.32V & 5.023V & 329.421 \\ \hline 12.013V & 5.068V & 3.313V & 5.016V & 438.787 \\ \hline 12.013V & 5.06V & 3.313V & 5.016V & 438.787 \\ \hline 12.015V & 5.063V & 3.313V & 5.016V & 438.787 \\ \hline 12.015V & 5.063V & 3.313V & 5.005V & 438.787 \\ \hline 12.015V & 5.063V & 3.313V & 5.004V & 438.787 \\ \hline 12.015V & 5.063V & 3.306V & 5.004V & 438.787 \\ \hline 12.015V & 5.063V & 3.306V & 5.004V & 650.466 \\ \hline 12.012V & 5.044V & 3.298V & 5.001V & 664.857 \\ \hline 12.012V & 5.044V & 3.298V & 5.001V & 664.857 \\ \hline 12.012V & 5.044V & 3.298V & 5.001V & 664.857 \\ \hline 12.009V & 5.036V & 3.29V & 4.993V & 781.51 \\ \hline 12.009V & 5.036V & 3.29V & 4.993V & 781.51 \\ \hline 12.009V & 5.036V & 3.29V & 4.993V & 781.51 \\ \hline 12.004V & 5.027V & 3.282V & 4.98V & 90.772 \\ \hline 12.004V & 5.027V & 3.282V & 4.98V & 90.772 \\ \hline 12.001V & 5.017V & 3.275V & 4.983V & 1021.912 \\ \hline 12.01V & 5.017V & 3.275V & 4.983V & 1021.912 \\ \hline 11.995V & 5.068V & 3.268V & 4.966V & 1144.19 \\ \hline 11.995V & 5.068V & 3.268V & 4.966V & 1144.19 \\ \hline 11.995V & 5.068V & 3.261V & 4.963V & 1021.912 \\ \hline 11.995V & 5.068V & 3.261V & 4.963V & 1021.912 \\ \hline 11.995V & 5.068V & 3.261V & 4.963V & 1127.168 \\ \hline 11.995V & 5.068V & 3.261V & 4.963V & 1127.168 \\ \hline 11.995V & 5.068V & 3.261V & 4.963V & 1127.168 \\ \hline 11.995V & 5.08V & 3.261V & 4.963V & 1271.689 \\ \hline 11.995V & 5.08V & 3.261V & 4.963V & 1271.689 \\ \hline 11.995V & 5.08V & 3.261V & 4.963V & 1271.689 \\ \hline 11.995V & 5.08V & 3.261V & 4.963V & 1271.689 \\ \hline 11.995V & 5.08V & 3.261V & 4.963V & 1271.689 \\ \hline 11.995V & 5.08V & 3.261V & 4.963V & 1271.689 \\ \hline 11.995V & 5.08V & 3.261V & 4.963V & 1271.689 \\ \hline 11.995V & 5.08V & 3.261V & 4.963V & 1271.689 \\ \hline 11.995V & 5.08V & 3.261V & 4.963V & 1271.689 \\ \hline 11.995V & 5.08V & 3.261V & 4.963V & 1271.689 \\ \hline 11.995V & 5.08V & 3.261V & 4.963V & 1271.689 \\ \hline 11.995V & 5.08V & 3.261V & 4.963V & 1271.689 \\ \hline 11.995V & 5.08V & 3.261V & 4.963V & 1271.689 \\ \hline 11.996V & 5.$	200/	14.046A	2.958A	2.978A	1.193A	199.963	00 55 40/	0	-6.0	46.17°C	0.978
30%12.023V5.068V3.32V5.023V329.42191.076%108533.347.64°C115.740%29.834A3.953A3.984A1.595A399.74291.01%109133.542.15°C0.98412.018V5.06V3.313V5.016V438.78791.01%109133.842.15°C0.98450%37.368A4.949A4.992A1.797A499.47690.772%111033.843.21°C0.98412.015V5.053V3.306V5.009V550.24690.772%111036.250.59°C114.360%44.972A5.949A6.004A2.A600.01490.247%121636.250.59°C114.312.012V5.044V3.296V5.01V664.85790.247%121636.250.59°C114.370%5.2516A6.953A7.022A2.03A699.76889.538%156142.051.42°C0.99912.003V5.036V3.28V4.993V781.53186.5382.60°C0.99951.42°C0.99912.004V5.027V3.282V4.983V900.77288.791%184.345.552.67°C114.390%12.01V5.017V3.275V4.983V1021.91286.307%2.04448.249.60°C0.99912.01V5.017V3.261V4.966V1144.6197.355°C1.94449.60°C0.99911.001V5.067V3.268V4.966V1144.6198.	20%	12.037V	5.073V	3.325V	5.03V	220.814	90.554%	0	<0.0	41.08°C	115.1V
$ \begin{array}{ c c c c c c c } \hline 12 \ 022 \ \ 5 \ 066 \ \ 3 \ 32 \ \ 5 \ 023 \ \ 5 \ 023 \ \ 32 \ \ \ 32 \ \ \ 32 \ \ \ 32 \ \ \ \$	200/	21.954A	3.454A	3.479A	1.394A	300.017	01.0760/	1005	22.2	41.79°C	0.984
40% 12.018V5.06V3.313V5.016V438.78791.101%109133.548.38°C115.150%37.368A4.949A4.992A1.797A499.47690.772%111033.843.21°C0.98812.015V5.053V3.306V5.009V550.24690.772%111033.843.58°C0.98860%44.972A5.949A6.004A2A600.01490.247%121636.250.59°C114.460%5.036V3.29V4.993V781.53190.247%156142.043.73°C0.9912.009V5.036V3.29V4.993V781.53189.538%156142.051.42°C0.9912.004V5.027V3.282V4.988V900.77288.791%184345.55.67°C114.490%6.0136A7.96A8.042A2.306A799.80988.791%184345.55.67°C114.490%5.027V3.282V4.988V900.77288.036%2.04448.25.67°C114.490%5.057V3.275V4.983V1021.91280.306%2.04448.25.15°C114.4100%5.058V3.268V4.966V1144.6198.7325%2.12648.75.15°C114.4101614.813A1.021A3.021A9.995588.7325%2.13648.33%6.06°C9.99611.99V5.068V3.261V4.963V1.271.6898.333%0-6.0 <td< td=""><td>30%</td><td>12.023V</td><td>5.068V</td><td>3.32V</td><td>5.023V</td><td>329.421</td><td>91.076%</td><td>1082</td><td>33.3</td><td>47.64°C</td><td>115.08V</td></td<>	30%	12.023V	5.068V	3.32V	5.023V	329.421	91.076%	1082	33.3	47.64°C	115.08V
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	400/	29.834A	3.953A	3.984A	1.595A	399.742	01 1010/	1001	22 F	42.15°C	0.986
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	40%	12.018V	5.06V	3.313V	5.016V	438.787	91.101%	1091	33.5	48.38°C	115.05V
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	E00/	37.368A	4.949A	4.992A	1.797A	499.476	00 7720/	1110	22.0	43.21°C	0.988
60% 12.012V 5.04VV 3.298V 5.001V 664.857 90.247% 1216 36.2 50.59°C 114.4 70% 52.516A 6.953A 7.022A 2.203A 699.768 89.538% 1561 42.0 43.73°C 0.99 12.009V 5.036V 3.29V 4.993V 781.531 89.538% 1561 42.0 51.42°C 114.4 80% 60.136A 7.96A 8.042A 2.306A 799.809 88.791% 1843 45.5 52.67°C 114.4 80% 12.004V 5.027V 3.282V 4.988V 900.772 88.036% 2044 48.2 53.99°C 114.4 90% 66.091A 8.473A 8.55A 2.409A 899.634 88.036% 2044 48.2 53.99°C 114.4 90% 12.001V 5.017V 3.275V 4.983V 1021.912 88.036% 2044 48.2 53.99°C 114.4 100% 11.995V 5.008V 3.268V <td< td=""><td>50%</td><td>12.015V</td><td>5.053V</td><td>3.306V</td><td>5.009V</td><td>550.246</td><td>90.772%</td><td>1110</td><td>55.8</td><td>49.85°C</td><td>115.01V</td></td<>	50%	12.015V	5.053V	3.306V	5.009V	550.246	90.772%	1110	55.8	49.85°C	115.01V
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	600/	44.972A	5.949A	6.004A	2A	600.014	00 2 4 70/	1016	26.2	43.58°C	0.989
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	00%	12.012V	5.044V	3.298V	5.001V	664.857	90.247%	1210	50.2	50.59°C	114.99V
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	700/	52.516A	6.953A	7.022A	2.203A	699.768	00 5 200/	1561	42.0	43.73°C	0.99
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	70%	12.009V	5.036V	3.29V	4.993V	781.531	09.000%	1001	42.0	51.42°C	114.96V
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	000/	60.136A	7.96A	8.042A	2.306A	799.809	00 7010/	10/2		44.62°C	0.992
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	0070	12.004V	5.027V	3.282V	4.988V	900.772	00.791%	1043	40.0	52.67°C	114.93V
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	000/	68.091A	8.473A	8.55A	2.409A	899.634	99.0360/	2044	40.0	44.98°C	0.993
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	90%	12.001V	5.017V	3.275V	4.983V	1021.912	88.030%	2044	48.2	53.99°C	114.9V
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	1000/	75.856A	8.987A	9.087A	3.021A	999.558	07 2250/	2120	10 7	45.06°C	0.994
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	100%	11.995V	5.008V	3.268V	4.966V	1144.619	07.525%	2120	40.7	55.15°C	114.87V
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	1100/	83.543A	10.003A	10.212A	3.023A	1100.101		2126	40.0	47.2°C	0.994
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	110%	11.992V	4.998V	3.261V	4.963V	1271.689	80.307%	2130	48.8	58.05°C	114.84V
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	0.1	0.116A	14.813A	14.96A	0A	126.296	04 2220/	0	-6.0	49.53°C	0.969
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		12.042V	5.083V	3.315V	5.05V	149.768	84.333%	U	<0.0	43.61°C	115.12V
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		0.116A	24.393A	0A	0A	126.392	02 2200/	0	-6.0	50.84°C	0.969
CL3 12.040V 5.04V 3.323V 5.043V 106.673 78.641% 0 <6.0 44.78°C 115.1 83.347A 0.001A 0A 0.002A 1000.083 87.859% 2126 48.7 45.81°C 0.994		12.048V	5.124V	3.31V	5.062V	151.662	63.338%	U	<0.0	44.01°C	115.11V
12.040V 5.04V 3.323V 5.043V 106.673 44.78°C 115.3 83.347A 0.001A 0A 0.002A 1000.083 87.859% 2126 48.7	CL 2	0.116A	0A	24.823A	0A	83.889	70 6/10/	0	-60	52.78°C	0.962
CL4 87.859% 2126 48.7		12.040V	5.04V	3.323V	5.043V	106.673	/8.041%	U	<0.0	44.78°C	115.13V
11.998V 4.985V 3.275V 5.039V 1138.278 2126 48.7 55.83°C 114.8		83.347A	0.001A	0A	0.002A	1000.083	07.0500/	2120	40.7	45.81°C	0.994
	JL4	11.998V	4.985V	3.275V	5.039V	1138.278	87.829%	2126	48.7	55.83°C	114.87V

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Anex

Gigabyte UD1000GM PG5

20-80W 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
2014/	1.234A	0.493A	0.494A	0.198A	20.003	71 11 20/		-6.0	40.04°C	0.864
20W	12.038V	5.076V	3.339V	5.057V	28.131	71.113%	0	<6.0	36.81°C	115.15V
4014/	2.717A	0.69A	0.692A	0.297A	40.001	- 01 0010/ 0		<6.0	40.83°C	0.921
40W	12.032V	5.075V	3.338V	5.055V	49.375	81.021%	0	<0.0	37.34°C	115.15V
COM	4.200A	0.887A	0.89A	0.396A	59.999		0	<6.0	42.28°C	0.944
60W	12.031V	5.074V	3.337V	5.052V	70.504	85.095%	6 0		38.4°C	115.13V
00144	5.680A	1.084A	1.088A	0.495A	79.958	07.00%	0	-6.0	43.59°C	0.951
80W	12.030V	5.074V	3.335V	5.049V	91.588	87.303%	0	<6.0	39.54°C	115.13V

RIPPLE MEASUREMENTS 115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	7.40mV	10.07mV	6.30mV	7.90mV	Pass
20% Load	12.41mV	11.76mV	7.01mV	8.97mV	Pass
30% Load	13.13mV	15.49mV	7.32mV	10.81mV	Pass
40% Load	14.56mV	15.39mV	7.06mV	11.98mV	Pass
50% Load	15.78mV	17.69mV	7.78mV	12.39mV	Pass
60% Load	17.62mV	20.40mV	8.44mV	14.12mV	Pass
70% Load	20.07mV	22.19mV	9.27mV	15.09mV	Pass
80% Load	22.68mV	24.29mV	15.76mV	20.29mV	Pass
90% Load	24.57mV	26.54mV	16.28mV	23.96mV	Pass
100% Load	32.28mV	31.13mV	18.66mV	27.24mV	Pass
110% Load	34.91mV	34.16mV	18.91mV	30.25mV	Pass
Crossload1	14.96mV	20.78mV	21.70mV	19.58mV	Pass
Crossload2	10.78mV	16.11mV	12.90mV	18.41mV	Pass
Crossload3	7.51mV	15.09mV	20.26mV	18.10mV	Pass
Crossload4	32.29mV	25.93mV	8.94mV	28.18mV	Pass

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EFFICIENCY AND NOISE LEVEL CERTIFICATIONS

Gigabyte UD1000GM PG5

230V

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Anex

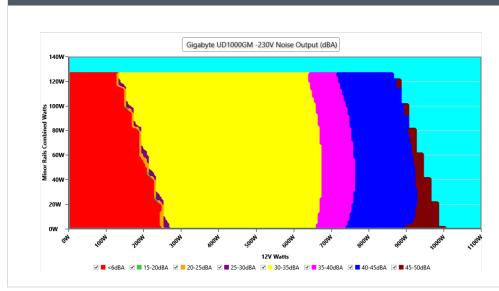
EFFICIENCY GRAPH 230V



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

NOISE GRAPH 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

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Anex

VAMPIRE POWER -230V

Detailed Results										
	Average	Min	Limit Min	Мах	Limit Max	Result				
Mains Voltage RMS:	230.36 V	230.32 V	227.70 V	230.37 V	232.30 V	PASS				
Mains Frequency:	50.00 Hz	50.00 Hz	49.50 Hz	50.00 Hz	50.50 Hz	PASS				
Mains Voltage CF:	1.415	1.415	1.340	1.415	1.490	PASS				
Mains Voltage THD:	0.14 %	0.13 %	N/A	0.16 %	2.00 %	PASS				
Real Power:	0.171 W	0.158 W	N/A	0.190 W	N/A	N/A				
Apparent Power:	28.556 W	28.542 W	N/A	28.567 W	N/A	N/A				
Power Factor:	0.006	N/A	N/A	N/A	N/A	N/A				

INFO

This graph is generated by the PPA Standby Power Analysis software which takes full control of the power analyzer during the whole procedure. This application features all of the EN50564 & IEC62301 test limits for standby power software testing

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Anex

Gigabyte UD1000GM PG5

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
100/	6.518A	1.968A	1.98A	0.993A	100.01	00 765%			45.18°C	0.861
10%	12.030V	5.081V	3.333V	5.037V	112.665	88.765%	0	<6.0	40.67°C	230.35V
200/	14.048A	2.957A	2.977A	1.193A	199.963	02.0120/	0	-6.0	46.09°C	0.925
20%	12.034V	5.074V	3.326V	5.03V	217.323	92.013%	0	<6.0	41.12°C	230.35V
200/	21.952A	3.454A	3.479A	1.394A	300.017	02 700/	1000	22 F	41.22°C	0.949
30%	12.024V	5.068V	3.32V	5.022V	323.329	92.79%	1090	33.5	46.86°C	230.34V
400/	29.833A	3.953A	3.984A	1.596A	399.711	02.0020/	1004	22 F	41.33°C	0.961
40%	12.017V	5.06V	3.314V	5.015V	429.501	93.062%	1094	33.5	47.43°C	230.33V
E00/	37.371A	4.949A	4.991A	1.798A	499.455	02.0150/	1110	22.0	42.29°C	0.969
50%	12.013V	5.053V	3.306V	5.008V	537.535	92.915%	1112	33.8	48.84°C	230.32V
CO 0/	44.975A	5.949A	6.004A	2A	600.029	02 5 4 40/	1170	25.0	42.41°C	0.975
60%	12.012V	5.045V	3.298V	5V	648.368	92.544%	1178	35.8	49.47°C	230.3V
700/	52.523A	6.952A	7.021A	2.204A	699.787	02.0049/	1540	41.8	43.42°C	0.978
70%	12.008V	5.036V	3.291V	4.992V	760.091	92.064%	1543		51.11°C	230.29V
000/	60.141A	7.96A	8.041A	2.306A	799.822	01 6010/	1064		44.19°C	0.981
80%	12.003V	5.027V	3.283V	4.987V	873.156	91.601%	1864	45.7	52.41°C	230.28V
000/	68.098A	8.472A	8.548A	2.409A	899.635	01.0710/	2022	40.0	44.51°C	0.983
90%	12.000V	5.017V	3.276V	4.982V	987.85	91.071%	2033	48.0	53.65°C	230.27V
1000/	75.857A	8.988A	9.088A	3.022A	999.635	00 5520/	2124	40.0	45.97°C	0.985
100%	11.996V	5.007V	3.268V	4.965V	1103.927	90.553%	2134	48.8	55.98°C	230.25V
1100/	83.546A	10.008A	10.216A	3.024A	1100.265	00.060/	2120	40.0	46.69°C	0.986
110%	11.993V	4.997V	3.259V	4.961V	1223.06	89.96%	2139	48.8	57.51°C	230.24V
	0.116A	14.812A	14.955A	0A	126.311	04 6049/	000	20.6	42.54°C	0.894
CL1	12.044V	5.084V	3.317V	5.05V	149.299	84.604%	960	29.6	48.98°C	230.37V
ab	0.116A	24.402A	0A	0A	126.398	04 4020/	0	-6.0	50.84°C	0.894
CL2	12.048V	5.123V	3.309V	5.061V	149.766	84.403%	0	<6.0	43.63°C	230.37V
C 2	0.116A	0A	24.824A	0A	83.892	70 620/	0	-6.0	52.81°C	0.852
CL3	12.039V	5.041V	3.323V	5.043V	105.353	79.63%	0	<6.0	44.37°C	230.37V
CI 4	83.361A	0.001A	0A	0.002A	1000.136		2120	40.0	45.47°C	0.985
CL4	11.997V	4.985V	3.275V	5.039V	1098.152	91.075%	2129	48.8	55.58°C	230.25V

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Anex

Gigabyte UD1000GM PG5

20-80W LOAD TESTS 230V										
Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
2014/	1.234A	0.492A	0.494A	0.198A	20	71 450/		-6.0	39.87°C	0.56
20W	12.034V	5.077V	3.341V	5.057V	27.991	71.45%	0	<6.0	36.79°C	230.36V
40144	2.718A	0.69A	0.692A	0.297A	39.999	01 0450/	0	<6.0	40.46°C	0.706
40W	12.029V	5.076V	3.339V	5.054V	48.864	81.845%	0		37.12°C	230.36V
COLM	4.201A	0.887A	0.89A	0.396A	59.998	06 10 40/	_	<6.0	42.15°C	0.782
60W	12.028V	5.075V	3.338V	5.051V	69.676	86.124%	0		38.62°C	230.36V
00144	5.682A	1.084A	1.088A	0.495A	79.955	07.0000/	0	<6.0	43.73°C	0.829
80W	12.026V	5.076V	3.337V	5.049V	90.871	87.982%	0		39.95°C	230.36V

RIPPLE MEASUREMENTS 230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	7.35mV	9.97mV	6.09mV	7.75mV	Pass
20% Load	11.90mV	11.86mV	6.45mV	9.38mV	Pass
30% Load	12.36mV	14.57mV	6.75mV	9.84mV	Pass
40% Load	13.18mV	15.09mV	6.91mV	10.66mV	Pass
50% Load	15.88mV	17.44mV	7.83mV	13.56mV	Pass
60% Load	17.11mV	19.48mV	8.34mV	13.46mV	Pass
70% Load	19.97mV	21.99mV	9.01mV	14.94mV	Pass
80% Load	22.12mV	24.03mV	15.76mV	21.00mV	Pass
90% Load	24.11mV	25.67mV	15.51mV	23.25mV	Pass
100% Load	31.97mV	30.47mV	18.02mV	27.32mV	Pass
110% Load	37.79mV	32.09mV	19.19mV	29.77mV	Pass
Crossload1	14.89mV	21.26mV	21.42mV	19.99mV	Pass
Crossload2	12.82mV	17.49mV	12.23mV	18.25mV	Pass
Crossload3	7.51mV	15.19mV	19.86mV	18.20mV	Pass
Crossload4	31.86mV	26.05mV	8.60mV	27.81mV	Pass

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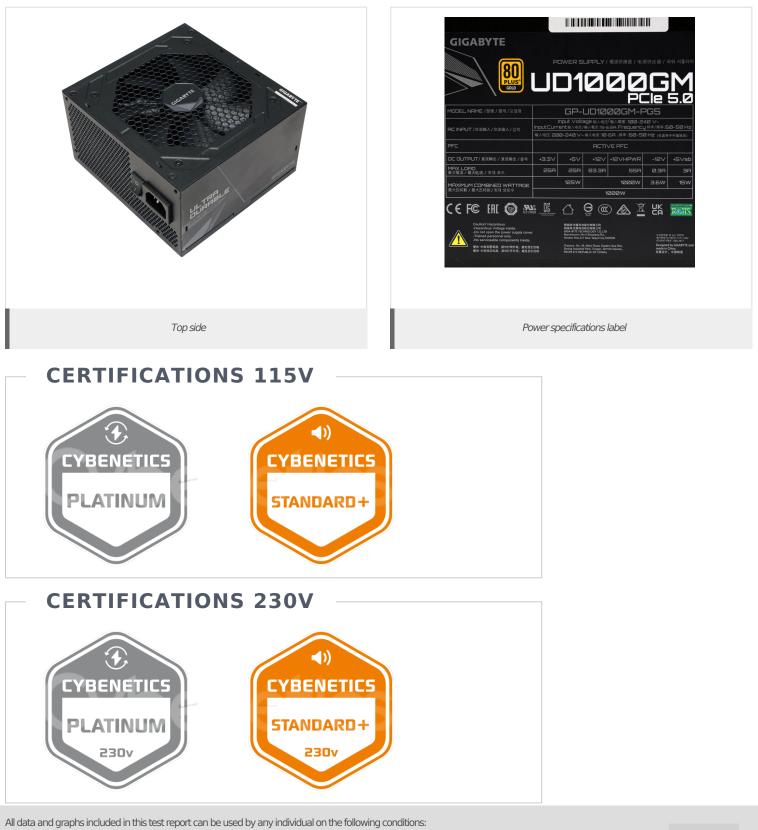
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