CORSAIR

Corsair TX750M

Serial Number 21264859000089270008

Lab ID CR75001916

Certification ID 251916

Test Result Report ID: 21PS1916A

Certificate Issue Date: Oct 13, 2021

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	Corsair
Model	TX750M
OEM/ODM	Great Wall
Serial Number	21264859000089270008
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	10-5
Rated Frequency (Hz)	47-63

Rated Power (W)	750
Operating Temperature (Continuous Full Load) (°C)	
Type	ATX12V
Cable Design	Semi Modular
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
Cooling	120mm Rifle Bearing Fan (NR120L)
Semi-Passive Operation	✗
Cybenetics Testing Information	
Lab ID	CR75001916
Date of receipt	Sep 9, 2021
Testing Date	Oct 11, 2021
Report Issued Date	Oct 13, 2021
Engineer Name	-
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

Cables and Connectors(Non-accredited measurements)

Native Cables				
Description	Cable Count	Connector Count (Total)	Gauge	In Cable Caps
ATX connector 20+4 pin (610mm)	1	1	18-20AWG	No
4+4 pin EPS12V (650mm)	1	1	18AWG	No
Modular Cables				
4+4 pin EPS12V (650mm)	1	1	18AWG	No
6+2 pin PCIe (600mm+150mm)	2	4	16-18AWG	No
SATA (450mm+110mm+110mm+110mm)	1	4	18AWG	No
SATA (500mm+95mm+95mm)	1	3	18AWG	No
4 pin Molex (450mm+100mm+100mm+100mm)	1	4	18AWG	No

Power Specifications

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	25	25	62	3	0.8
	Watts	130		744	15	9.6
Total Max. Power (W)		750				

Parts Description

General Data	-
Manufacturer (OEM)	Great Wall
PCB Type	Double Sided
Primary Side	-
Transient Filter	4x Y caps, 2x X caps, 3x CM chokes, 1x MOV
Inrush Protection	NTC Thermistor SCK-2R58 (2.5Ohm) & Relay
Bridge Rectifier(s)	2x Shindengen US15KB80R (800V, 15A @ 101°C)
APFC MOSFETs	2x Vishay SiHG33N60EF (600V, 21A @ 100°C, Rds(on): 0.098Ohm)
APFC Boost Diode	1x CREE C3D06060A (600V, 6A @ 154°C)
Bulk Cap(s)	2x Rubycon (450V, 330uF each or 660uF combined, 2,000h @ 105°C, MXH)
Main Switchers	2x Advanced Power Electronics AP65SL130DI (650V, 16.5A @ 100°C, Rds(on): 0.13Ohm)
APFC Controller	Champion CM6500UNX & Champion CM03AX
Resonant Controller	Champion CU6901VPA
Topology	Primary side: APFC, Half-Bridge & LLC converter Secondary side: Synchronous Rectification & DC-DC converters
Secondary Side	-
+12V MOSFETs	6x Advanced Power Electronics AP4N1R8CMT-A (45V, 180A, Rds(on): 1.8mOhm)
5V & 3.3V	DC-DC Converters: 6x Advanced Power Electronics AP0403GH (30V, 50A @ 100°C, Rds(on): 4.5mOhm) PWM Controllers: ANPEC APW7159C
Filtering Capacitors	Electrolytic: 1x Rubycon (6-10,000h @ 105°C, ZLH), 5x Rubycon (4-10,000h @ 105°C, YXJ), 1x Rubycon (3-6,000h @ 105°C, YXG), 1x Nippon Chemi-Con (4-10,000h @ 105°C, KY) Polymer: 11x Nippon Chemi-Con, 4x FPCAP
Supervisor IC	IN1S429I-SCG (OVP, UVP, OCP, SG, PGO)
Fan Model	Corsair NR120L (120mm, 12V, 0.22A, Rifle Bearing Fan)
5VSB Circuit	-

Rectifier	1x Diodes Incorporated SBR10E45P5 SBR (45V, 10A)
Standby PWM Controller	Power Integrations TNY278GN

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	✓

Performance Summary

115V

Accredited	
Average Efficiency (>1450 load combinations)	88.010%
Average Noise Output (>1450 Load Combinations)	27.75dBA
Average PF (>1450 Load Combinations)	0.983
Efficiency With 10W (≤500W) or 2% (>500W) Load	71.796%
Standby Power Consumption	0.0477W
Non-Accredited	
12V Ripple (Full Load)	39.35mV
5V Ripple (Full Load)	20.76mV
3.3V Ripple (Full Load)	27.97mV
5VSB Ripple (Full Load)	21.46mV
12V Load Regulation	0.72%
5V Load Regulation	0.87%
3.3V Load Regulation	1.48%
5VSB Load Regulation	1.49%
Inrush Current	44.320A

230V		
Accredited		
Average Efficiency (>1450 load combinations)		90.153%
Average Noise Output (>1450 Load Combinations)		27.45dBA
Average PF (>1450 Load Combinations)		0.955
Efficiency With 10W (≤500W) or 2% (>500W) Load		-
Standby Power Consumption		0.0836W
Non-Accredited		
12V Ripple (Full Load)		39.25mV
5V Ripple (Full Load)		17.91mV
3.3V Ripple (Full Load)		24.23mV
5VSB Ripple (Full Load)		20.82mV
12V Load Regulation		0.73%
5V Load Regulation		0.89%
3.3V Load Regulation		1.51%
5VSB Load Regulation		1.47%
Inrush Current		84.610A
Hold-Up Time & PWR_OK Signal		17.60ms
AC Loss to PWR_OK Hold Up Time		13.40ms
PWR_OK Inactive to DC Loss Delay		4.20ms
PSU Timings: T1 (20% / 100%)	38.0ms	38.0ms
PSU Timings: T3 (20% / 100%)	132.0ms	132.0ms
OPP (28.25°C / 45.32°C)	121.10%	121.10%

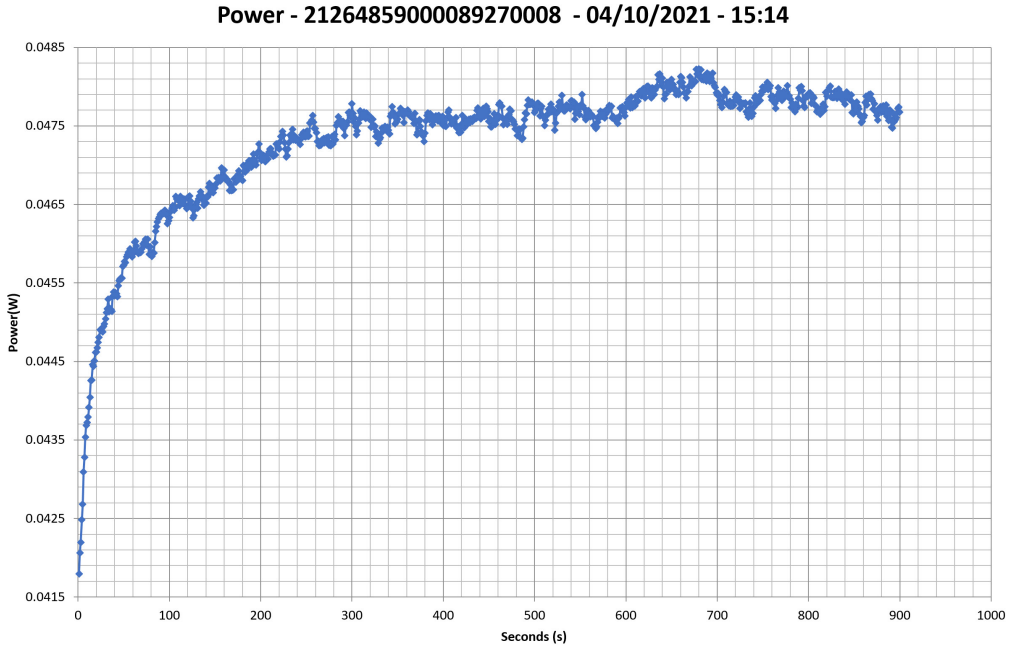
Hold-Up Time & PWR_OK Signal

Hold-Up Time (ms)	17.6
AC Loss to PWR_OK Hold Up Time (ms)	13.4
PWR_OK Inactive to DC Loss Delay (ms)	4.2

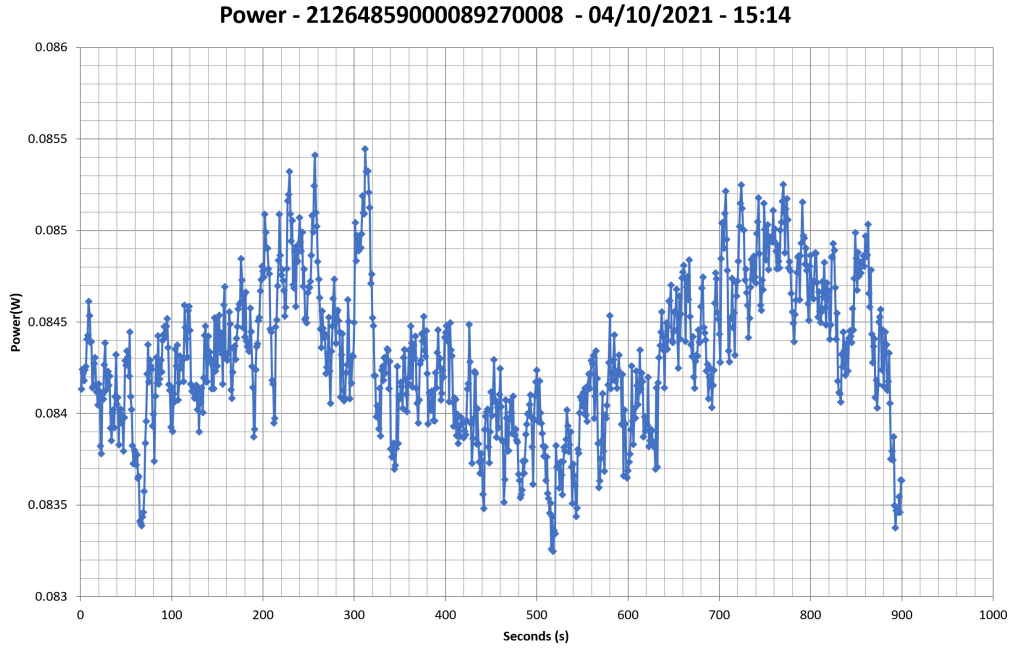
Stromverbrauch im Ruhezustand

Graphs

115V

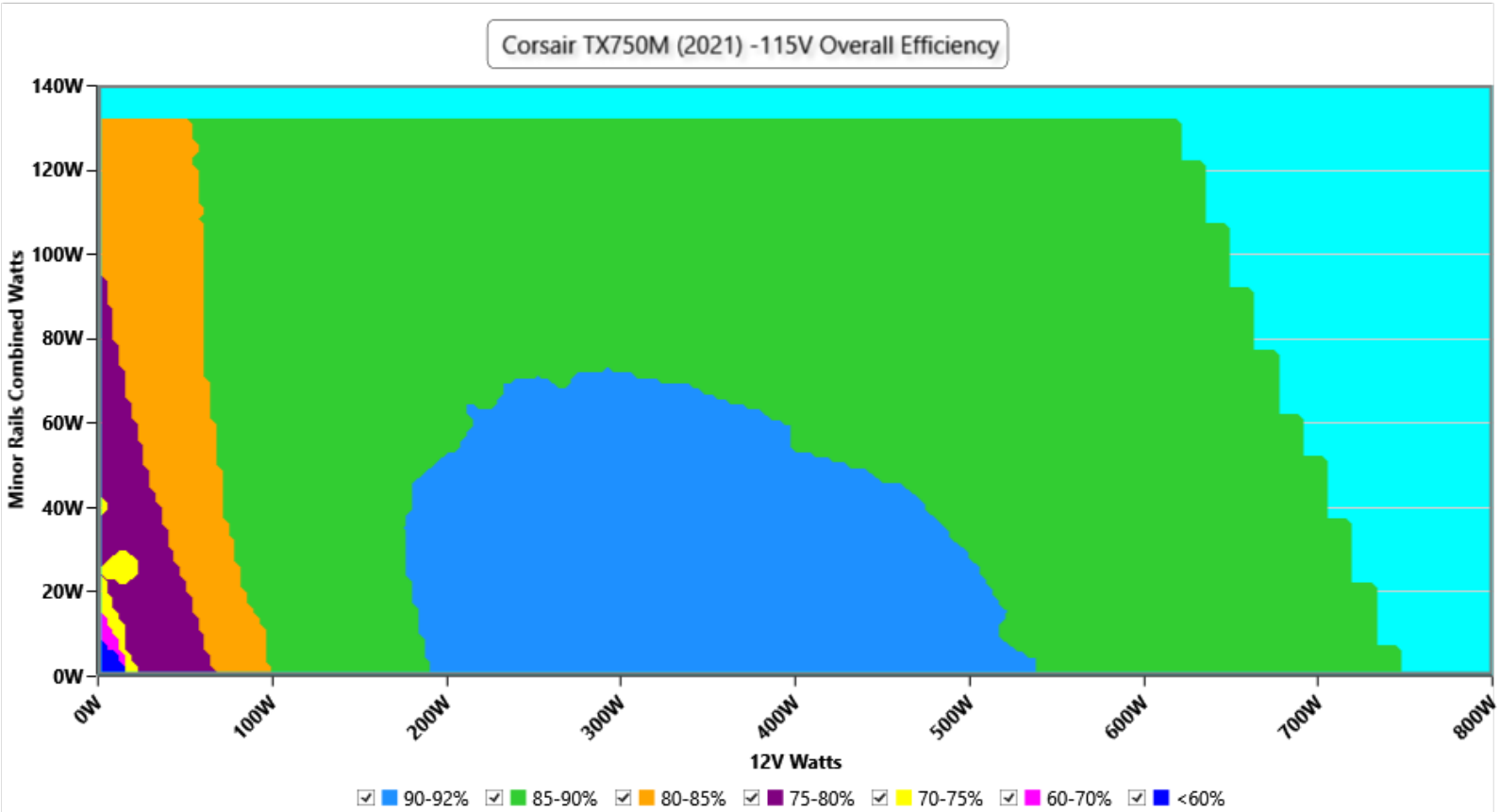


230V



Efficiency Graph

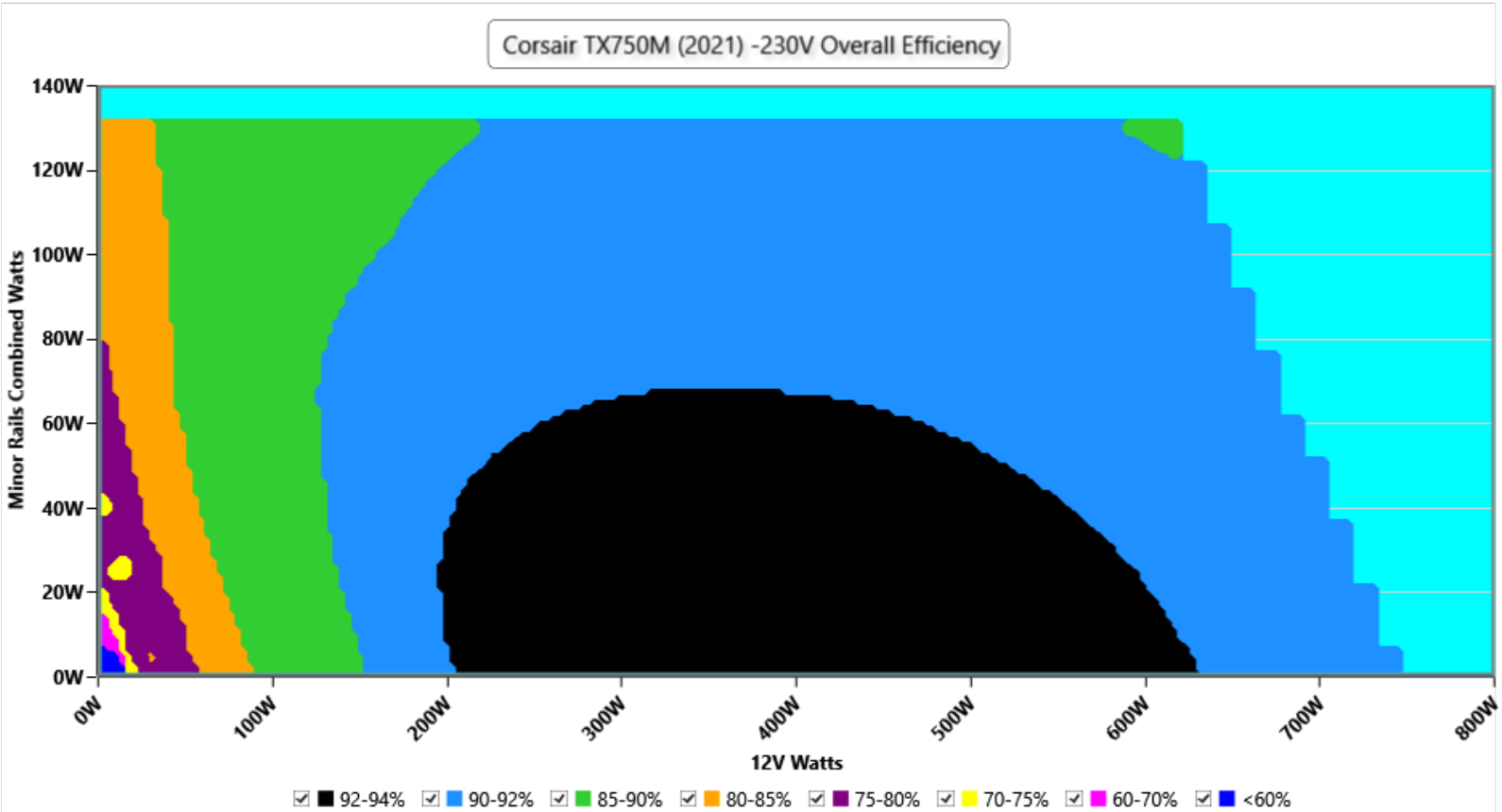
115V



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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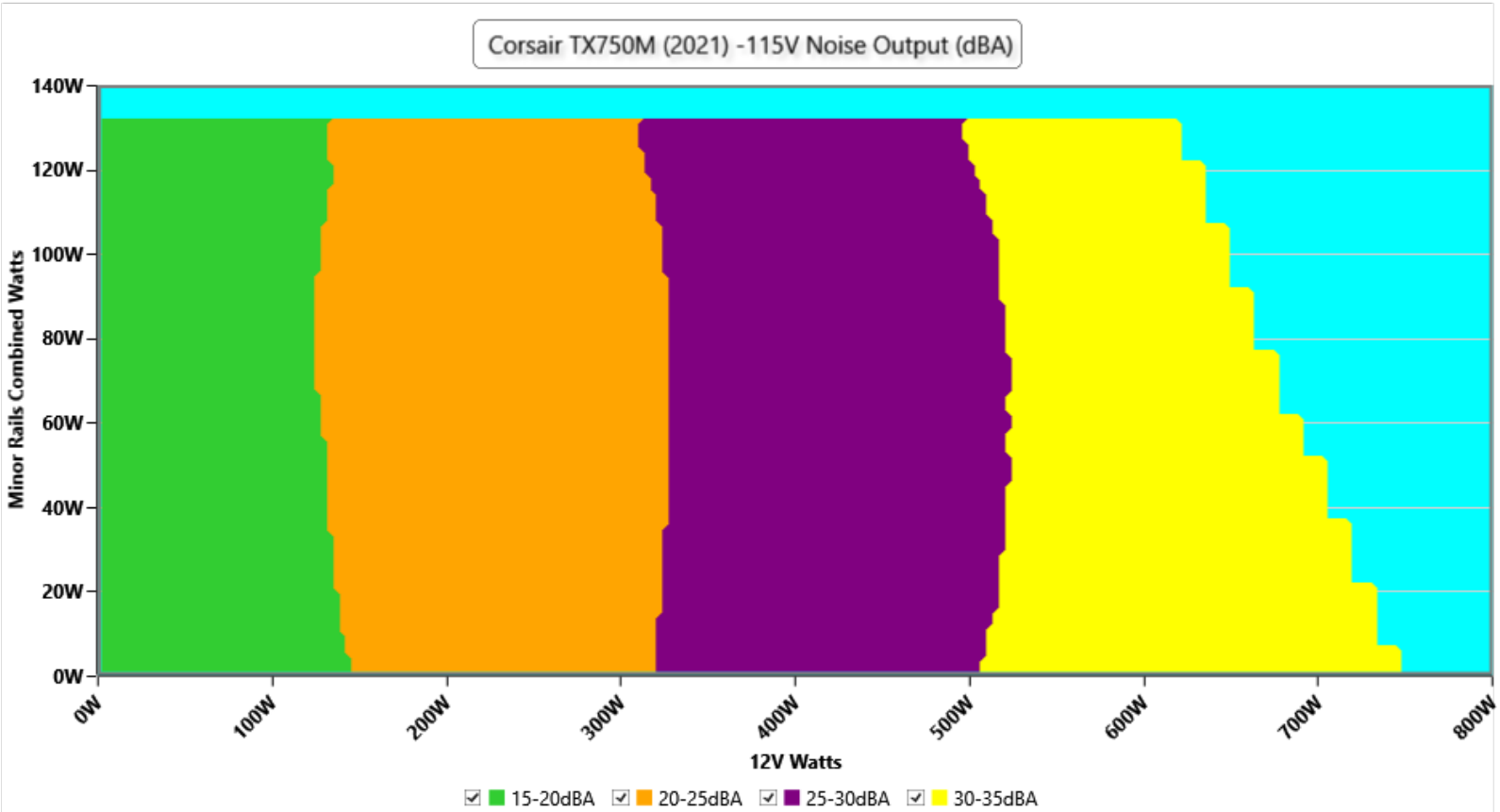
Noise Graph

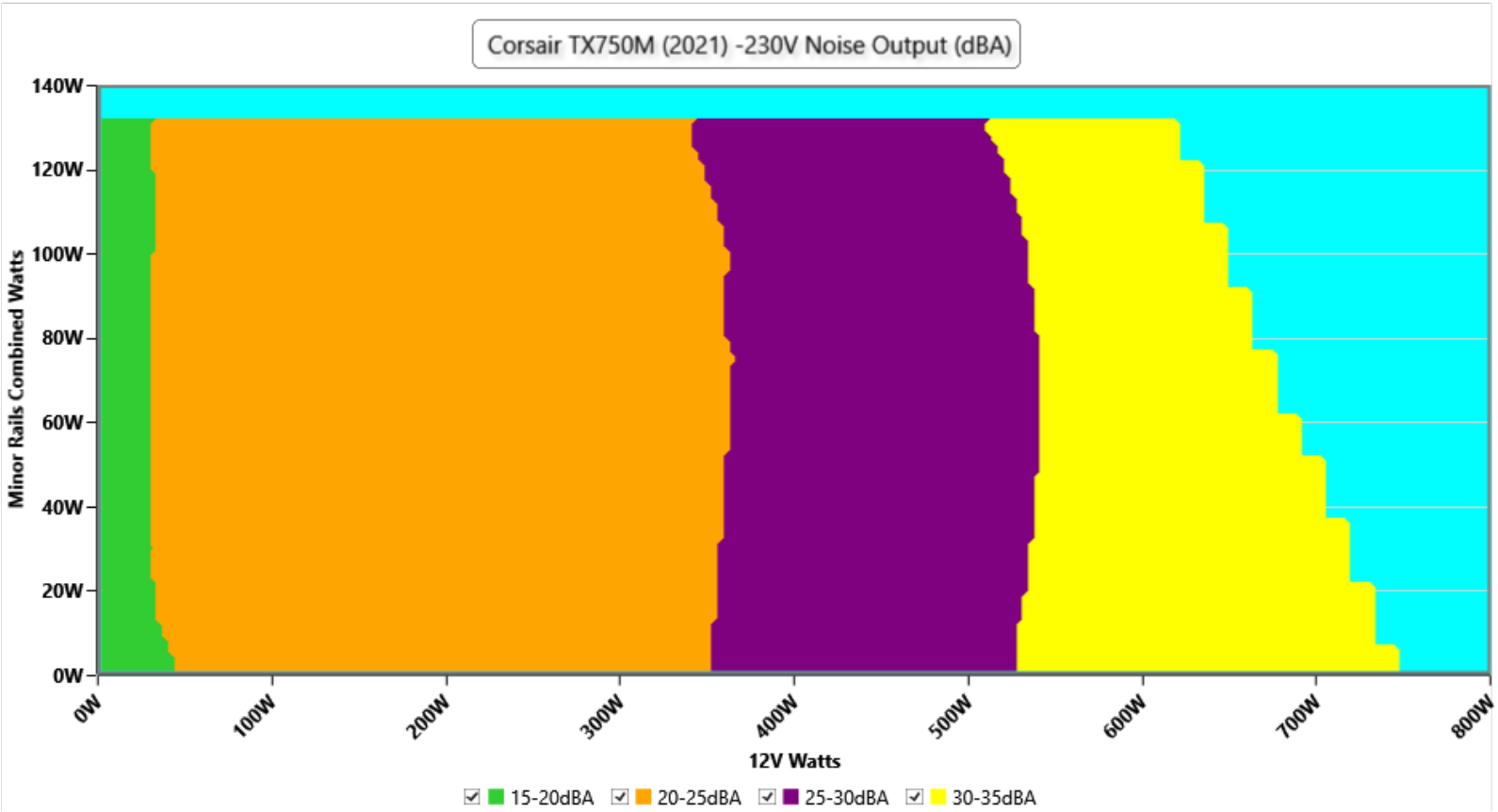
115V



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

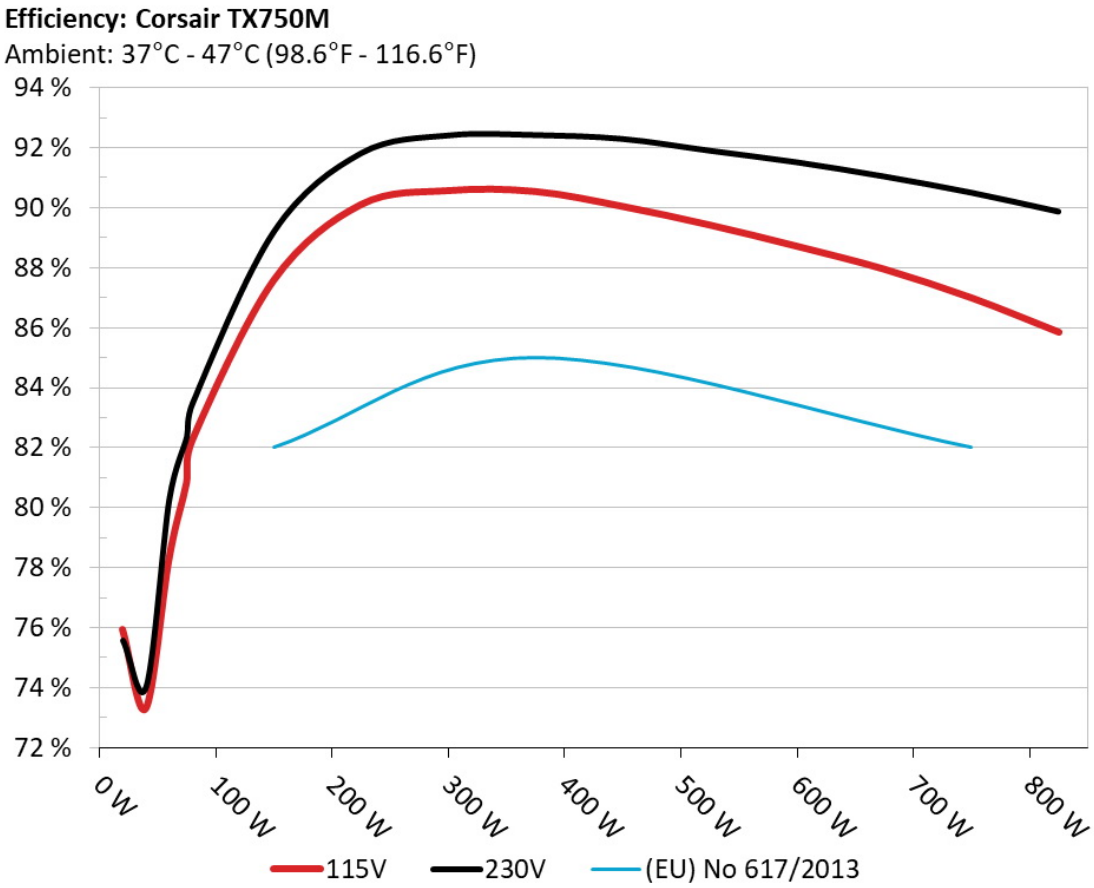


INFO

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

Indicative Performance

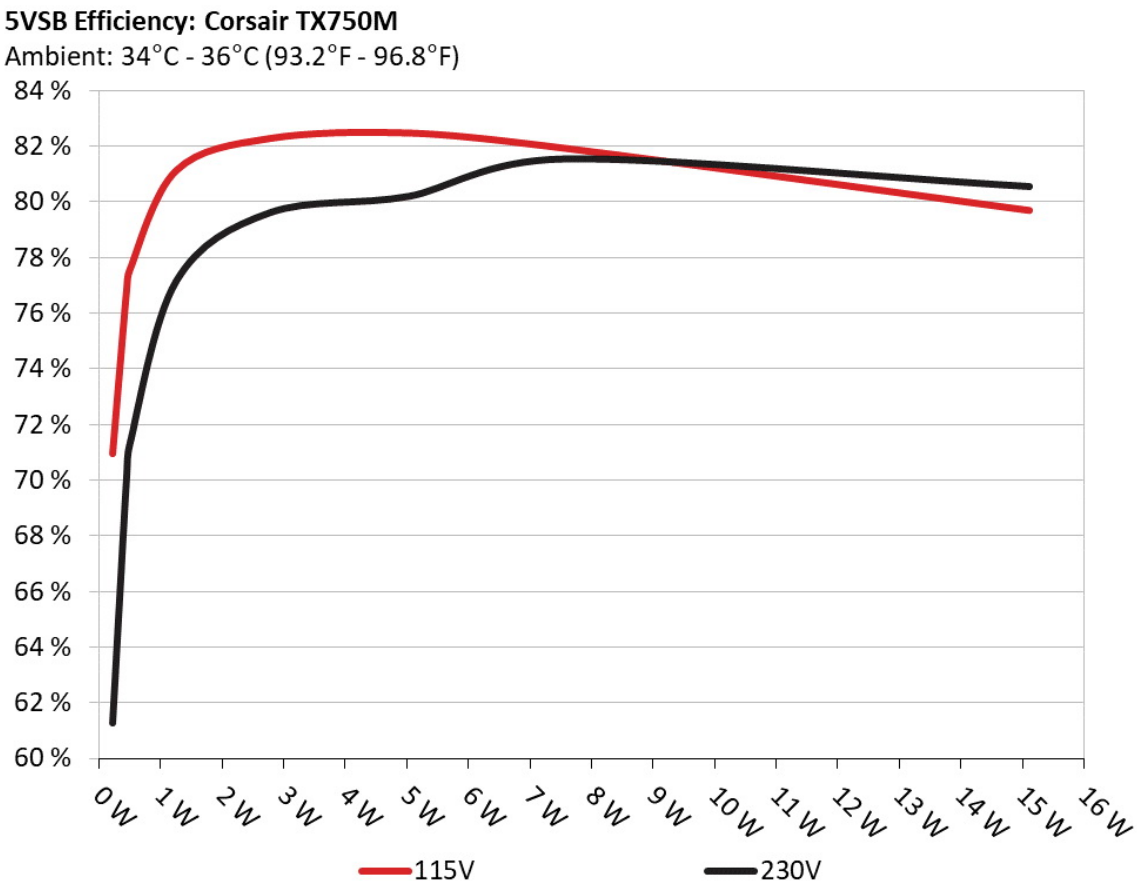
Efficiency under high ambient temperature



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	0.227W	70.962%	0.048
	5.045V	0.32W		115.11V
2	0.09A	0.454W	76.849%	0.085
	5.045V	0.591W		115.11V
3	0.55A	2.775W	82.287%	0.293
	5.044V	3.372W		115.11V
4	1A	5.044W	82.483%	0.358
	5.043V	6.115W		115.11V
5	1.5A	7.563W	81.938%	0.394
	5.042V	9.23W		115.11V
6	3A	15.114W	79.702%	0.446
	5.037V	18.963W		115.11V

230V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.227W	61.29%	0.017
	5.046V	0.37W		230.24V
2	0.09A	0.454W	70.14%	0.029
	5.046V	0.647W		230.24V
3	0.55A	2.775W	79.619%	0.138
	5.044V	3.485W		230.25V
4	1A	5.044W	80.214%	0.211
	5.043V	6.288W		230.25V
5	1.5A	7.564W	81.556%	0.261
	5.042V	9.275W		230.25V
6	3.001A	15.116W	80.565%	0.337
	5.038V	18.762W		230.25V

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%	4.444A	2.001A	2.004A	0.993A	75.016	80.832%	958	25.0	40.09°C	0.942
	12.021V	4.997V	3.294V	5.035V	92.805				45.05°C	115.14V
20%	9.908A	3.004A	3.009A	1.194A	149.977	87.576%	978	25.9	40.4°C	0.966
	12.018V	4.993V	3.29V	5.027V	171.254				45.82°C	115.13V
30%	15.741A	3.508A	3.516A	1.395A	224.989	90.095%	997	26.8	41.33°C	0.978
	12.002V	4.989V	3.285V	5.02V	249.723				47.31°C	115.13V
40%	21.598A	4.013A	4.024A	1.596A	300.084	90.561%	1010	27.1	41.95°C	0.985
	11.986V	4.985V	3.281V	5.014V	331.362				48.38°C	115.12V
50%	27.075A	5.021A	5.038A	1.798A	374.648	90.532%	994	26.6	42.61°C	0.988
	11.972V	4.979V	3.275V	5.007V	413.829				49.59°C	115.11V
60%	32.567A	6.03A	6.054A	2A	449.569	90.036%	1098	29.4	43.14°C	0.99
	11.968V	4.976V	3.271V	4.999V	499.321				50.44°C	115.11V
70%	38.073A	7.043A	7.073A	2.205A	524.488	89.418%	1171	31.8	43.75°C	0.992
	11.961V	4.971V	3.266V	4.991V	586.557				51.52°C	115.11V
80%	43.651A	8.003A	8.096A	2.308A	599.439	88.71%	1247	32.4	44.3°C	0.993
	11.954V	4.966V	3.261V	4.983V	675.732				52.84°C	115.1V
90%	49.575A	8.567A	8.598A	2.412A	674.743	87.945%	1318	34.3	44.42°C	0.993
	11.946V	4.962V	3.256V	4.977V	767.233				53.61°C	115.1V
100%	55.305A	9.078A	9.134A	3.02A	749.959	86.987%	1386	35.9	46.01°C	0.993
	11.938V	4.959V	3.251V	4.968V	862.149				56.01°C	115.11V
110%	60.905A	10.094A	10.257A	3.024A	824.98	85.847%	1463	37.5	47.06°C	0.994
	11.931V	4.955V	3.246V	4.961V	960.987				57.81°C	115.12V
CL1	0.117A	15.72A	15.746A	0A	131.319	80.562%	1236	32.3	42.25°C	0.965
	12.019V	4.982V	3.277V	5.016V	163.004				49.51°C	115.12V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
CL2	0.116A	25.114A	0A	0A	126.431	79.128%	1144	30.4	43.16°C	0.964
	12.022V	4.979V	3.292V	5.024V	159.78				51.33°C	115.12V
CL3	0.116A	0A	25.196A	0A	83.885	72.914%	1118	29.6	44.16°C	0.956
	12.019V	4.995V	3.274V	5.02V	115.048				53.48°C	115.12V
CL4	62.791A	0A	0A	0A	749.721	88.055%	1306	33.9	45.36°C	0.993
	11.940V	4.972V	3.264V	4.988V	851.421				55.39°C	115.1V

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%	4.444A	2.001A	2.004A	0.993A	75.012	82.368%	943	24.4	40.76°C	0.838
	12.020V	4.998V	3.294V	5.035V	91.069				46.67°C	230.26V
20%	9.909A	3.005A	3.01A	1.194A	149.971	89.201%	963	25.2	41.05°C	0.917
	12.016V	4.993V	3.289V	5.027V	168.127				47.27°C	230.26V
30%	15.741A	3.508A	3.516A	1.394A	224.984	91.805%	986	26.3	41.83°C	0.947
	12.002V	4.99V	3.285V	5.021V	245.066				48.56°C	230.26V
40%	21.601A	4.012A	4.024A	1.596A	300.082	92.398%	981	26.0	42.04°C	0.96
	11.985V	4.985V	3.28V	5.014V	324.772				49.22°C	230.26V
50%	27.074A	5.021A	5.038A	1.798A	374.711	92.41%	1033	27.2	42.24°C	0.969
	11.975V	4.98V	3.275V	5.006V	405.489				49.81°C	230.26V
60%	32.579A	6.03A	6.055A	2A	449.557	92.281%	1056	27.7	43.24°C	0.975
	11.963V	4.976V	3.27V	4.999V	487.162				51.16°C	230.26V
70%	38.080A	7.042A	7.075A	2.205A	524.548	91.891%	1167	31.6	43.84°C	0.979
	11.960V	4.972V	3.265V	4.991V	570.835				52.42°C	230.26V
80%	43.667A	8.004A	8.098A	2.308A	599.496	91.505%	1232	32.4	44.03°C	0.981
	11.950V	4.967V	3.26V	4.984V	655.153				52.94°C	230.26V
90%	49.590A	8.568A	8.601A	2.412A	674.821	91.033%	1306	33.9	44.77°C	0.983
	11.944V	4.962V	3.255V	4.977V	741.289				54.38°C	230.26V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
100%	55.322A	9.081A	9.138A	3.02A	750.032	90.492%	1375	35.6	45.43°C	0.985
	11.935V	4.958V	3.25V	4.969V	828.836				55.74°C	230.26V
110%	60.930A	10.1A	10.262A	3.024A	825.062	89.862%	1448	37.3	46.98°C	0.986
	11.927V	4.953V	3.245V	4.961V	918.149				57.82°C	230.26V
CL1	0.117A	15.728A	15.751A	0A	131.333	82.142%	1217	32.2	42.31°C	0.913
	12.018V	4.98V	3.276V	5.016V	159.884				49.4°C	230.27V
CL2	0.117A	25.094A	0A	0A	126.44	80.686%	1135	30.1	43.59°C	0.911
	12.022V	4.983V	3.291V	5.023V	156.706				51.62°C	230.27V
CL3	0.116A	0A	25.202A	0A	83.892	73.951%	1116	29.6	44.22°C	0.873
	12.018V	4.995V	3.273V	5.02V	113.443				53.69°C	230.26V
CL4	62.819A	0A	0A	0A	749.811	91.483%	1282	32.7	45.89°C	0.984
	11.936V	4.97V	3.263V	4.988V	819.62				55.91°C	230.26V

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	1.240A	0.5A	0.5A	0.198A	20.011	75.947%	825	19.9	36.8°C	0.825
	11.986V	5.002V	3.299V	5.042V	26.349				39.88°C	115.14V
40W	2.720A	0.7A	0.7A	0.298A	40.012	73.315%	892	22.6	37.76°C	0.898
	12.024V	5.001V	3.298V	5.04V	54.575				41.26°C	115.14V
60W	4.204A	0.9A	0.901A	0.397A	60.013	78.308%	920	23.6	38.54°C	0.928
	12.023V	5V	3.297V	5.038V	76.637				42.54°C	115.14V
80W	5.686A	1.101A	1.102A	0.497A	79.982	82.253%	935	24.1	39.6°C	0.946
	12.022V	4.999V	3.295V	5.036V	97.24				44.26°C	115.14V

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	1.240A	0.5A	0.5A	0.198A	20.008	75.575%	824	19.8	36.82°C	0.546
	11.986V	5.002V	3.299V	5.042V	26.474				39.92°C	230.25V
40W	2.720A	0.7A	0.7A	0.298A	40.009	74.044%	889	22.4	37.48°C	0.737
	12.022V	5.001V	3.298V	5.04V	54.034				41.11°C	230.26V
60W	4.204A	0.9A	0.901A	0.397A	60.009	80.318%	911	23.3	38.14°C	0.8
	12.023V	5V	3.296V	5.038V	74.714				42.28°C	230.26V
80W	5.684A	1.1A	1.102A	0.497A	79.972	83.489%	964	25.2	39.61°C	0.846
	12.022V	4.999V	3.295V	5.036V	95.787				44.48°C	230.25V

The results above are not used in the certification process

Ripple Measurements

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	13.46mV	12.41mV	15.75mV	12.33mV	Pass
20% Load	29.17mV	15.02mV	17.44mV	12.23mV	Pass
30% Load	28.53mV	12.46mV	16.42mV	12.38mV	Pass
40% Load	21.67mV	12.41mV	16.36mV	13.87mV	Pass
50% Load	22.82mV	22.52mV	29.15mV	18.93mV	Pass
60% Load	21.85mV	15.48mV	19.07mV	17.45mV	Pass
70% Load	24.62mV	15.48mV	21.12mV	16.38mV	Pass
80% Load	24.05mV	16.60mV	20.51mV	14.99mV	Pass
90% Load	25.74mV	19.25mV	23.98mV	15.40mV	Pass
100% Load	39.35mV	20.76mV	27.97mV	21.46mV	Pass
110% Load	41.77mV	21.09mV	28.73mV	24.07mV	Pass
Crossload1	31.47mV	19.60mV	23.30mV	14.19mV	Pass
Crossload2	27.84mV	19.71mV	17.59mV	10.39mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
Crossload3	13.61mV	11.59mV	18.20mV	11.10mV	Pass
Crossload4	38.33mV	18.75mV	25.85mV	16.81mV	Pass

The results above are not used in the certification process

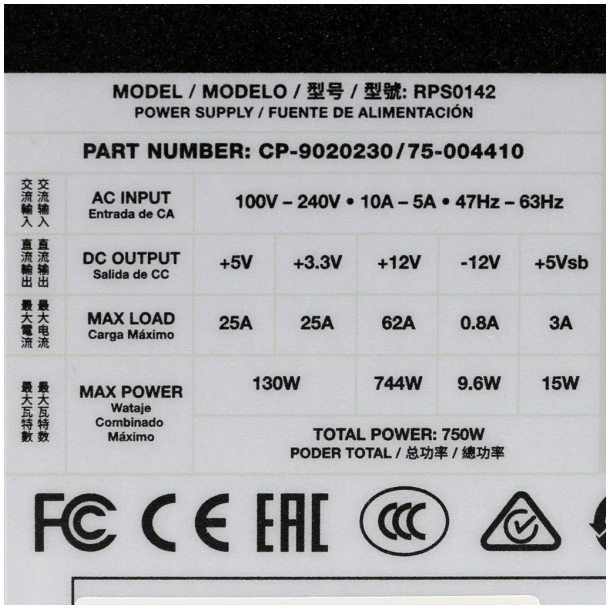
230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	12.18mV	11.08mV	14.06mV	12.28mV	Pass
20% Load	27.68mV	13.69mV	17.54mV	11.67mV	Pass
30% Load	33.95mV	12.87mV	16.93mV	12.28mV	Pass
40% Load	26.89mV	12.62mV	16.42mV	12.74mV	Pass
50% Load	25.46mV	21.04mV	26.54mV	20.42mV	Pass
60% Load	22.49mV	14.15mV	18.26mV	17.14mV	Pass
70% Load	23.87mV	13.94mV	18.67mV	14.58mV	Pass
80% Load	22.98mV	14.76mV	20.25mV	15.30mV	Pass
90% Load	22.72mV	17.26mV	21.22mV	14.64mV	Pass
100% Load	39.25mV	17.91mV	24.23mV	20.82mV	Pass
110% Load	41.21mV	18.93mV	25.50mV	22.17mV	Pass
Crossload1	31.08mV	18.19mV	23.35mV	14.18mV	Pass
Crossload2	28.50mV	18.90mV	18.00mV	10.59mV	Pass
Crossload3	14.18mV	11.65mV	19.28mV	10.90mV	Pass
Crossload4	38.72mV	16.19mV	23.28mV	16.72mV	Pass

The results above are not used in the certification process

Corsair TX750M

Top side



MODEL / MODELO / 型号 / 型號: RPS0142
POWER SUPPLY / FUENTE DE ALIMENTACIÓN

PART NUMBER: CP-9020230/75-004410

交流輸入	AC INPUT Entrada de CA	100V – 240V • 10A – 5A • 47Hz – 63Hz				
直流輸出	DC OUTPUT Salida de CC	+5V	+3.3V	+12V	-12V	+5Vsb
最大電流	MAX LOAD Carga Máximo	25A	25A	62A	0.8A	3A
最大瓦特數	MAX POWER Wataje Combinado Máximo	130W		744W	9.6W	15W
		TOTAL POWER: 750W PODER TOTAL / 总功率 / 總功率				

Power specifications label

Cybenetics bietet freiwillige Zertifizierungsprogramme für Netzteile – ETA für Effizienz, LAMBDA für Lautstärke und SAFE für Sicherheit und korrekten Betrieb – sowie für Kühlprodukte mit DELTA für die Schalldämmung von Gehäusen und PHI für Luftstrom und statischen Druck von Lüftern

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