

GIGABYTE™

Gigabyte GP-UD750GM PG5 V2 / ICE

Serial Number -

Lab ID GB75003091

Certification ID 253091

Test Result Report ID: 25PS3091A

Certificate Issue Date: Jan 9, 2026

115V

230V

Scheme: ETA-EMI PSU



115V

230V



Scheme: LAMBDA PSU



Outside Validation Scope

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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-UD750GM PG5 V2 / ICE
OEM/ODM	Guangzhou Pansheng Electronic Technology Co., Ltd
Serial Number	-
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	6.5-12

Rated Frequency (Hz)	50-60
Rated Power (W)	750
Operating Temperature (Continuous Full Load) (°C)	0 - 50
Type	ATX12V
Cable Design	Fully Modular
Warranty	No Info
Cybenetics Measurements	
Dimensions (W x H x D)	150 x 85 x 140mm
Weight	1.28 kg (2.82 lb)
Cooling	120mm Fluid Dynamic Bearing Fan (BK BDH12025S)
Semi-Passive Operation	✓
Cybenetics Testing Information	
Lab ID	GB75003091
Date of receipt	Nov 17, 2025
Testing Date	Jan 5, 2026
Report Issued Date	Jan 9, 2026
DUT Notes	• The results apply to both the black and white (ICE) models. • The vampire power consumption is too high for the Gold ETA rating at 230V (0.2263W). • The power factor is low at 230V AC (0.908); therefore, the PSU cannot obtain any ETA certification at 230V. • Hold-up time re-checked on 2026-10-11: the lowest hold-up of all captures was logged (26.80 ms; AC loss to PWR_OK 23.00 ms; PWR_OK inactive to DC loss 3.80 ms).
Engineer Name	Ioannis Kalyviotis
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	18AWG	Tinned Copper
4+4 pin EPS12V (650mm+200mm)	1	2	18AWG	Tinned Copper
6+2 pin PCIe (600mm+145mm)	2	4	18AWG	Tinned Copper

12+4 pin PCIe (700mm) (600W)	1	1	16-24AWG	Tinned Copper
SATA (600mm+150mm+150mm+150mm)	2	8	18AWG	Tinned Copper
4-pin Molex (500mm+150mm+150mm) / FDD (+150mm)	1	3 / 1	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	✗

Power Specifications

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	20	20	62.5	3	0.3
	Watts	105		750	15	3.6
Total Max. Power (W)		750				

Parts Description

General Data	
Manufacturer (OEM)	Guangzhou Pansheng Electronic Technology Co., Ltd
PCB Type	Double-Sided
Primary Side	
Transient Filter	4x Y caps, 3x X caps, 2x CM chokes, 1x MOV
Inrush Protection	NTC Thermistor MF72-10D15 (10 Ohm @ 25°C) & Relay
Bridge Rectifier	2x GBU1006 (600V, 10A @ 100°C)
APFC MOSFETs	2x Wuhan Xinyuan Semiconductor CWS60R125AF (600V, 19A @ 100°C, Rds(on): 125mOhm)
APFC Boost Diode	Macrocore Semiconductor HX1D08065F (650V, 8A @ 125°C)
Bulk Cap(s)	2x Toshin Kogyo (420V, 270µF, 2000h @ 105°C, LW)

Main Switchers	2x Wuhan Xinyuan Semiconductor CWS55R140BF (550V, 25A @ 100°C, Rds(on): 140mOhm)
APFC Controller	Champion CM6500UNX
Resonant Controller	Champion CM6901T6X
Topology	Primary side: APFC, Half-Bridge & LLC Resonant Converter Secondary side: [12V] Synchronous Rectification & [Minor Rails] DC-DC converters
Secondary Side	
+12V MOSFETs	6x InPower Semiconductor FTG014N04SA (40V, 100A @ 100°C, Rds(on): 1.4mOhm)
5V & 3.3V	DC-DC Converters: 4x InPower Semiconductor FTG022N03S (30V, 120A @ 100°C, Rds(on): 2.2mOhm) PWM Controller(s): 2x ANPEC APW7164
Filtering Capacitors	Electrolytic: 4x Toshin Kogyo (@ 105°C, HZ series) 10x Toshin Kogyo (@ 105°C, AZ series) Polymer 10x Teapo (470µF, 16V) 9x Teapo (820µF, 6.3V)
Supervisor IC	Grenergy GR8329E (OVP, UVP, OCP, PGO, FPO)
MCU / Fan Controller	Anpec APW9010
Fan Model	BOK BDH12025S (120mm, 12V, 0.18A, Fluid Dynamic Bearing)
5VSB Circuit	
Rectifier	Dongke Semiconductor DK5V60R20H Synchronous Rectifier (60V, 35A, Rds(on): 20mOhm)
Standby PWM Controller	Excelliance MOS Corporation EM8564A

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	✓
Conducted Emissions EN 55032 & CISPR 32	Passed

Performance Summary 115V

Accredited	
Average Efficiency (>1450 load combinations)	89.120%
Average Noise Output (>1450 Load Combinations)	31.13dBA
Average PF (>1450 Load Combinations)	0.981
Efficiency With 10W (≤500W) or 2% (>500W) Load	64.430%
Standby Power Consumption	0.0945W
Non-Accredited	
12V Ripple (Full Load)	25.39mV
5V Ripple (Full Load)	23.62mV
3.3V Ripple (Full Load)	26.15mV
5VSB Ripple (Full Load)	20.32mV
12V Load Regulation	0.14%
5V Load Regulation	1.74%
3.3V Load Regulation	0.42%
5VSB Load Regulation	1.85%
Inrush Current	20.730A

Hold-Up Time & PWR_OK Signal

Hold-Up Time (ms)	26.8
AC Loss to PWR_OK Hold Up Time (ms)	23.0
PWR_OK Inactive to DC Loss Delay (ms)	3.8



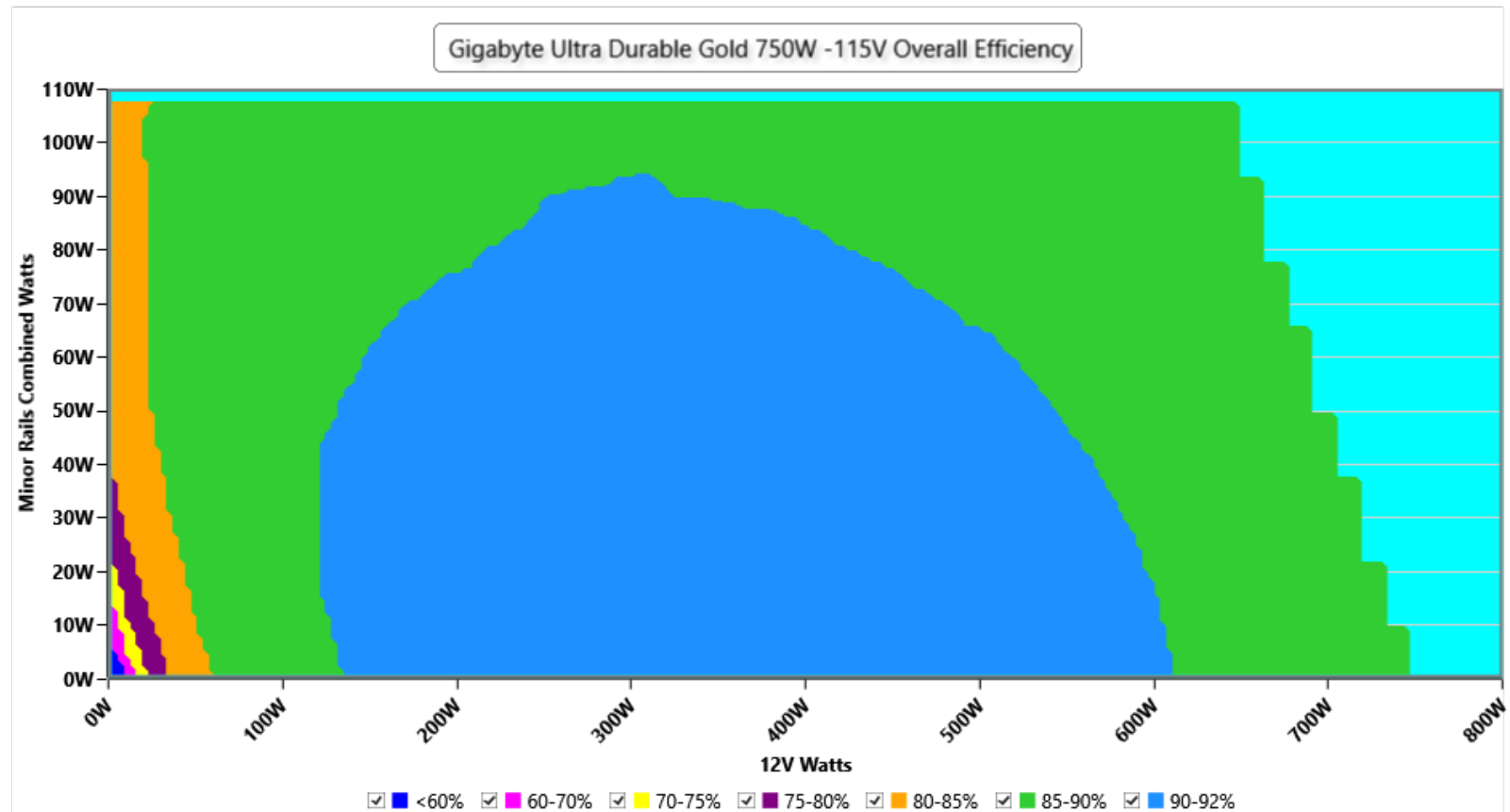
Tables 115V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	115.06 V	115.04 V	113.85 V	115.07 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:	0.095 W	0.073 W	N/A	0.127 W	N/A	N/A
Apparent Power:	20.575 W	20.557 W	N/A	20.595 W	N/A	N/A
Power Factor:	0.004	N/A	N/A	N/A	N/A	N/A

Efficiency Graph

115V

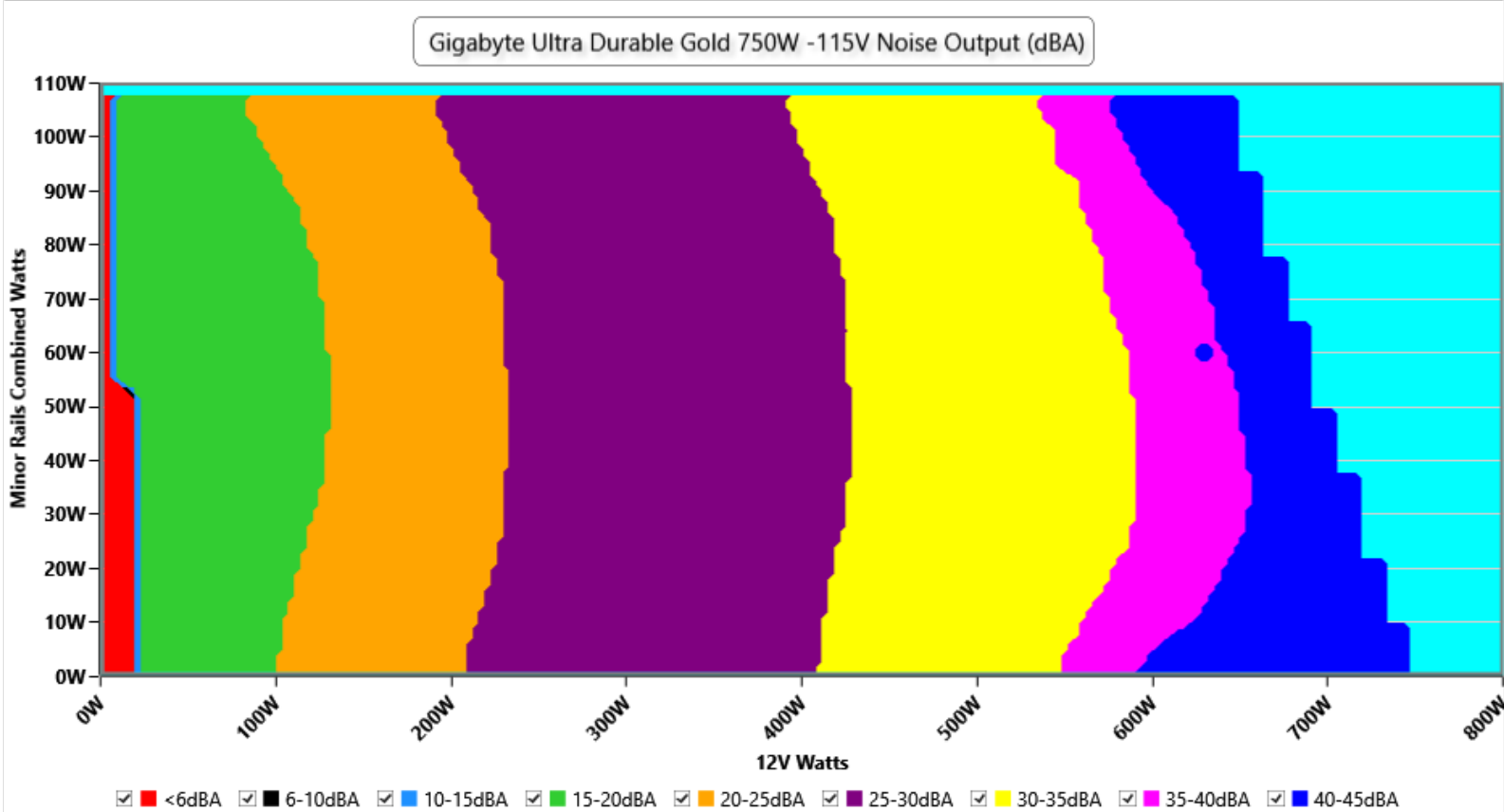


INFO

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

Noise Graph

115V

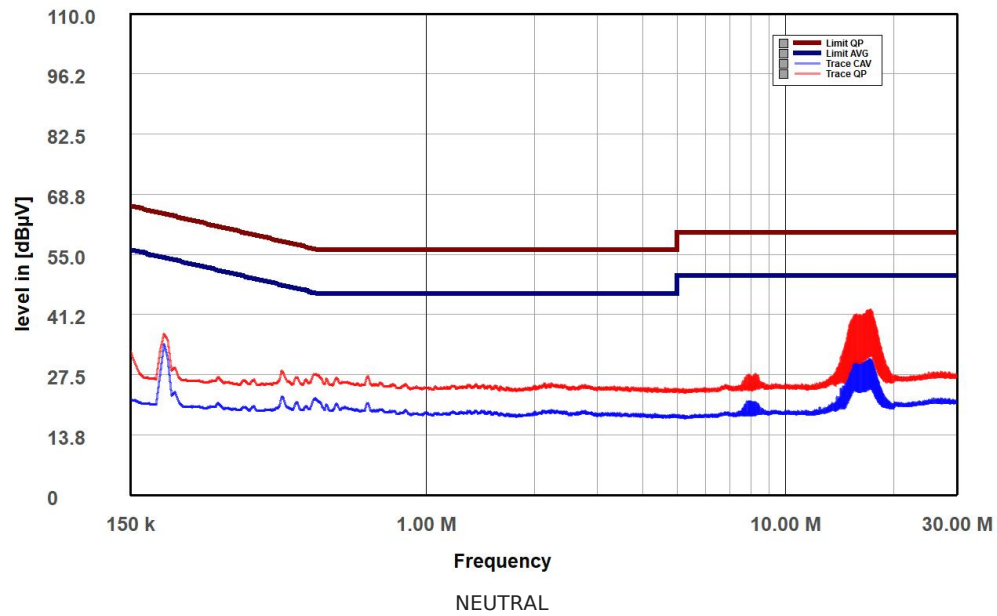


INFO

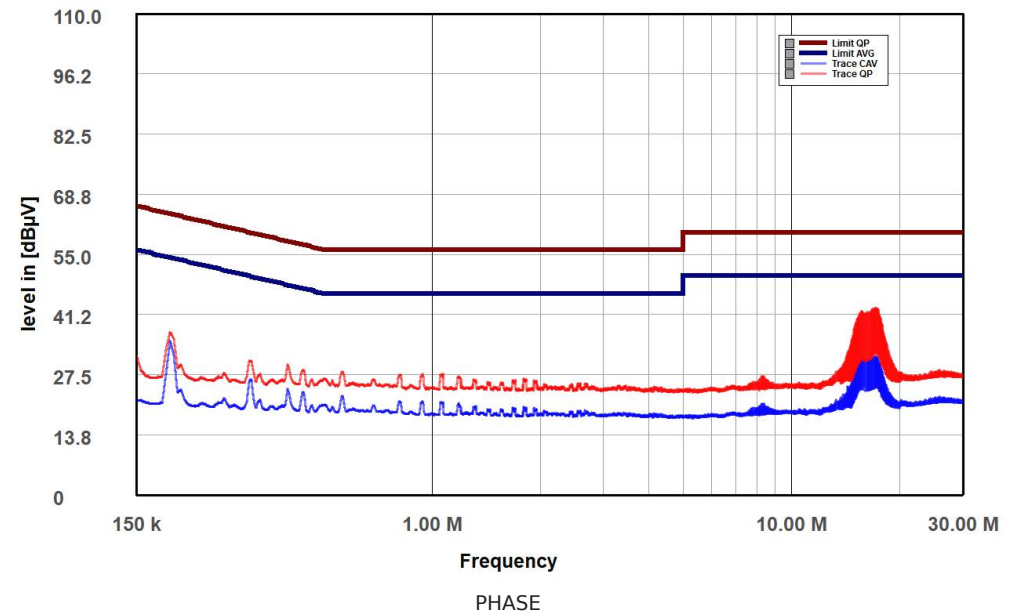
The PSU`s noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

Conducted Emissions EN 55032 & CISPR 32

Gigabyte Ultra Durable Gold 750W (GB75003091) Neutral



Gigabyte Ultra Durable Gold 750W (GB75003091) Phase

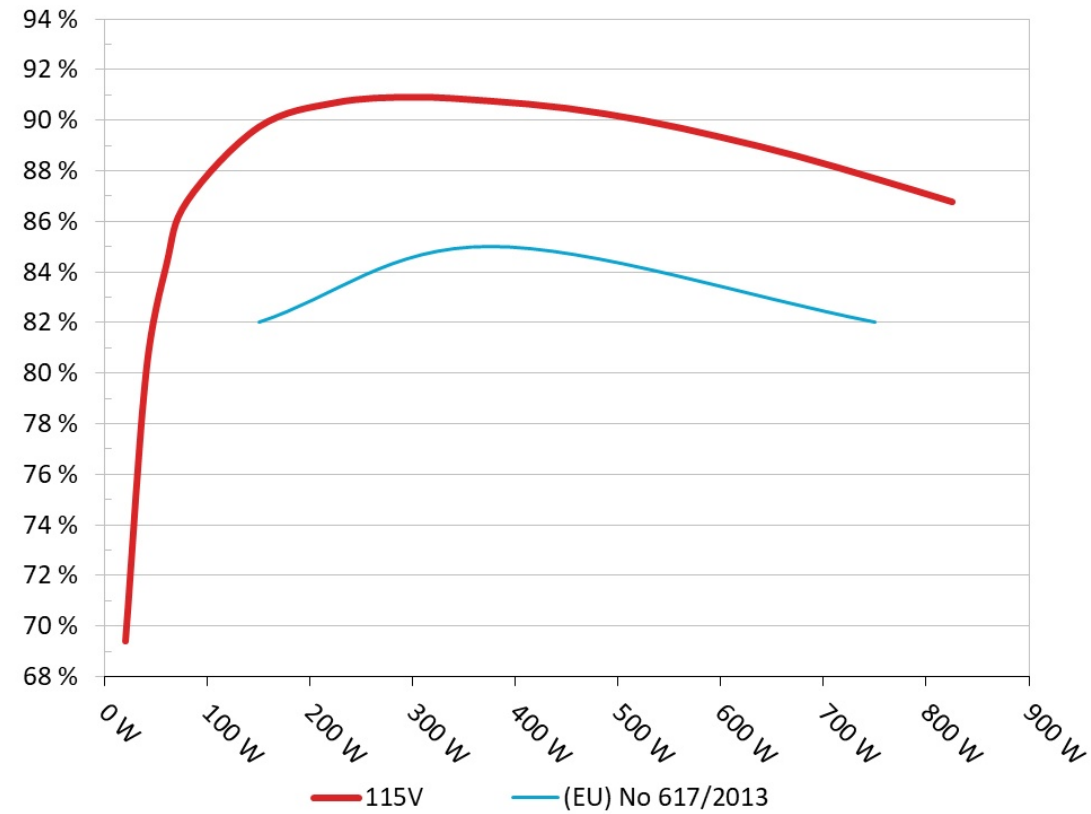


Indicative Performance

Efficiency under high ambient temperature

Efficiency: Gigabyte Ultra Durable Gold 750W

Ambient: 36°C - 47°C (96.8°F - 116.6°F)



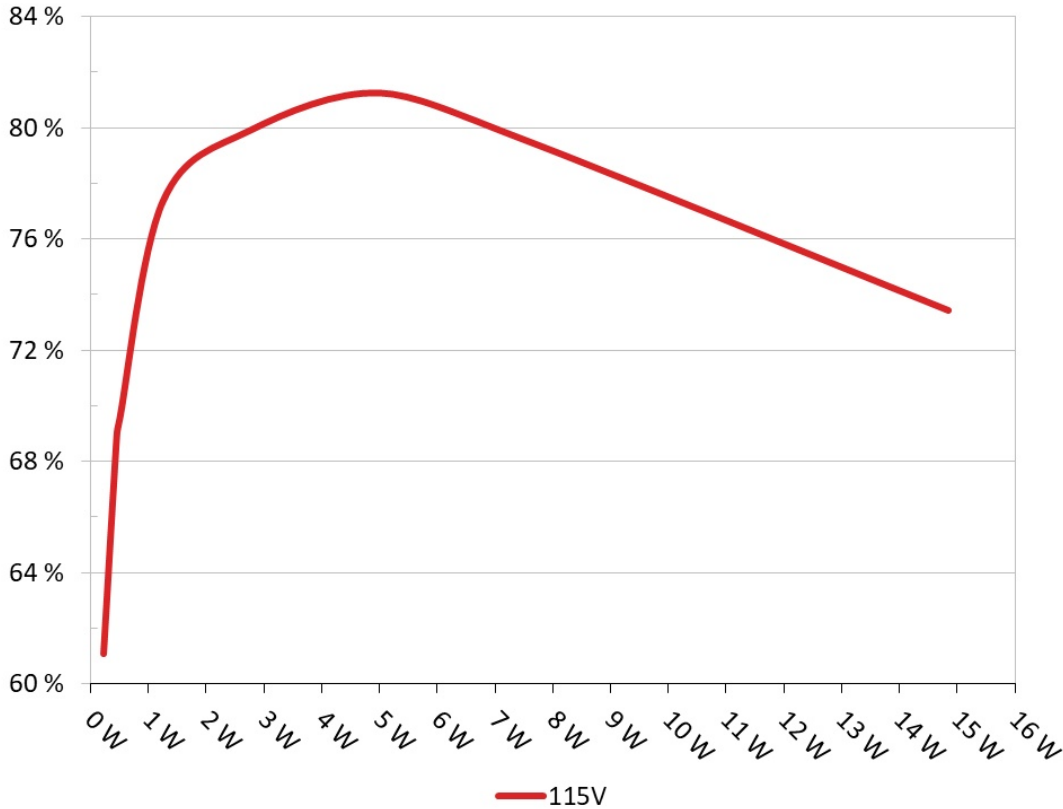
INFO

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

5VSB Efficiency: Gigabyte Ultra Durable Gold 750W

Ambient: 25°C - 30°C (77°F - 86°F)



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	0.226W	61.101%	0.018
	5.027V	0.37W		115.04V

2	0.09A	0.452W	68.901%	0.032
	5.026V	0.656W		115.04V
3	0.55A	2.757W	79.921%	0.154
	5.014V	3.45W		115.04V
4	1A	5.002W	81.272%	0.237
	5.002V	6.155W		115.04V
5	1.5A	7.483W	79.606%	0.299
	4.988V	9.4W		115.03V
6	3A	14.841W	73.452%	0.383
	4.948V	20.206W		115.03V

Protection Features

OCP (Normal @ 27.6°C)	12V: 82.40A (131.84%), 11.926V 5V: 28.4A (142.00%), 5.077V 3.3V: 30.3A (151.50%), 3.291V 5VSB: 3.7A (123.33%), 4.926V
OCP (Hot @ 43.4°C)	12V: 81.40A (130.24%), 11.935V 5V: 28.3A (141.50%), 5.076V 3.3V: 30.5A (152.50%), 3.29V 5VSB: 3.7A (123.33%), 4.923V
OPP (Normal @ 27.3°C)	965.61W (128.75%)
OPP (Hot @ 43.2°C)	929.62W (123.95%)
OTP	✓ (110°C @ 12V Heatsink)
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	X
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%	4.480A	1.973A	1.983A	1A	75.004	85.51%	814	24.3	40.04°C	0.929
	11.921V	5.068V	3.329V	5V	87.716				42.19°C	115.02V
20%	9.988A	2.965A	2.975A	1.202A	149.947	89.741%	872	26.2	40.67°C	0.963
	11.919V	5.059V	3.327V	4.993V	167.088				43.78°C	114.99V
30%	15.849A	3.465A	3.472A	1.404A	224.951	90.703%	955	29	41.17°C	0.979
	11.918V	5.051V	3.327V	4.986V	248.008				44.76°C	114.96V
40%	21.718A	3.966A	3.97A	1.607A	300.043	90.916%	1020	30.7	41.65°C	0.987
	11.918V	5.043V	3.325V	4.979V	329.981				45.23°C	114.93V
50%	27.188A	4.967A	4.965A	1.81A	374.477	90.767%	1069	32.2	42.13°C	0.991
	11.916V	5.034V	3.324V	4.972V	412.573				45.78°C	114.91V
60%	32.699A	5.971A	5.961A	2A	449.32	90.478%	1126	33.4	42.79°C	0.993
	11.914V	5.025V	3.322V	4.965V	496.608				46.63°C	114.88V
70%	38.212A	6.979A	6.957A	2.219A	524.321	89.994%	1397	38.9	43.15°C	0.994
	11.913V	5.016V	3.321V	4.958V	582.616				48.26°C	114.86V
80%	43.794A	7.988A	7.954A	2.321A	599.508	89.337%	1736	43	43.66°C	0.995
	11.911V	5.006V	3.319V	4.954V	671.069				48.03°C	114.83V
90%	49.721A	8.502A	8.439A	2.424A	674.548	88.581%	1952	45.2	44.02°C	0.995
	11.908V	4.997V	3.318V	4.95V	761.502				48.41°C	114.8V
100%	55.438A	9.02A	8.953A	3.043A	749.753	87.7%	1955	45.2	45.56°C	0.996
	11.906V	4.988V	3.317V	4.931V	854.901				50.84°C	114.76V
110%	61.018A	10.041A	10.043A	3.044A	824.772	86.781%	1965	45.3	46.42°C	0.996
	11.906V	4.978V	3.316V	4.929V	950.409				53.97°C	114.73V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
CL1	0.117A	12.511A	12.586A	0A	106.284	82.405%	859	25.7	39.56°C	0.956
	11.925V	5.05V	3.313V	5.027V	128.976				41.98°C	115V
CL2	0.116A	19.732A	0A	0A	101.355	81.191%	1931	44.9	40.97°C	0.956
	11.923V	5.066V	3.331V	5.027V	124.834				40.84°C	115V
CL3	0.116A	0A	19.977A	0A	67.398	76.171%	957	29.1	40.81°C	0.931
	11.924V	5.052V	3.304V	5.027V	88.483				43.86°C	115.01V
CL4	62.990A	0A	0A	0.001A	749.56	88.745%	1962	45.2	45.54°C	0.996
	11.900V	5.005V	3.33V	5.017V	844.623				51.44°C	114.77V

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	1.246A	0.493A	0.495A	0.199A	20.007	69.427%	757	21.9	36.02°C	0.658
	11.923V	5.075V	3.331V	5.022V	28.817				37.77°C	115.03V
40W	2.742A	0.69A	0.694A	0.299A	40.003	80.03%	753	21.8	37.22°C	0.825
	11.920V	5.073V	3.331V	5.019V	49.988				39.22°C	115.03V
60W	4.240A	0.887A	0.892A	0.399A	60.001	84.32%	760	21.8	38.34°C	0.903
	11.920V	5.071V	3.33V	5.016V	71.16				39.22°C	115.01V
80W	5.732A	1.085A	1.09A	0.499A	79.948	86.807%	773	22.3	39.18°C	0.936
	11.919V	5.068V	3.33V	5.013V	92.097				40.4°C	115.01V

The results above are not used in the certification process

Ripple Measurements 115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	20.77mV	17.83mV	19.08mV	16.06mV	Pass
20% Load	21.23mV	18.70mV	20.15mV	16.88mV	Pass
30% Load	21.49mV	19.87mV	19.59mV	17.75mV	Pass
40% Load	26.70mV	19.36mV	20.36mV	17.08mV	Pass
50% Load	23.94mV	23.60mV	23.63mV	18.47mV	Pass

