



Corsair CX750M

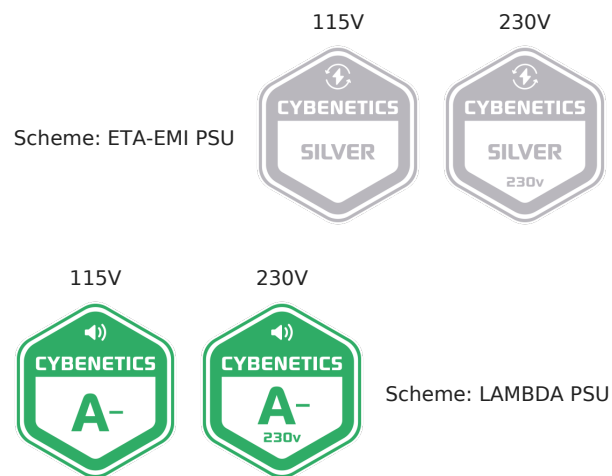
Serial Number

Lab ID CR75001806

Certification ID 251806

Test Result Report ID: 21PS1806A

Certificate Issue Date: Mar 17, 2021



A handwritten signature in blue ink, appearing to read "A. Bitziopoulos", written over a faint circular stamp.

Aristeidis Bitziopoulos, Certification Body General Manager

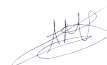
General Information

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	CX750M
OEM/ODM	Channel Well Technology
Serial Number	
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	
Semi-Passive Operation	X
Cybenetics Testing Information	
Lab ID	CR75001806
Date of receipt	Feb 19, 2021
Testing Date	Mar 10, 2021
Report Issued Date	Mar 17, 2021
DUT Notes	Shasta
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	18-22AWG	No
4+4 pin EPS12V (670mm)	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)	2	8	18AWG	No
4-pin Molex (450mm+100mm+100mm) / FDD (+100mm)	1	2 / 1	18-22AWG	No

AC Power Cord (1400mm) - C13 coupler	1	1	18AWG	-
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Power Specifications

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	20	20	62	3	0.3
	Watts	130		744	15	3.6
Total Max. Power (W)		750				

Parts Description

General Data	-
Manufacturer (OEM)	CWT
PCB Type	Single Sided
Primary Side	-
Transient Filter	4x Y caps, 2x X caps, 2x CM chokes, 1x MOV, 1x CAP200DG (Discharge IC)
Inrush Protection	NTC Thermistor SCK - 2R58 (2.5Ohm)
Bridge Rectifier(s)	1x GBU15L06 (800V, 10A @ 100°C)
APFC MOSFETs	2x Champion GP28S50 (500V, 28A, Rds(on): 0.125Ohm)
APFC Boost Diode	1x ON Semiconductor FFSP0665A (650V, 6A @ 153°C)
Bulk Cap(s)	1x Nippon Chemi-Con (400V, 390uF, 2,000h @ 105°C, KMW)
Main Switchers	2x Champion GP23S60HX
PFC/PWM Combo Controller	Champion CM6800TX & Champion CM03X
Topology	Primary side: APFC, Double Forward Secondary side: Semi-Synchronous Rectification (12V) & DC-DC converters (5V & 3.3V)
Secondary Side	-
+12V	2x Advanced Power AP6N3R5P (60V, 80A @ 100°C, Rds(on): 3.58mOhm) FET & 2x PFC PFR40V60CT (60V, 40A @ 100°C) SBR
5V & 3.3V MOSFETs	2x UBIQ QM3054M6 (30V, 61A @ 100°C, Rds(on): 4.8mOhm) & 2x UBIQ QN3107M6N (30V, 70A @ 100°C, Rds(on): 2.6mOhm) PWM Controller: ANPEC APW7159C
Filtering Capacitors	Electrolytic: 10x Elite (2-5,000h @ 105°C, ED), 3x Elite (4-10,000h @ 105°C, EY), 1x Elite (2-5,000h @ 105°C, EK), 1x Nippon Chemi-Con (4-10,000h @ 105°C, KY), 1x Nippon Chemi-Con (1-5,000h @ 105°C, KZE), 2x Elite (2,000h @ 105°C, PF) Polymer: 7x APAQ, 2x Elite
Driver IC	Sync Power SP6019
Supervisor IC	INI1S429I - DCG (OVP, UVP, OCP, PG, SCP)

Fan Model	Hong Hua HA1225H12F-Z (120mm, 12V, 0.58A, Rifle Bearing Fan)
5VSB Circuit	-
Standby PWM Controller	Power Integrations TNY290PG

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)	86.065%
Average Noise Output (>1450 Load Combinations)	26.90dBA
Average PF (>1450 Load Combinations)	0.982
Efficiency With 10W (≤500W) or 2% (>500W) Load	66.630%
Standby Power Consumption	0.0525W
Non-Accredited	
12V Ripple (Full Load)	41.23mV
5V Ripple (Full Load)	19.66mV
3.3V Ripple (Full Load)	15.49mV
5VSB Ripple (Full Load)	30.65mV
12V Load Regulation	1.36%
5V Load Regulation	0.66%
3.3V Load Regulation	1.26%
5VSB Load Regulation	2.98%
Inrush Current	79.830A

230V

Accredited		
Average Efficiency (>1450 load combinations)	88.325%	
Average Noise Output (>1450 Load Combinations)	27.06dBA	
Average PF (>1450 Load Combinations)	0.957	
Efficiency With 10W (≤500W) or 2% (>500W) Load	-	
Standby Power Consumption	0.1022W	
Non-Accredited		
12V Ripple (Full Load)	37.81mV	
5V Ripple (Full Load)	19.46mV	
3.3V Ripple (Full Load)	15.61mV	
5VSB Ripple (Full Load)	30.62mV	
12V Load Regulation	1.33%	
5V Load Regulation	0.66%	
3.3V Load Regulation	1.23%	
5VSB Load Regulation	2.92%	
Inrush Current	99.170A	
Hold-Up Time & PWR_OK Signal	10.10ms	
AC Loss to PWR_OK Hold Up Time	8.40ms	
PWR_OK Inactive to DC Loss Delay	1.70ms	
PSU Timings: T1 (20% / 100%)	34.0ms	34.0ms
PSU Timings: T3 (20% / 100%)	122.0ms	122.0ms
OPP (22.32°C / 43.99°C)	133.13%	121.18%

Hold-Up Time & PWR_OK Signal

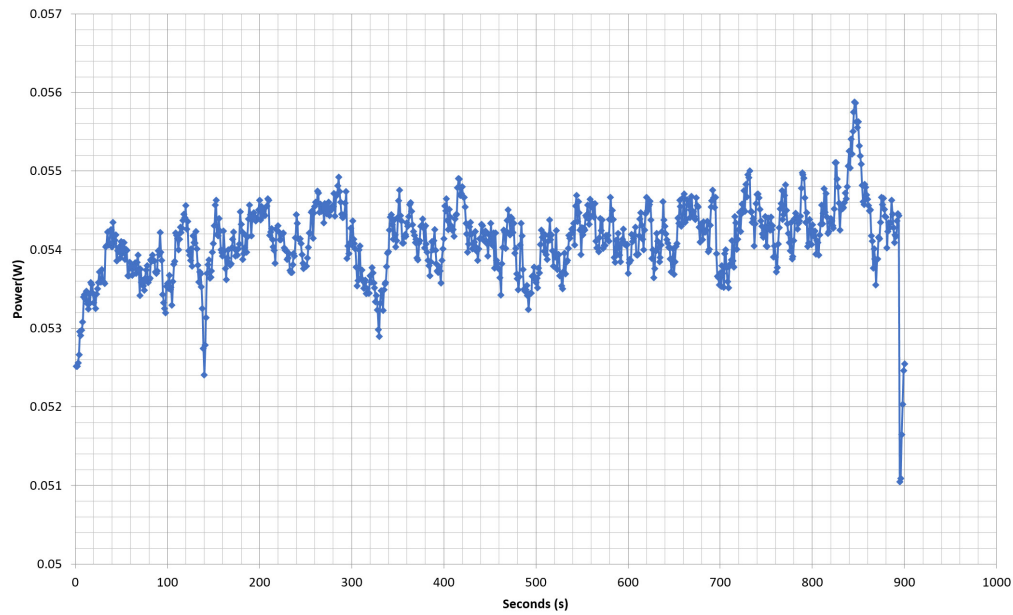
Hold-Up Time (ms)	10.1
AC Loss to PWR_OK Hold Up Time (ms)	8.4
PWR_OK Inactive to DC Loss Delay (ms)	1.7

Stromverbrauch im Ruhezustand

Graphs

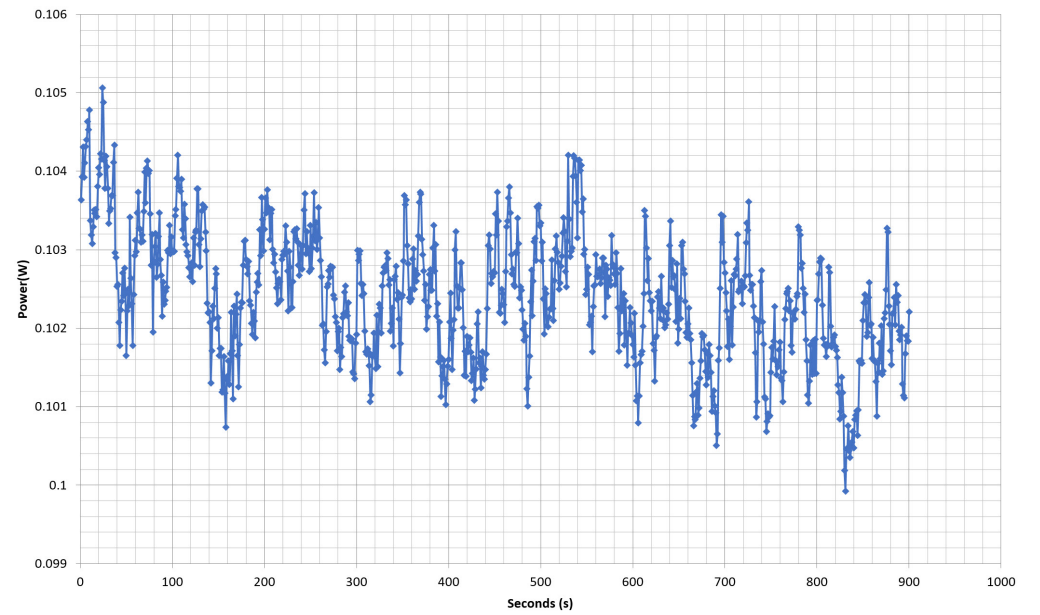
115V

Power - 05/03/2021 - 09:23



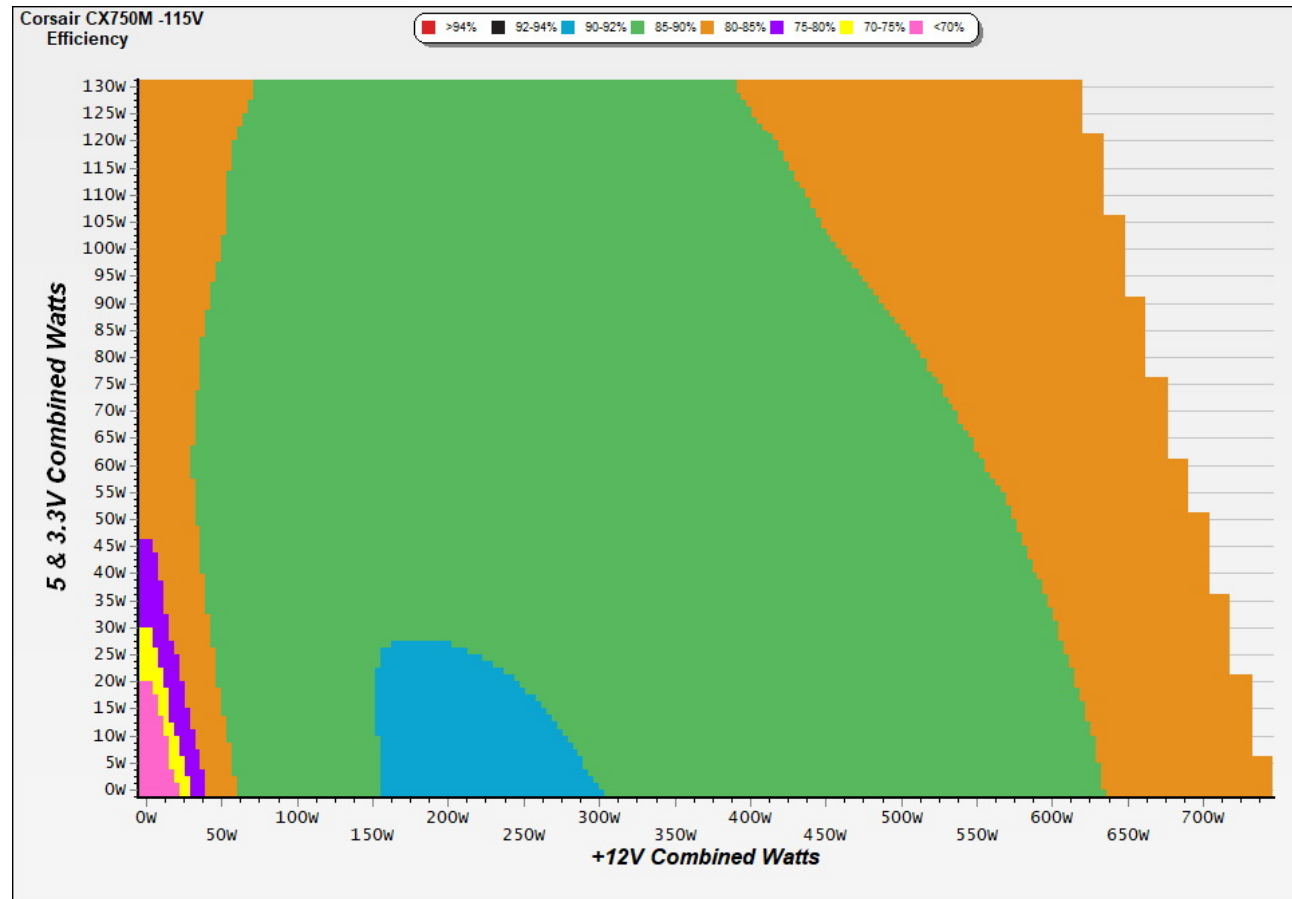
230V

Power - 05/03/2021 - 09:23



Efficiency Graph

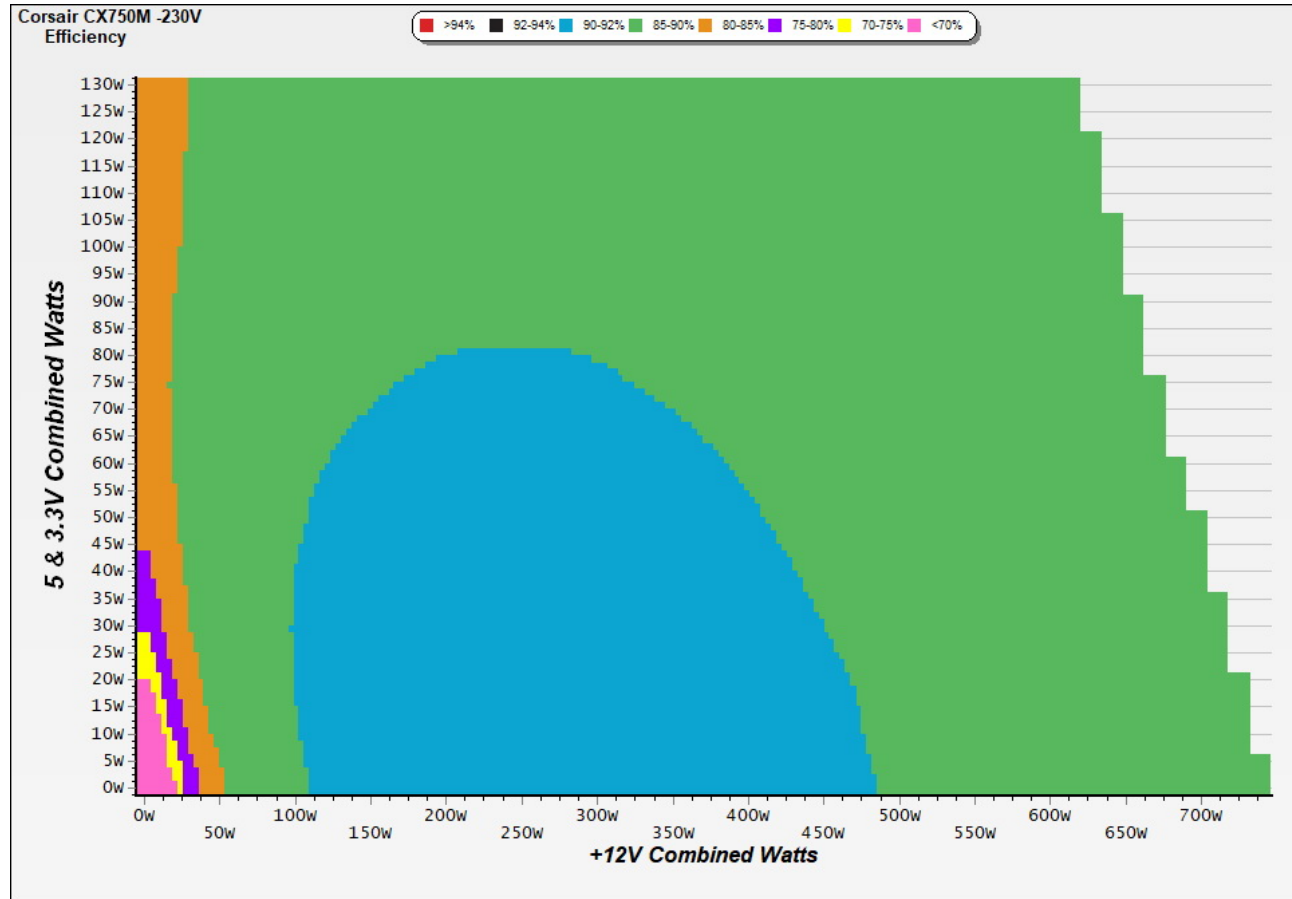
115V



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

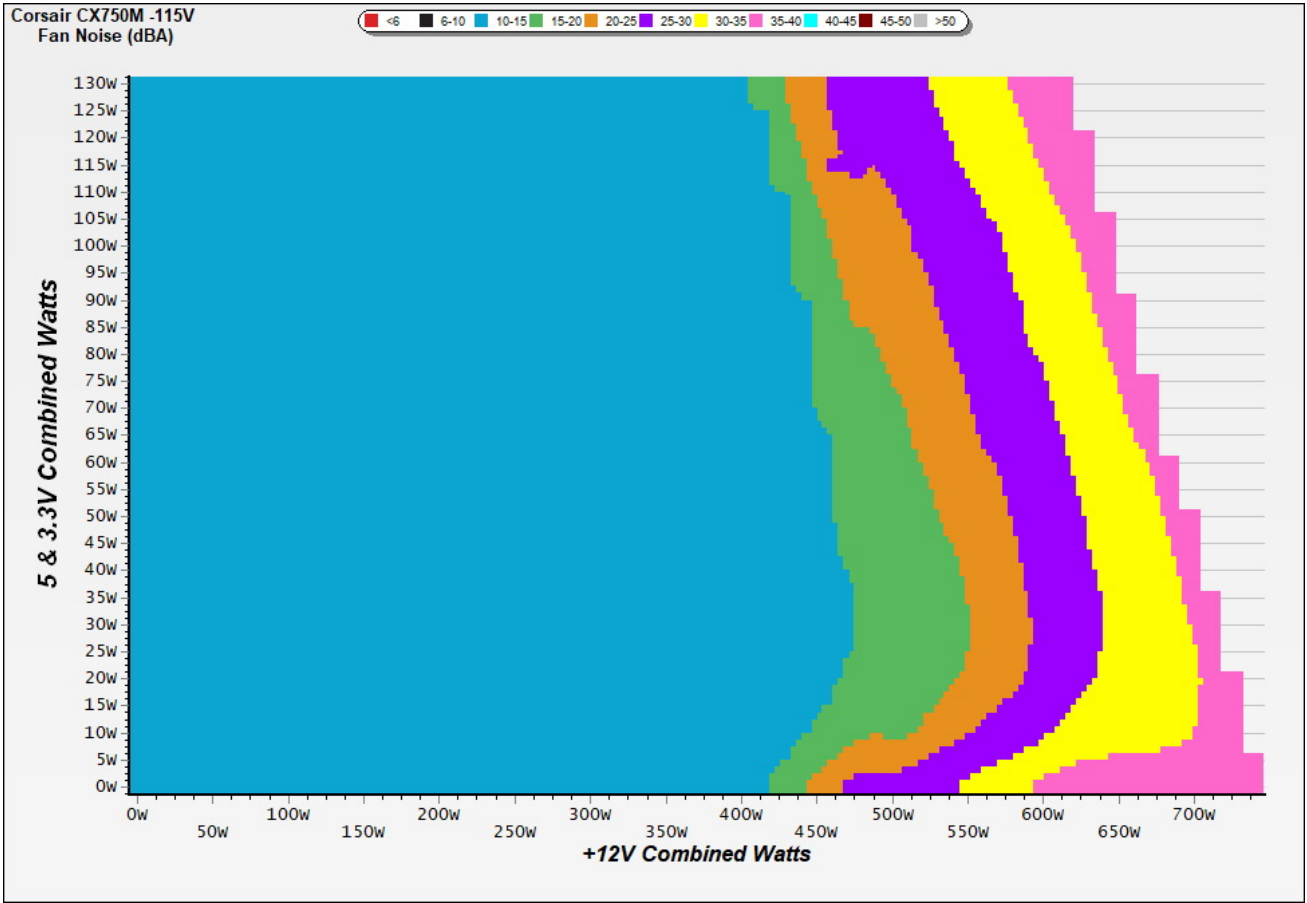


INFO

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

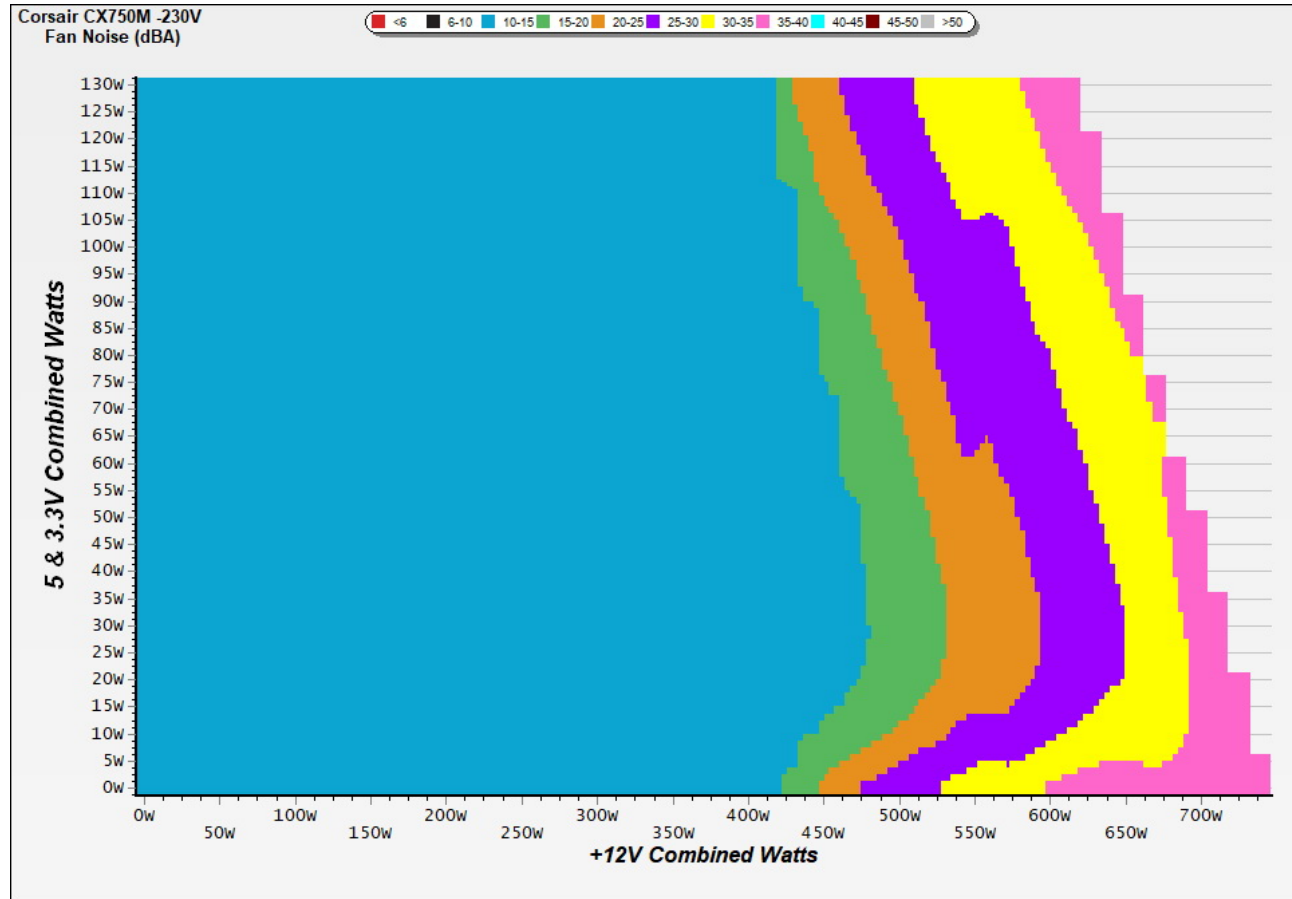
115V



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

230V



INFO

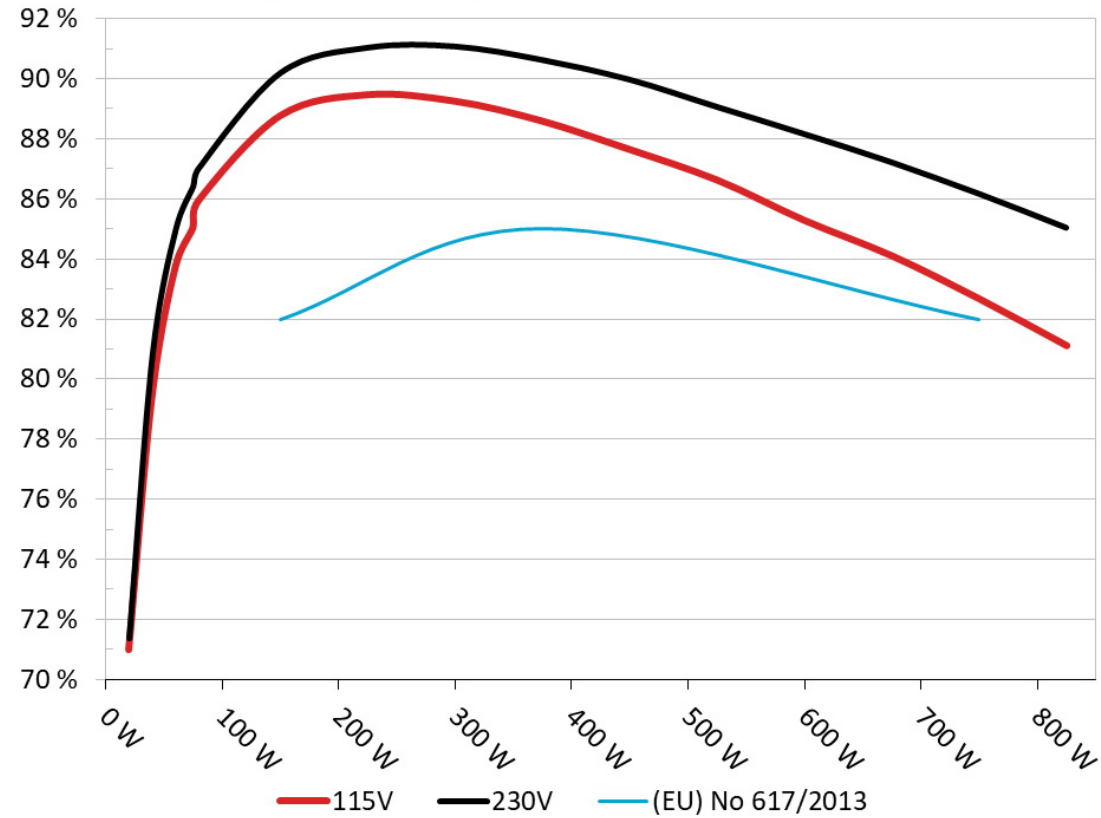
The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

Indicative Performance

Efficiency under high ambient temperature

Efficiency: Corsair CX750M

Ambient: 37°C - 47°C (98.6°F - 116.6°F)



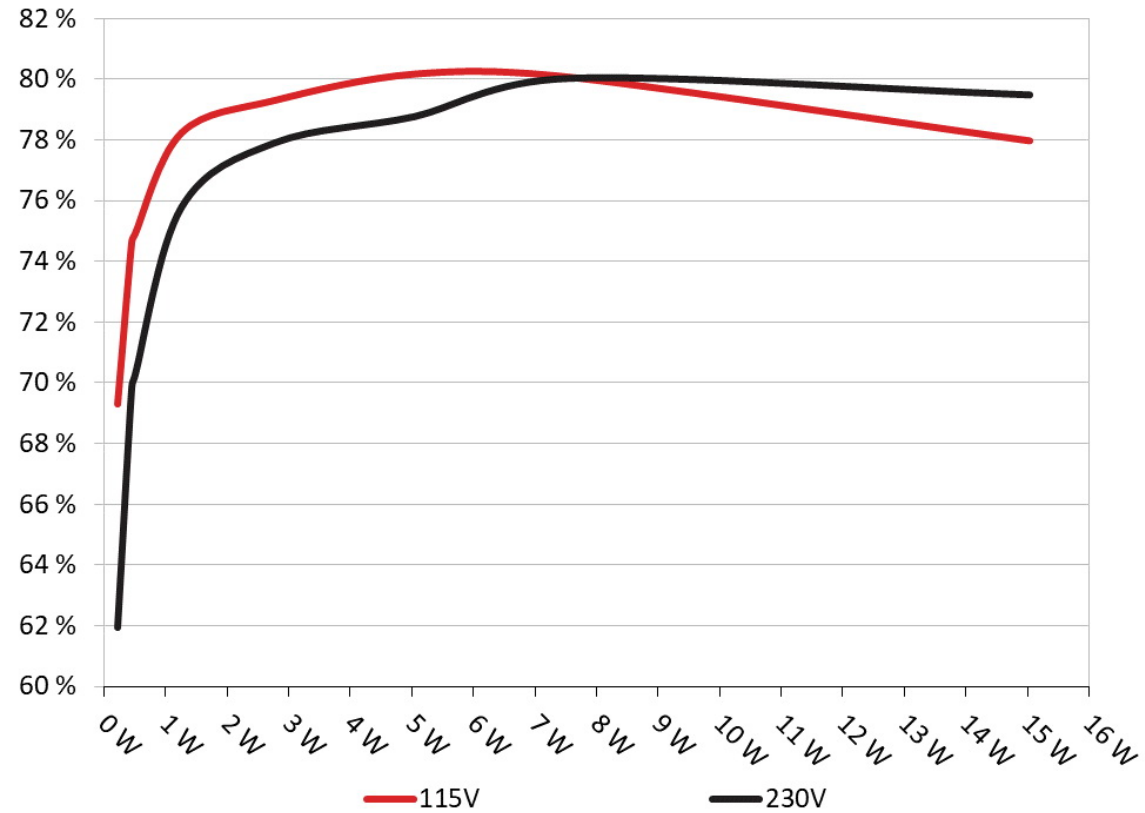
INFO

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: Corsair CX750M

Ambient: 34°C - 36°C (93.2°F - 96.8°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	0.228	69.301%	0.037
	5.072V	0.329		115.16V
2	0.090A	0.456	74.632%	0.068
	5.071V	0.611		115.14V
3	0.550A	2.784	79.316%	0.272
	5.063V	3.510		115.14V
4	1.000A	5.054	80.184%	0.351
	5.054V	6.303		115.14V
5	1.500A	7.566	80.080%	0.395
	5.044V	9.448		115.15V
6	2.999A	15.041	77.981%	0.456
	5.015V	19.288		115.15V

230V

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.228	61.957%	0.013
	5.072V	0.368		230.31V
2	0.090A	0.456	69.832%	0.022
	5.071V	0.653		230.29V
3	0.550A	2.784	77.896%	0.112
	5.063V	3.574		230.29V
4	1.000A	5.053	78.756%	0.181
	5.054V	6.416		230.31V
5	1.500A	7.566	80.013%	0.233
	5.044V	9.456		230.31V
6	2.999A	15.041	79.468%	0.323
	5.015V	18.927		230.31V

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
1	4.382A	2.002A	1.983A	0.992A	74.950	85.016%	706	13.8	40.33°C	0.952
	12.174V	4.996V	3.329V	5.041V	88.160				43.85°C	115.14V
2	9.797A	3.004A	2.978A	1.193A	149.995	88.753%	706	13.8	40.54°C	0.972
	12.157V	4.991V	3.325V	5.028V	169.002				44.67°C	115.13V
3	15.561A	3.509A	3.478A	1.396A	224.984	89.451%	710	13.9	41.38°C	0.979
	12.141V	4.989V	3.321V	5.015V	251.517				46.36°C	115.13V
4	21.341A	4.011A	3.980A	1.599A	299.981	89.235%	715	14.1	41.62°C	0.984
	12.126V	4.986V	3.317V	5.003V	336.169				47.22°C	115.13V
5	26.742A	5.019A	4.981A	1.804A	374.299	88.579%	719	14.3	42.43°C	0.987
	12.108V	4.982V	3.313V	4.989V	422.558				48.69°C	115.12V
6	32.208A	6.023A	5.986A	2.000A	449.171	87.636%	725	14.6	42.72°C	0.989
	12.091V	4.980V	3.308V	4.974V	512.544				49.71°C	115.12V
7	37.722A	7.035A	6.993A	2.217A	524.518	86.618%	896	19.7	43.81°C	0.991
	12.073V	4.975V	3.304V	4.960V	605.556				51.83°C	115.11V
8	43.263A	8.002A	7.999A	2.426A	599.627	85.273%	1425	34.0	43.86°C	0.992
	12.053V	4.973V	3.299V	4.945V	703.189				52.33°C	115.11V
9	49.185A	8.554A	8.495A	2.430A	674.383	84.100%	1670	38.9	44.15°C	0.992
	12.034V	4.969V	3.295V	4.936V	801.880				53.63°C	115.11V
10	54.925A	9.063A	9.024A	3.052A	749.614	82.665%	2245	45.5	45.48°C	0.993
	12.015V	4.965V	3.291V	4.913V	906.814				55.81°C	115.10V
11	61.282A	9.070A	9.032A	3.058A	824.824	81.104%	2242	45.5	46.51°C	0.994
	11.996V	4.961V	3.287V	4.905V	1016.996				57.38°C	115.10V
CL1	0.113A	16.001A	15.997A	0.001A	134.173	81.101%	740	15.2	42.47°C	0.975
	12.150V	4.991V	3.309V	5.026V	165.440				48.98°C	115.15V

CL2	61.991A	0.999A	0.999A	1.000A	758.421	83.128%	2058	44.2	45.69°C	0.993
	12.021V	4.970V	3.299V	4.966V	912.351				56.04°C	115.11V

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
1	4.383A	2.002A	1.981A	0.992A	74.949	86.409%	705	13.7	40.16°C	0.862
	12.173V	4.995V	3.329V	5.040V	86.737				43.33°C	230.27V
2	9.797A	3.005A	2.977A	1.193A	149.995	90.187%	709	13.9	40.39°C	0.929
	12.157V	4.992V	3.324V	5.027V	166.315				44.14°C	230.27V
3	15.563A	3.509A	3.477A	1.396A	224.986	91.024%	713	14.0	41.56°C	0.952
	12.140V	4.989V	3.320V	5.015V	247.173				45.85°C	230.27V
4	21.345A	4.012A	3.978A	1.599A	299.984	91.063%	716	14.2	41.93°C	0.964
	12.124V	4.986V	3.317V	5.002V	329.426				47.18°C	230.28V
5	26.744A	5.018A	4.982A	1.804A	374.288	90.618%	720	14.3	42.33°C	0.971
	12.107V	4.982V	3.312V	4.988V	413.039				48.57°C	230.28V
6	32.211A	6.026A	5.988A	2.000A	449.165	89.967%	726	14.6	42.68°C	0.976
	12.089V	4.980V	3.308V	4.974V	499.256				49.31°C	230.28V
7	37.733A	7.035A	6.993A	2.218A	524.539	89.058%	1056	24.0	43.43°C	0.980
	12.070V	4.976V	3.303V	4.958V	588.988				50.88°C	230.29V
8	43.269A	8.002A	8.002A	2.426A	599.616	88.153%	1395	33.6	43.67°C	0.981
	12.051V	4.972V	3.299V	4.945V	680.196				51.87°C	230.29V
9	49.193A	8.553A	8.497A	2.431A	674.377	87.216%	1767	39.8	45.32°C	0.983
	12.032V	4.969V	3.294V	4.935V	773.228				54.64°C	230.29V
10	54.935A	9.063A	9.023A	3.052A	749.603	86.166%	2105	46.6	45.57°C	0.985
	12.013V	4.964V	3.290V	4.913V	869.949				55.83°C	230.29V
11	61.292A	9.070A	9.033A	3.058A	824.821	85.036%	2246	45.5	46.70°C	0.985
	11.994V	4.961V	3.287V	4.904V	969.967				57.63°C	230.30V
CL1	0.114A	16.000A	15.997A	0.001A	134.164	82.306%	743	15.3	42.35°C	0.930
	12.149V	4.991V	3.308V	5.026V	163.006				48.79°C	230.30V

CL2	61.990A	1.000A	0.998A	1.000A	758.287	86.582%	2248	45.4	45.18°C	0.984
	12.019V	4.970V	3.299V	4.966V	875.799				55.19°C	230.30V

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])	PF/AC Volts
1	1.217A	0.500A	0.494A	0.198A	19.980	70.990%	692	13.1	0.856
	12.185V	5.001V	3.335V	5.064V	28.145				115.15V
2	2.436A	1.000A	0.990A	0.395A	39.968	79.428%	696	13.3	0.916
	12.181V	4.998V	3.333V	5.058V	50.320				115.15V
3	3.658A	1.501A	1.488A	0.594A	59.999	83.727%	699	13.4	0.941
	12.177V	4.997V	3.330V	5.051V	71.660				115.15V
4	4.876A	2.002A	1.982A	0.793A	79.950	85.936%	704	13.7	0.954
	12.172V	4.996V	3.329V	5.044V	93.034				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])	PF/AC Volts
1	1.217A	0.500A	0.493A	0.198A	19.977	71.369%	701	13.5	0.605
	12.185V	5.002V	3.335V	5.064V	27.991				230.28V
2	2.436A	1.000A	0.990A	0.395A	39.964	80.781%	699	13.5	0.759
	12.180V	4.998V	3.332V	5.057V	49.472				230.27V
3	3.659A	1.501A	1.485A	0.594A	59.997	84.982%	701	13.5	0.829
	12.176V	4.997V	3.330V	5.051V	70.600				230.27V
4	4.876A	2.002A	1.982A	0.793A	79.949	87.023%	703	13.6	0.870
	12.172V	4.995V	3.329V	5.044V	91.871				230.27V

The results above are not used in the certification process

Ripple Measurements

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	6.60mV	9.60mV	5.70mV	10.80mV	Pass
20% Load	8.00mV	9.30mV	5.80mV	12.20mV	Pass
30% Load	8.40mV	9.70mV	6.00mV	16.30mV	Pass
40% Load	11.30mV	11.50mV	6.60mV	14.40mV	Pass
50% Load	12.60mV	11.80mV	7.40mV	16.10mV	Pass
60% Load	14.20mV	12.60mV	7.60mV	19.00mV	Pass
70% Load	16.40mV	13.10mV	9.40mV	22.80mV	Pass
80% Load	22.40mV	15.80mV	12.30mV	30.80mV	Pass
90% Load	27.30mV	17.70mV	13.90mV	30.90mV	Pass
100% Load	41.20mV	19.70mV	15.50mV	30.70mV	Pass
110% Load	47.20mV	22.00mV	16.80mV	30.70mV	Pass
Crossload1	13.70mV	14.80mV	12.40mV	18.10mV	Pass
Crossload2	37.70mV	16.10mV	11.50mV	21.80mV	Pass

The results above are not used in the certification process

230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	7.00mV	10.40mV	5.60mV	10.90mV	Pass
20% Load	8.60mV	8.90mV	6.00mV	11.50mV	Pass
30% Load	9.10mV	10.20mV	6.40mV	16.60mV	Pass
40% Load	9.90mV	11.30mV	7.00mV	14.20mV	Pass
50% Load	10.60mV	10.90mV	7.30mV	14.50mV	Pass
60% Load	13.30mV	12.00mV	8.50mV	20.00mV	Pass
70% Load	17.10mV	12.40mV	9.20mV	23.40mV	Pass
80% Load	21.20mV	15.70mV	12.30mV	30.40mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
90% Load	26.00mV	17.20mV	13.80mV	31.80mV	Pass
100% Load	37.80mV	19.50mV	15.60mV	30.60mV	Pass
110% Load	38.40mV	21.40mV	18.10mV	31.40mV	Pass
Crossload1	15.10mV	16.00mV	12.40mV	17.90mV	Pass
Crossload2	32.90mV	16.00mV	12.50mV	21.00mV	Pass

The results above are not used in the certification process

Corsair CX750M



Top side

MODEL / MODELO / 型号 / 型號 / 모델: RPS0139 POWER SUPPLY / FUENTE DE ALIMENTACIÓN / 전원 공급 장치					
PART NUMBER: CP-9020222 / 75-004125					
交流輸入 AC INPUT	AC 입력 Entrada de CA	100V - 240V • 10A • 5A • 47Hz - 63Hz			
直流輸出 DC OUTPUT	DC 출력 Salida de CC	+3.3V	+5V	+12V	-12V +5Vsb
最大電流 MAX LOAD	최대 부하 Carga Máximo	20A	20A	62A	0.3A 3A
最大瓦特數 MAX POWER	최대 결합 와트 Wataje Combinado Máximo	130W	744W	3.6W	15W
TOTAL POWER: 750W PODER TOTAL / 总功率 / 總功率					
FC CE EAC TÜV Rheinland CCC					

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

CYBENETICS LTD Syrou 6, Latsia, 2231, Nicosia Cyprus

www.cybenetics.com - info@cybenetics.com