ASUS ROG THOR 1600W Titanium III (2024)

Lab ID AS16002523

Certification ID 252523

Test Result Report ID: 24PS2523A

Certificate Issue Date: Aug 5, 2024

Scheme: ETA-EMI PSU

115V



230V



115V



230V



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	ASUS
Model	ROG THOR 1600W Titanium III (2024)
OEM/ODM	Wentai
Serial Number	
Product Specifications	
Manufacturer-Provided Information	
□□□□ (Vrms)	100-240
□□□□ (Arms)	15
□□□□ (Hz)	50/60

□□□□ (W)	1600
Operating Temperature (Continuous Full Load) (°C)	
□□	ATX12V
□□□□	Fully Modular
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
□□	135mm Fluid Dynamic Bearing Fan (F1214025BU)
□□□□□	✓ (selectable)
Cybenetics Testing Information	
Lab ID	AS16002523
Date of receipt	Jul 23, 2024
Testing Date	Aug 1, 2024
Report Issued Date	Aug 5, 2024
□□□□□	Fan speed profile is too loose to achieve LAMBDA-A+. We suggest a more aggressive fan speed profile for increased reliability. We are unsure about this PSU's reliability under tough conditions with the current fan speed profile.
Engineer Name	-
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

□□□□□ (Non-accredited measurements)

□□□□□				
□□	□□□□	□□□□□□	**Gauge**	In Cable Capacitors
ATX □□ 20+4 pin (615mm)	1	1	18AWG	□
4+4 pin EPS 12V □□ (1005mm)	2	2	18AWG	□
6+2pin PCIe□□ (750mm)	4	4	18AWG	□
12+4 pin PCIe (750mm)	2	2	16-24AWG	□
SATA□□ (400mm+120mm+120mm+120mm)	2	6	18AWG	□

SATA□□ (395mm+115mm+115mm+115mm)	1	3	18AWG	□
4-pin Molex (405mm+155mm+155mm)	3	9	18AWG	□
ARGB Cable (800mm)	1	1	22AWG	□

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	25	133.3	3	0.3
	□	125		1600	15	3.6
□□□□□ (W)		1600				

Parts Description

General Data	
Manufacturer (OEM)	Wentai
PCB Type	Double-Sided
Primary Side	
Transient Filter	6x Y caps, 3x X caps, 2x CM chokes, 1x MOV, 1x CAP200DG (Discharge IC)
Inrush Protection	1x NTC Thermistor SCK-105 (10 Ohm) & Relay
Bridge Rectifier(s) (Standby Mode)	5x GBJ25JL (600V, 25A @ 115°C)
Totem-Pole PFC MODFETs (HEMTs)	2x Transform TP65H050WS GaN MODFETs (650 V, 25 A @ 100 °C, 0.06 ohm) &1x Champion CM03X (for reduced no-load consumption)

Totem-Pole PFC Driver	2x On Semiconductor NCP81071 & 1x Champion CM03X (Phantom Power Remover)
Totem-pole PFC MOSFETs	2x HCA60R040 (600 V, 68.8 A, 0.04 ohm)
Boost Diode(s)	2x 3Win Tech 3WS10A065N (650V, 10A)
Bulk Cap(s)	2x TK(400V, 820uF each or 1640 both, 2000h @ 105°C, LGW) 1x TK (400V, 470uF , 2000h @ 105°C, LGW)
Main Switchers	4x Alpha & Omega AOTF29S50 (500V, 18A @ 100°C, Rds(on): 0.4Ohm)
IC Driver(s)	2x Texas Instruments UCC21520
Primary DSC	2x Texas Instruments UCD3138A
Topology	Primary side: Digital Totem-Pole Bridgeless PFC, Full-Bridge & LLC converter Secondary side: Synchronous Rectification & Analogue Controlled DC-DC converters
Secondary Side	
+12V MOSFETs	12x Toshiba TPH1R005PL (45V, 280A @ 175°C, Rds(on): 1.04mOhm)
5V & 3.3V	DC-DC Converters: 6x Excelliance MOS EMB04N03HR (30V, 45A @ 100°C, Rds(on): 4mOhm) PWM Controller(s): ANPEC APW7159C
Filtering Capacitors	Electrolytic: 10x Jamicon TK series (2,000 @ 105°C, LWY) 4x Jamicon TK series (2,000 @ 105°C, LWK) 2x Jamicon TK series (2,000 @ 105°C, LWV) Polymer: 2x Nippon Chemicon (KYA), 74x
Supervisor IC	Weltrend WT7502R (OVP, UVP, SCP, PG)
Flash Memory	Winbond W25Q16DV
Microcontroller	Arery AT32F403A
Fan Model	F1214025BU (135mm, 12V, 1.1A, Double Ball Bearing Fan)
5VSB Circuit	
Rectifier	1x PMD04N65M FET (650V, 2.5A @ 100°C, Rds(on): 2.6Ohm) & 1x Taiwan SemiconductorPB1545S (45V, 15A)
Standby PWM Controller	Weltrend T7161R

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)	91.842%
Average Noise Output (>1450 Load Combinations)	18.23dBA
PF□□□ (>1450 Load Combinations)	0.991
Efficiency With 10W (≤500W) or 2% (>500W) Load	73.424%
□□□□□□	0.0244W
Non-Accredited	
12V Ripple (Full Load)	35.65mV
5V Ripple (Full Load)	18.81mV
3.3V Ripple (Full Load)	24.81mV
5VSB Ripple (Full Load)	14.36mV
12V Load Regulation	1.19%
5V Load Regulation	0.35%
3.3V Load Regulation	0.61%
5VSB Load Regulation	2.45%
Inrush Current	16.830A

230V

Accredited		
□□□□ (>1450 load combinations)		93.672%
Average Noise Output (>1450 Load Combinations)		17.89dBA
PF□□□ (>1450 Load Combinations)		0.949
Efficiency With 10W (≤500W) or 2% (>500W) Load		73.567%
□□□□□□		0.1036W
Non-Accredited		
12V Ripple (Full Load)		38.98mV
5V Ripple (Full Load)		19.54mV
3.3V Ripple (Full Load)		25.50mV
5VSB Ripple (Full Load)		14.35mV
12V Load Regulation		1.18%
5V Load Regulation		0.37%
3.3V Load Regulation		0.61%
5VSB Load Regulation		2.43%
Inrush Current		35.810A
12V Transient Response (200%)		11.49V
5V Transient Response (200%)		4.984V
3.3V Transient Response (200%)		3.097V
5VSB Transient Response (200%)		4.950V
□□□□ & PG□□		23.80ms
AC Loss to PWR_OK Hold Up Time		18.70ms
PWR_OK Inactive to DC Loss Delay		5.10ms
PSU Timings: T1 (20% / 100%)	94.0ms	91.0ms
PSU Timings: T3 (20% / 100%)	136.0ms	135.0ms
12V OCP (27.4°C / 42.9°C)	177.00A (132.78%), 12.173V	177.40A (133.08%), 12.194V
5V OCP (27.4°C / 42.9°C)	31.1A (124.40%), 5.103V	29.2A (116.80%), 5.119V
3.3V OCP (27.4°C / 42.9°C)	34.4A (114.67%), 3.266V	32.4A (108.00%), 3.271V
5VSB OCP (27.4°C / 42.9°C)	4.4A (146.67%), 4.92V	4.3A (143.33%), 4.916V
OPP (29.88°C / 42.94°C)	128.07%	133.07%

□□□□ & PG□□

Hold-Up Time (ms)	23.8
AC Loss to PWR_OK Hold Up Time (ms)	18.7
PWR_OK Inactive to DC Loss Delay (ms)	5.1

□□□□

Tables

115V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	115.08 V	115.05 V	113.85 V	115.12 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	1.418	1.490	PASS
Mains Voltage THD:	0.13 %	0.09 %	N/A	0.17 %	2.00 %	PASS
Real Power:	0.024 W	0.008 W	N/A	0.042 W	N/A	N/A
Apparent Power:	19.110 W	18.198 W	N/A	20.053 W	N/A	N/A
Power Factor:	0.002	N/A	N/A	N/A	N/A	N/A

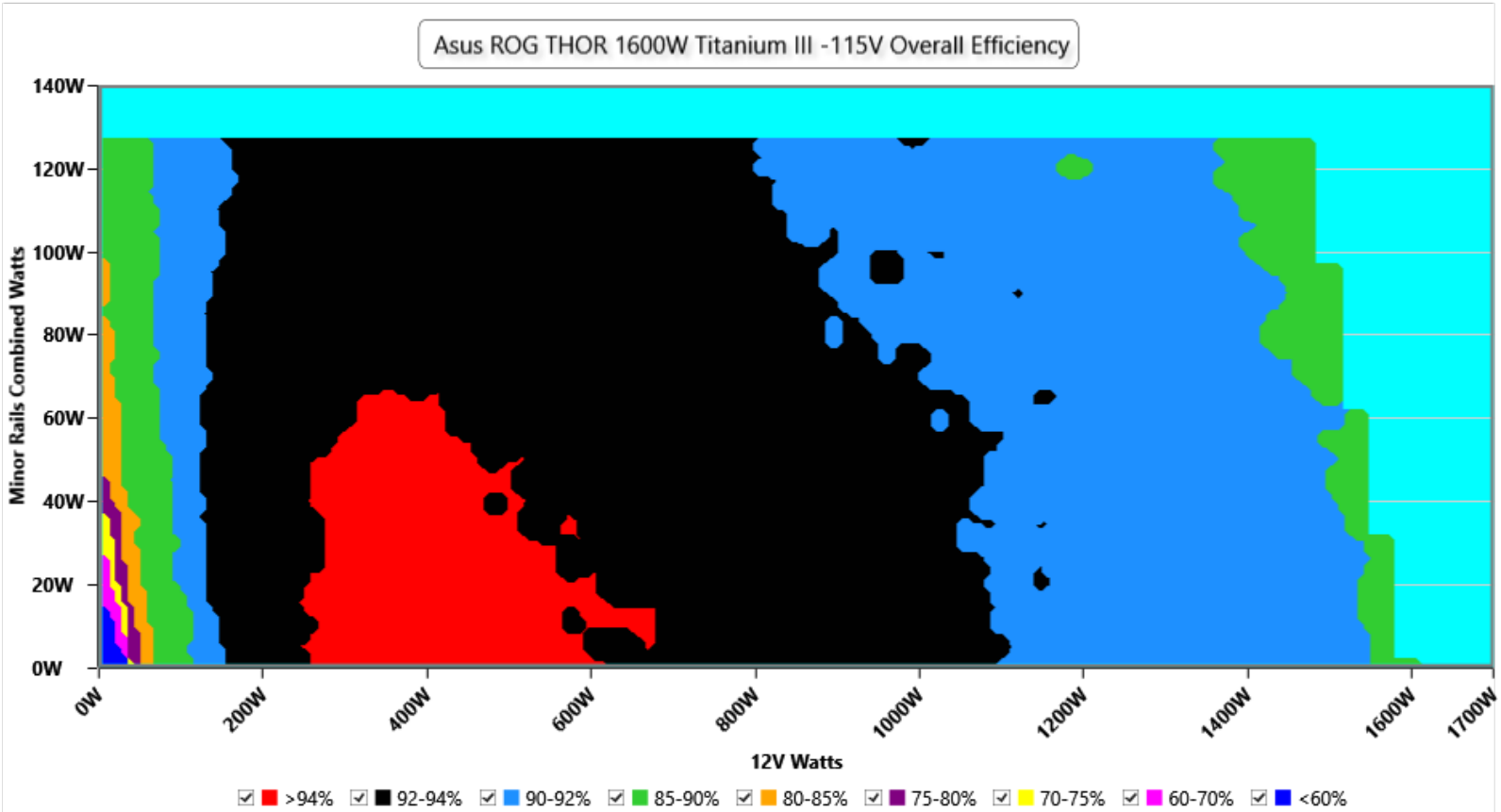
230V

Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	231.04 V	230.95 V	227.70 V	231.11 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:	1.417	1.416	1.340	1.419	1.490	PASS
Mains Voltage THD:	0.17 %	0.14 %	N/A	0.27 %	2.00 %	PASS
Real Power:	0.104 W	0.071 W	N/A	0.209 W	N/A	N/A
Apparent Power:	62.088 W	60.491 W	N/A	63.730 W	N/A	N/A

Power Factor:	0.002	N/A	N/A	N/A	N/A	N/A

□□□□□□

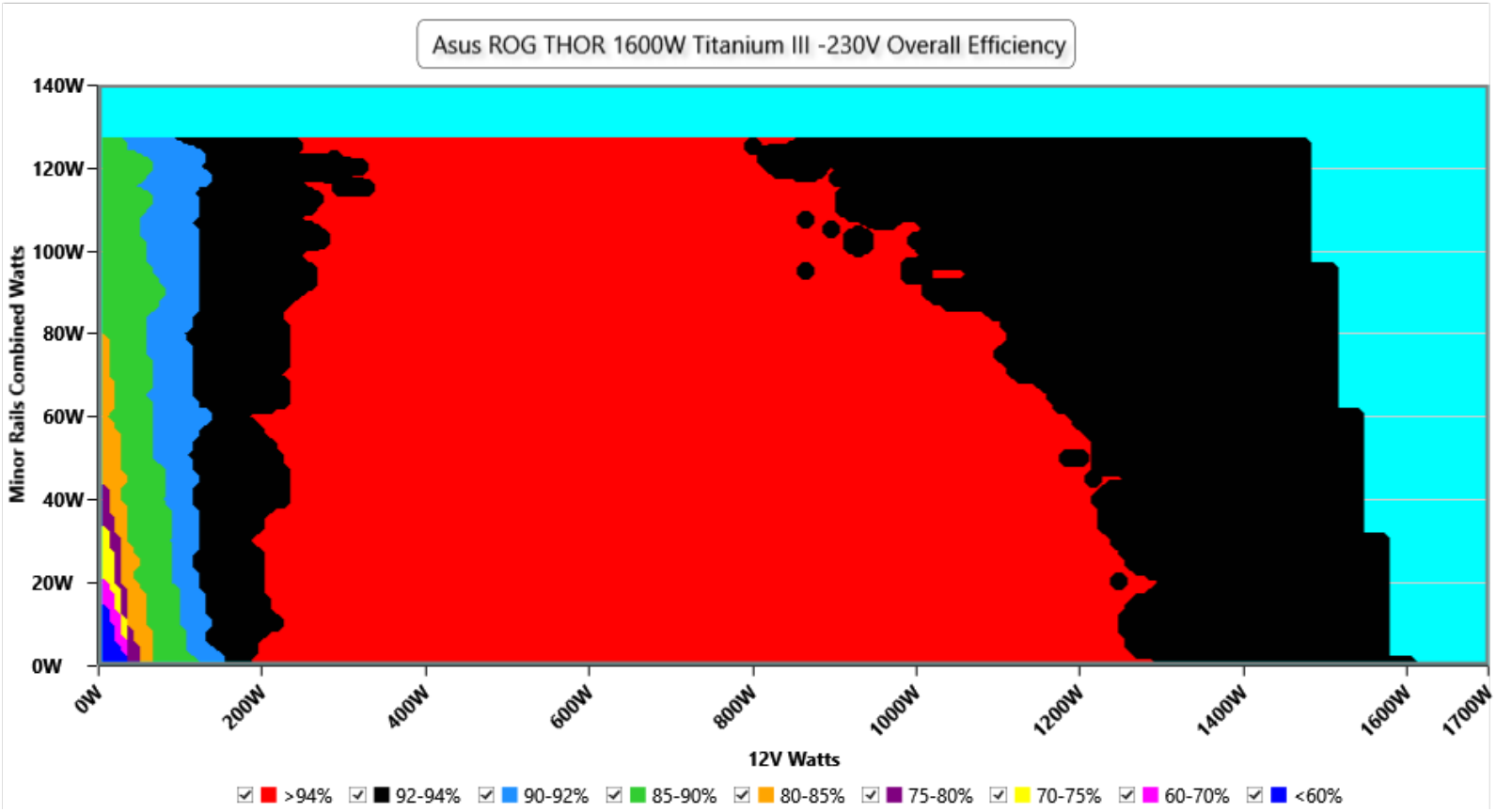
115V



□□

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

230V



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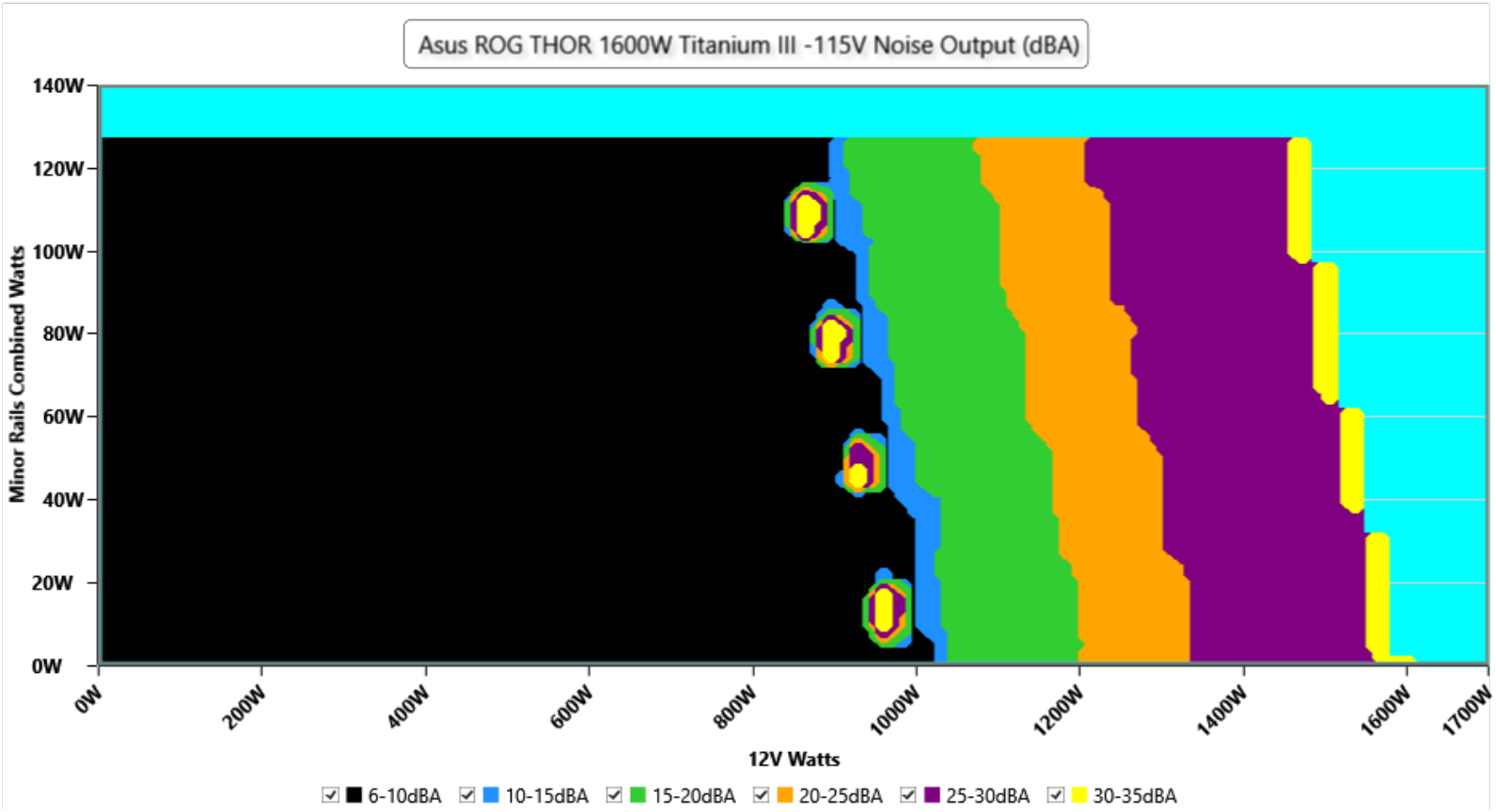
□□□□□

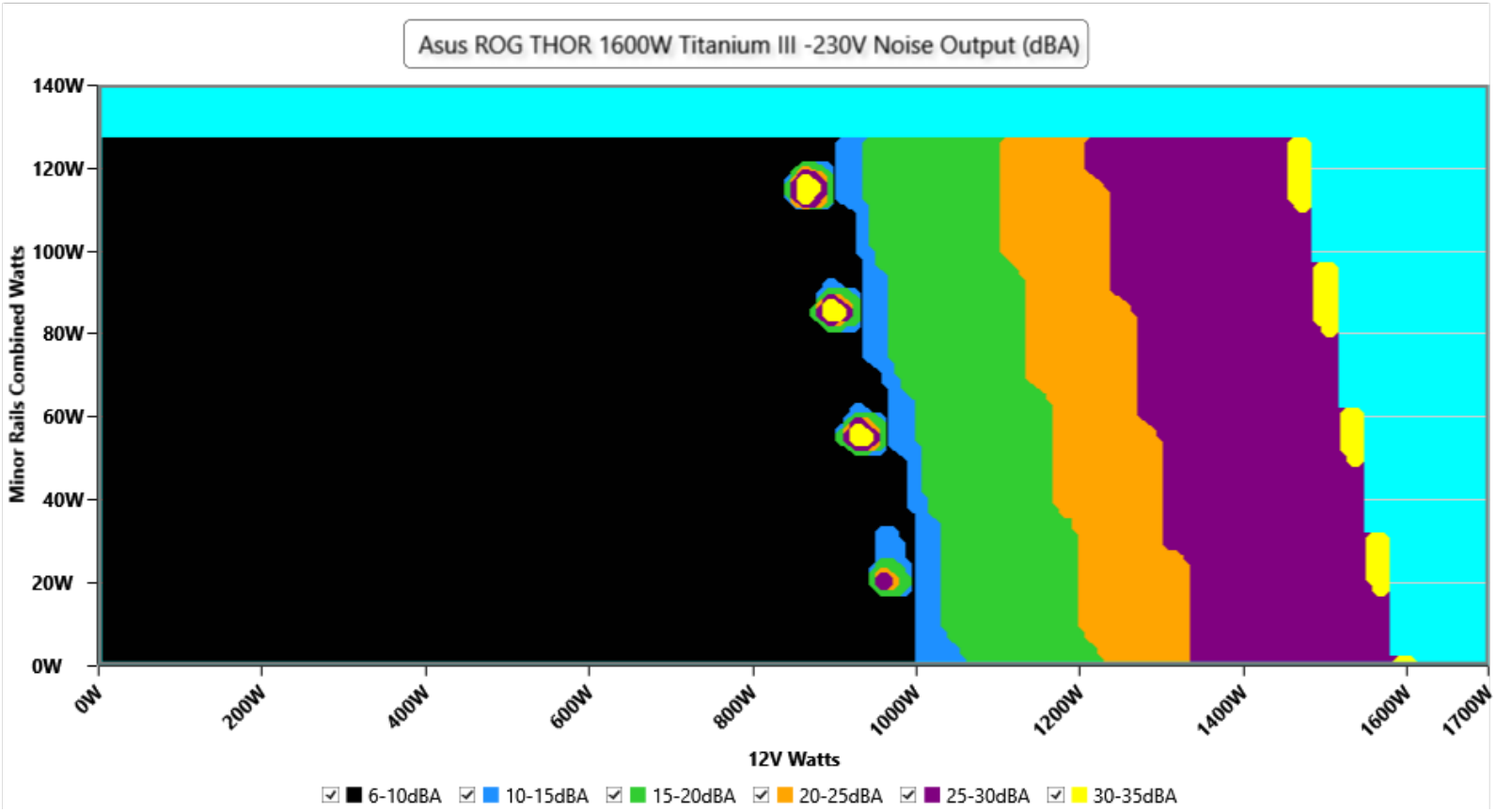
115V



□□

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

230V



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) · 29.8 °C	0 RPM · <6.0 dB(A) · 43.4 °C	fan off in both
20%	0 RPM · <6.0 dB(A) · 36.1 °C	0 RPM · <6.0 dB(A) · 44.6 °C	fan off in both
50%	0 RPM · <6.0 dB(A) · 35.8 °C	0 RPM · <6.0 dB(A) · 49.6 °C	fan off in both
100%	1047 RPM · 30.5 dB(A) · 30.8 °C	1052 RPM · 30.7 dB(A) · 46.0 °C	**+0.2 dB(A)**

230V

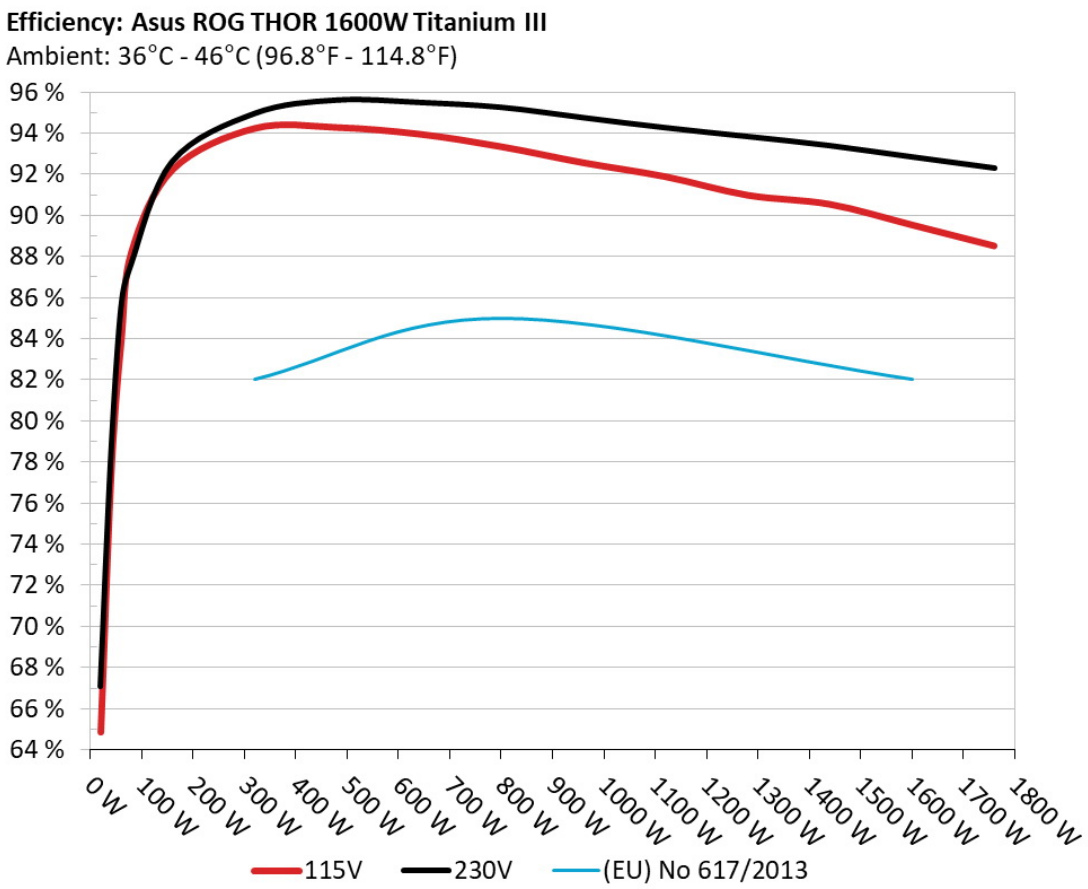
Load	Normal ambient fan · noise · intake	High ambient fan · noise · intake	Noise change
10%	0 RPM · <6.0 dB(A) · 32.3 °C	0 RPM · <6.0 dB(A) · 46.0 °C	fan off in both
20%	0 RPM · <6.0 dB(A) · 31.7 °C	0 RPM · <6.0 dB(A) · 45.0 °C	fan off in both
50%	0 RPM · <6.0 dB(A) · 32.8 °C	0 RPM · <6.0 dB(A) · 43.9 °C	fan off in both
100%	1041 RPM · 30.4 dB(A) · 30.8 °C	1051 RPM · 30.7 dB(A) · 45.9 °C	**+0.3 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.

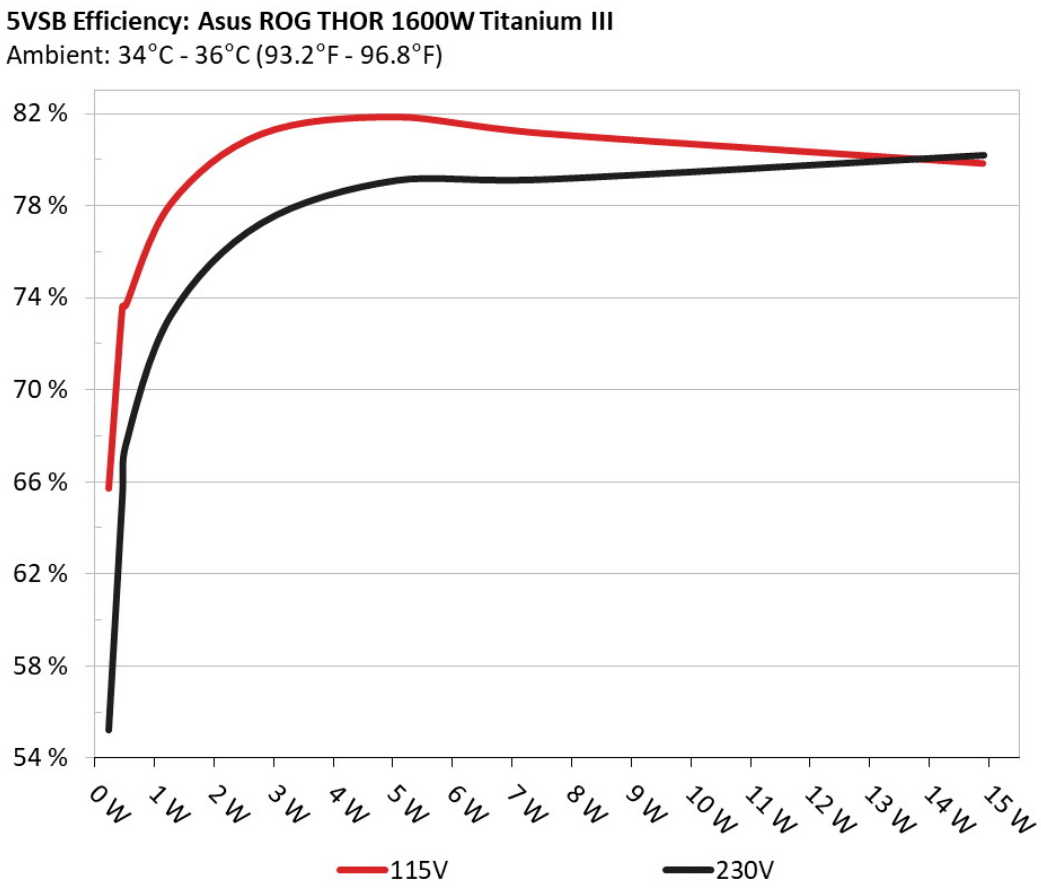
Informational. Not part of the ETA or LAMBDA rating.

Indicative Performance



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**	0.229W	65.691%	0.02
	5.092V	0.352W		114.87V
2	**0.09A**	0.458W	73.609%	0.036
	5.09V	0.623W		114.84V
3	**0.55A**	2.788W	81.109%	0.182
	5.069V	3.435W		114.84V
4	**1A**	5.05W	81.847%	0.287
	5.049V	6.169W		114.85V
5	**1.5A**	7.541W	81.128%	0.367
	5.027V	9.296W		114.84V
6	**3A**	14.887W	79.828%	0.48
	4.962V	18.649W		114.85V

230V

□□ #	5VSB	DC/AC (□)	□□	PF/AC □□
1	**0.045A**	0.229W	55.239%	0.007
	5.095V	0.419W		229.84V
2	**0.09A**	0.458W	65.376%	0.012
	5.092V	0.695W		229.83V
3	**0.55A**	2.79W	77.232%	0.061
	5.072V	3.614W		229.84V
4	**1A**	5.054W	79.084%	0.106
	5.053V	6.392W		229.84V
5	**1.5A**	7.55W	79.128%	0.152
	5.033V	9.541W		229.84V
6	**3A**	14.914W	80.175%	0.261
	4.971V	18.605W		229.85V

Protection Features

OCP (Normal @ 27.4°C)	12V: 177.00A (132.78%), 12.173V 5V: 31.1A (124.40%), 5.103V 3.3V: 34.4A (114.67%), 3.266V 5VSB: 4.4A (146.67%), 4.92V
OCP (Hot @ 42.9°C)	12V: 177.40A (133.08%), 12.194V 5V: 29.2A (116.80%), 5.119V 3.3V: 32.4A (108.00%), 3.271V 5VSB: 4.3A (143.33%), 4.916V
OPP (Normal @ 29.9°C)	2049.18W (128.07%)
OPP (Hot @ 42.9°C)	2129.20W (133.07%)
OTP	✓ (165°C @ Secondary Side)
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)

10-110%□□□□

115V

□□	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
10%	**11.398A**	**1.944A**	**2.002A**	**0.978A**	159.997	92.243%	0	<6.0	43.38°C	0.969
	12.143V	5.143V	3.296V	5.112V	173.456				40.03°C	114.78V

20%	**23.766A**	**2.917A**	**3.005A**	**1.176A**	319.968	94.246%	0	<6.0	44.63°C	0.994
	12.163V	5.142V	3.294V	5.104V	339.435				40.88°C	114.74V
30%	**36.411A**	**3.404A**	**3.508A**	**1.374A**	479.187	94.29%	0	<6.0	42.48°C	0.995
	12.170V	5.141V	3.293V	5.094V	507.957				41.12°C	114.7V
40%	**49.059A**	**3.89A**	**4.01A**	**1.573A**	639.648	93.968%	0	<6.0	46.35°C	0.994
	12.199V	5.142V	3.292V	5.086V	681.182				41.64°C	114.65V
50%	**61.270A**	**4.864A**	**5.016A**	**1.773A**	799.374	93.357%	0	<6.0	49.61°C	0.994
	12.222V	5.141V	3.289V	5.078V	856.258				42.04°C	114.57V
60%	**73.485A**	**5.838A**	**6.024A**	**1.973A**	959.873	92.571%	0	<6.0	49.74°C	0.996
	12.249V	5.14V	3.287V	5.069V	1036.892				42.71°C	114.53V
70%	**85.652A**	**6.82A**	**7.034A**	**2.176A**	1119.599	91.896%	655	17.3	43.35°C	0.997
	12.264V	5.133V	3.285V	5.055V	1218.367				58.77°C	114.46V
80%	**98.092A**	**7.799A**	**8.043A**	**2.278A**	1279.635	90.991%	794	23.1	43.9°C	0.997
	12.251V	5.129V	3.282V	5.048V	1402.506				59.88°C	114.41V
90%	**110.884A**	**8.289A**	**8.535A**	**2.381A**	1439.459	90.553%	925	27.3	44.68°C	0.997
	12.238V	5.127V	3.28V	5.041V	1589.688				62.22°C	114.34V
100%	**123.457A**	**8.779A**	**9.057A**	**2.991A**	1599.448	89.55%	1052	30.7	45.95°C	0.996
	12.229V	5.126V	3.279V	5.015V	1785.475				64.9°C	114.27V
110%	**135.987A**	**9.759A**	**10.163A**	**2.992A**	1760.081	88.524%	1133	32.6	46.31°C	0.995
	12.220V	5.124V	3.276V	5.013V	1988.078				67.93°C	114.18V
CL1	**0.115A**	**14.662A**	**15.123A**	**0A**	126.313	84.035%	0	<6.0	41.03°C	0.986
	12.187V	5.136V	3.28V	5.189V	150.421				46.14°C	114.8V
CL2	**0.114A**	**24.312A**	**0A**	**0A**	126.233	81.482%	0	<6.0	41.38°C	0.987
	12.194V	5.135V	3.287V	5.212V	155.416				42.86°C	114.79V
CL3	**0.114A**	**0A**	**25.175A**	**0A**	83.883	79.671%	0	<6.0	40.42°C	0.919
	12.164V	5.157V	3.277V	5.168V	105.299				41.88°C	114.8V
CL4	**130.835A**	**0A**	**0A**	**0A**	1600.009	89.949%	1052	30.7	46.42°C	0.996
	12.229V	5.144V	3.292V	5.113V	1778.762				64.19°C	114.27V

The results above are not used in the certification process

230V

□□	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
10%	**11.396A**	**1.944A**	**2.002A**	**0.978A**	159.999	92.637%	0	<6.0	46°C	0.853
	12.144V	5.144V	3.297V	5.112V	172.635				40.08°C	229.81V
20%	**23.763A**	**2.917A**	**3.005A**	**1.176A**	319.973	94.973%	0	<6.0	45.02°C	0.925
	12.165V	5.142V	3.294V	5.103V	336.907				40.73°C	229.77V
30%	**36.394A**	**3.404A**	**3.508A**	**1.375A**	479.196	95.628%	0	<6.0	43.54°C	0.948
	12.176V	5.142V	3.293V	5.093V	501.259				41.46°C	229.77V
40%	**49.092A**	**3.89A**	**4.01A**	**1.574A**	639.617	95.516%	0	<6.0	43.41°C	0.96
	12.189V	5.141V	3.292V	5.083V	669.487				41.73°C	229.73V
50%	**61.308A**	**4.865A**	**5.016A**	**1.774A**	799.35	95.277%	0	<6.0	43.94°C	0.966
	12.214V	5.14V	3.289V	5.074V	838.944				42.29°C	229.71V
60%	**73.532A**	**5.839A**	**6.024A**	**1.974A**	959.85	94.772%	0	<6.0	43.64°C	0.971
	12.241V	5.138V	3.287V	5.066V	1012.837				42.84°C	229.69V
70%	**85.689A**	**6.818A**	**7.034A**	**2.177A**	1119.584	94.283%	608	16.1	43.22°C	0.987
	12.259V	5.134V	3.285V	5.055V	1187.462				52.4°C	229.66V
80%	**98.108A**	**7.796A**	**8.043A**	**2.278A**	1279.591	93.854%	752	22	43.74°C	0.989
	12.249V	5.13V	3.282V	5.048V	1363.394				53.73°C	229.63V
90%	**110.874A**	**8.287A**	**8.535A**	**2.381A**	1439.422	93.41%	902	26.6	44.54°C	0.989
	12.239V	5.128V	3.28V	5.04V	1540.972				54.81°C	229.6V
100%	**123.457A**	**8.778A**	**9.058A**	**2.991A**	1599.438	92.861%	1051	30.7	45.86°C	0.99
	12.229V	5.126V	3.279V	5.015V	1722.45				56.34°C	229.58V
110%	**136.013A**	**9.759A**	**10.163A**	**2.992A**	1760.061	92.318%	1132	32.6	46.34°C	0.99
	12.218V	5.124V	3.276V	5.013V	1906.585				58.59°C	229.54V
CL1	**0.116A**	**14.675A**	**15.122A**	**0A**	126.315	87.096%	0	<6.0	43.38°C	0.823
	12.171V	5.132V	3.28V	5.185V	145.038				59.89°C	229.82V
CL2	**0.114A**	**24.315A**	**0A**	**0A**	126.233	84.919%	0	<6.0	43.47°C	0.828
	12.170V	5.134V	3.288V	5.212V	148.676				57.77°C	229.82V
CL3	**0.114A**	**0A**	**25.18A**	**0A**	83.886	79.806%	0	<6.0	42.93°C	0.754
	12.168V	5.158V	3.276V	5.169V	105.117				56.32°C	229.82V

CL4	**130.807A**	**0A**	**0A**	**0A**	1600.031	93.119%	1047	30.5	45.8°C	0.99
	12.232V	5.144V	3.292V	5.113V	1718.335				58.22°C	229.56V

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	**1.225A**	**0.486A**	**0.5A**	**0.195A**	19.999	64.846%	0	<6.0	36.82°C	0.764
	12.121V	5.143V	3.299V	5.138V	30.811				36.14°C	114.84V
40W	**2.698A**	**0.68A**	**0.7A**	**0.292A**	40	77.368%	0	<6.0	40.42°C	0.839
	12.120V	5.144V	3.299V	5.136V	51.581				37.63°C	114.85V
60W	**4.164A**	**0.875A**	**0.9A**	**0.39A**	60	83.997%	0	<6.0	41.48°C	0.875
	12.137V	5.144V	3.298V	5.132V	71.123				38.61°C	114.83V
80W	**5.630A**	**1.069A**	**1.101A**	**0.487A**	79.942	88.238%	0	<6.0	41.52°C	0.903
	12.134V	5.144V	3.298V	5.129V	90.977				39.22°C	114.82V

The results above are not used in the certification process

230V

□□	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
20W	**1.226A**	**0.486A**	**0.5A**	**0.195A**	19.998	67.077%	0	<6.0	43.95°C	0.381
	12.116V	5.143V	3.299V	5.137V	29.82				36.36°C	229.83V
40W	**2.698A**	**0.681A**	**0.7A**	**0.292A**	40	78.076%	0	<6.0	45.1°C	0.534
	12.115V	5.143V	3.298V	5.134V	51.23				37.2°C	229.83V
60W	**4.164A**	**0.875A**	**0.9A**	**0.39A**	60	85.485%	0	<6.0	44.42°C	0.626
	12.134V	5.143V	3.298V	5.131V	70.2				38.33°C	229.83V
80W	**5.630A**	**1.069A**	**1.101A**	**0.488A**	79.942	87.648%	0	<6.0	45.94°C	0.713
	12.133V	5.144V	3.298V	5.128V	90.895				39.7°C	229.83V

The results above are not used in the certification process

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	21.63mV	16.27mV	21.49mV	10.06mV	Pass
20% Load	28.18mV	14.01mV	21.19mV	8.77mV	Pass
30% Load	19.13mV	13.50mV	19.03mV	9.34mV	Pass
40% Load	23.47mV	17.24mV	21.60mV	10.83mV	Pass
50% Load	22.55mV	13.24mV	19.03mV	9.13mV	Pass
60% Load	30.94mV	21.04mV	32.42mV	15.85mV	Pass
70% Load	22.71mV	15.60mV	21.09mV	9.90mV	Pass
80% Load	25.78mV	16.89mV	21.55mV	12.01mV	Pass
90% Load	26.80mV	18.37mV	23.39mV	12.57mV	Pass
100% Load	35.65mV	18.81mV	24.81mV	14.36mV	Pass
110% Load	41.70mV	22.59mV	29.71mV	17.31mV	Pass
Crossload1	26.50mV	16.50mV	21.98mV	10.03mV	Pass
Crossload2	24.75mV	18.42mV	17.29mV	9.03mV	Pass
Crossload3	18.11mV	15.86mV	21.45mV	9.65mV	Pass
Crossload4	37.70mV	17.98mV	26.03mV	13.07mV	Pass

The results above are not used in the certification process

230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	15.24mV	15.04mV	25.29mV	9.75mV	Pass
20% Load	21.89mV	14.11mV	19.44mV	8.98mV	Pass
30% Load	33.70mV	14.94mV	20.11mV	8.83mV	Pass
40% Load	26.39mV	17.40mV	21.86mV	11.49mV	Pass
50% Load	30.59mV	18.73mV	26.06mV	14.06mV	Pass
60% Load	39.69mV	16.89mV	23.40mV	12.57mV	Pass





Test	12V	5V	3.3V	5VSB	Pass/Fail
70% Load	26.49mV	17.04mV	23.24mV	11.90mV	Pass
80% Load	26.34mV	19.66mV	26.16mV	12.98mV	Pass
90% Load	30.12mV	19.61mV	25.24mV	13.70mV	Pass
100% Load	38.98mV	19.54mV	25.50mV	14.35mV	Pass
110% Load	40.58mV	21.54mV	28.89mV	16.53mV	Pass
Crossload1	23.96mV	18.37mV	26.13mV	11.65mV	Pass
Crossload2	20.82mV	20.22mV	22.17mV	10.41mV	Pass
Crossload3	19.90mV	17.71mV	24.78mV	12.21mV	Pass
Crossload4	37.94mV	19.12mV	25.56mV	12.98mV	Pass

The results above are not used in the certification process

ASUS ROG THOR 1600W Titanium III (2024)

Top side

Power specifications label

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