









Corsair SF750 Platinum

序号 18414866000067140032

Lab ID 550

认证 ID 25550

测试结果报告 ID:

证书签发日期 : Nov 27, 2018

115V 230V

认证方案: ETA-EMI PSU

115V 230V

认证方案: LAMBDA PSU

Aristeidis Bitziopoulos, 认证机构总经理

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	SF750 Platinum
OEM/ODM	Great Wall
Serial Number	18414866000067140032
Product Specifications	
Manufacturer-Provided Information	
□□□□ (Vrms)	100-240
□□□□ (Arms)	10-5



额定频率 (Hz)	47-63
额定功率 (W)	750
工作温度（持续满载） (°C)	
类别	SFX
线材设计	Fully Modular
质保	-
Cybenetics Measurements	
Dimensions (W x H x D)	
重量	
散热	92mm Rifle Bearing Fan (NR092L)
半被动运行	✓
Cybenetics Testing Information	
Lab ID	550
Date of receipt	Nov 19, 2018
Testing Date	Nov 25, 2018
Report Issued Date	Nov 27, 2018
Engineer Name	-
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

线材与接头

(Non-accredited measurements)

模组化线材				
描述	线材数量	总连接器数量	Gauge	In Cable Capacitors
ATX 接头 20+4 pin (300mm)	1	1	16-18AWG	否
4+4 EPS12V接口 (400mm)	2	2	16AWG	否
6+2 pin PCIe接口 (400mm+100mm)	2	4	16AWG	否
SATA接头 (100mm+120mm+120mm120mm)	2	8	18AWG	否
4 pin Molex 接口 (100mm+120mm+120mm)	1	3	18AWG	否

AC Power Cord (1380mm) - C13 coupler	1	1	16AWG	-

□□□□

□□□		3.3V	5V	12V	5VSB	-12V
□□□□	□□	20	20	62.5	2.5	0.3
	□	130		750	12.5	3.6
□□□□□ (W)		750				

Parts Description

General Data	
Manufacturer (OEM)	Great Wall
Model Number	RPS0115
Primary Side	
Transient Filter	4x Y caps, 2x X caps, 3x CM chokes, 1x MOV, 1x CMD02X
Inrush Protection	NTC Thermistor & Diode
Bridge Rectifier(s)	1x
APFC MOSFET	Infineon IPZ60R060C7 (650V, 22A @ 100°C, 0.06Ohm)
APFC Boost Diode	ROHM SCS306AP (650V, 6A @ 135°C)
Hold-up Cap	Nippon Chemi-Con (420V, 470uF, 2000h @ 105°C, KMZ)
Main Switchers	2x 60F2094 (600V, 15.8A @ 150°C, 0.19Ohm) Driver IC: Silicon Labs Si8230BD
Quasi-Resonant Contoller	Infineon 5QR1680AG
APFC Controller	Champion CM6502UHHX & CM03AX Green PFC controller
Resonant & PWM Controller	Champion CM6901X
Quasi-Resonant Contoller	Infineon 5QR1680AG
Topology	Primary side: Half-Bridge & LLC Resonant Controller Secondary side: Synchronous Rectification & DC-DC converters
Secondary Side	
+12V MOSFETS	6x APower 4N1R8C-A (45V, 32A @ 70C, 1.8mOhm)
5V & 3.3V	DC-DC Converters: 4x Infineon PSMN2R0-30YLE (30V, 100A @ 100°C, 2.8mOhm @ 100°C) PWM Controller: APW7159C

Filtering Capacitors	Electrolytics: 1x Nippon Chemi-Con (4-10,000 @ 105°C, KY), 2x Rubycon (3-6,000 @ 105°C, YXG) Polymers: Nippon Chemi-Con (G61B, G8, G84R, G84G, G85F), 6x Nichicon (LG)
Supervisor IC	Infinno IN1S429i-SCG
Fan Controller	PIC16F1824
Fan Model	Corsair NR092L (92mm, 12V, 0.22A, 3950 RPM, Rifle Bearing)
5VSB Circuit	
Rectifier	1x CSD18534 (60V, 13A @ 25°C, 9.8mOhm)
Step-Down Converter	Texas Instruments TPS54231 (3.5V-28V Input, 2A)

Test Results

Temperature & Compliance Info

□□□□ (°C /°F)	28-32 / 82.4-89.6
□□ ErP Lot 3/6	✓
□□ (EU) No 617/2013□□	✓

Performance Summary

115V

Accredited	
□□□□ (>1450 load combinations)	90.210%
Average Noise Output (>1450 Load Combinations)	26.20dBA
PF□□□ (>1450 Load Combinations)	0.981
Efficiency With 10W (≤500W) or 2% (>500W) Load	54.190%
□□□□	0.0477W
Non-Accredited	
12V Ripple (Full Load)	29.54mV
5V Ripple (Full Load)	20.21mV
3.3V Ripple (Full Load)	16.74mV
5VSB Ripple (Full Load)	20.90mV
12V Load Regulation	0.11%

5V Load Regulation	0.24%
3.3V Load Regulation	0.45%
5VSB Load Regulation	1.27%
Inrush Current	28.322A

230V

Accredited		
□□□□ (>1450 load combinations)		92.083%
Average Noise Output (>1450 Load Combinations)		25.45dBA
PF□□□ (>1450 Load Combinations)		0.950
Efficiency With 10W (≤500W) or 2% (>500W) Load		-
□□□□		0.0747W
Non-Accredited		
12V Ripple (Full Load)		29.54mV
5V Ripple (Full Load)		20.21mV
3.3V Ripple (Full Load)		16.74mV
5VSB Ripple (Full Load)		20.90mV
12V Load Regulation		0.12%
5V Load Regulation		0.24%
3.3V Load Regulation		0.45%
5VSB Load Regulation		1.25%
Inrush Current		79.115A
□□□□ & PWR_OK □□		11.60ms
AC Loss to PWR_OK Hold Up Time		8.80ms
PWR_OK Inactive to DC Loss Delay		2.80ms
OPP (0.00°C / 0.00°C)	-	-

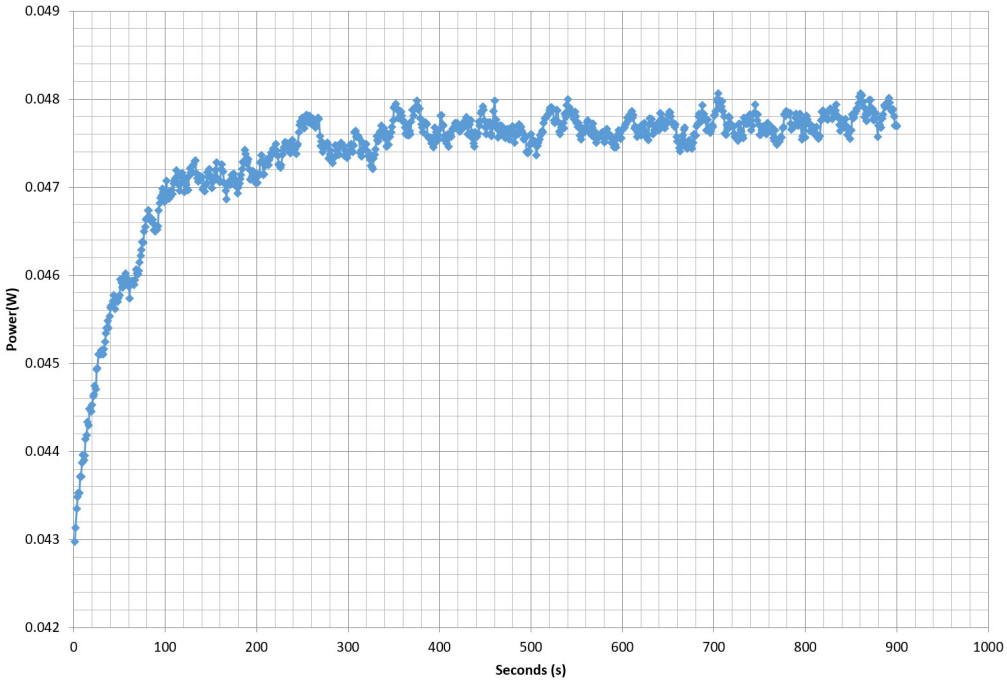
□□□□ & PWR_OK □□

Hold-Up Time (ms)	11.60
AC Loss to PWR_OK Hold Up Time (ms)	8.80

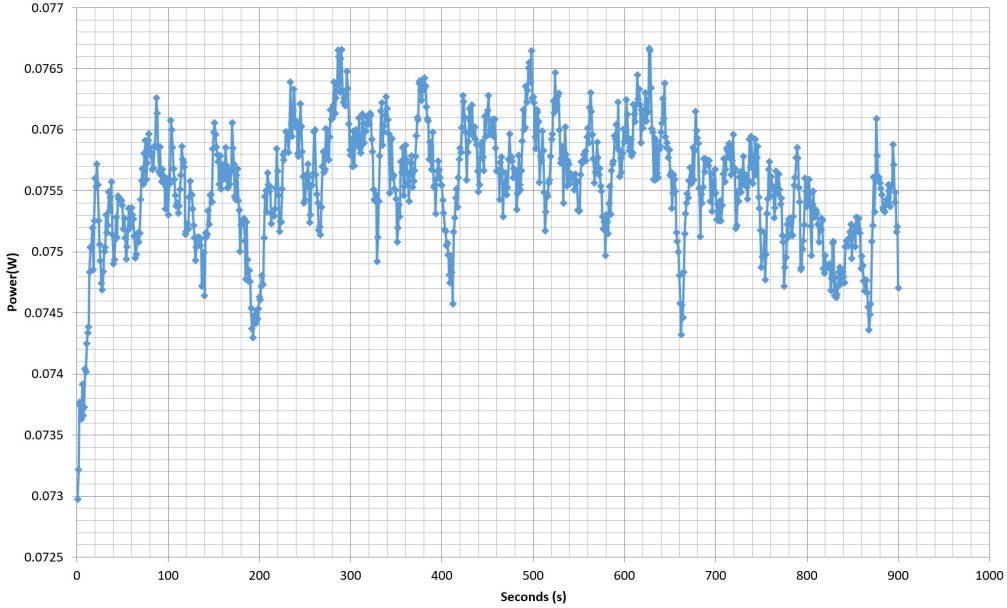
PWR_OK Inactive to DC Loss Delay (ms)	2.80

Graphs

115V

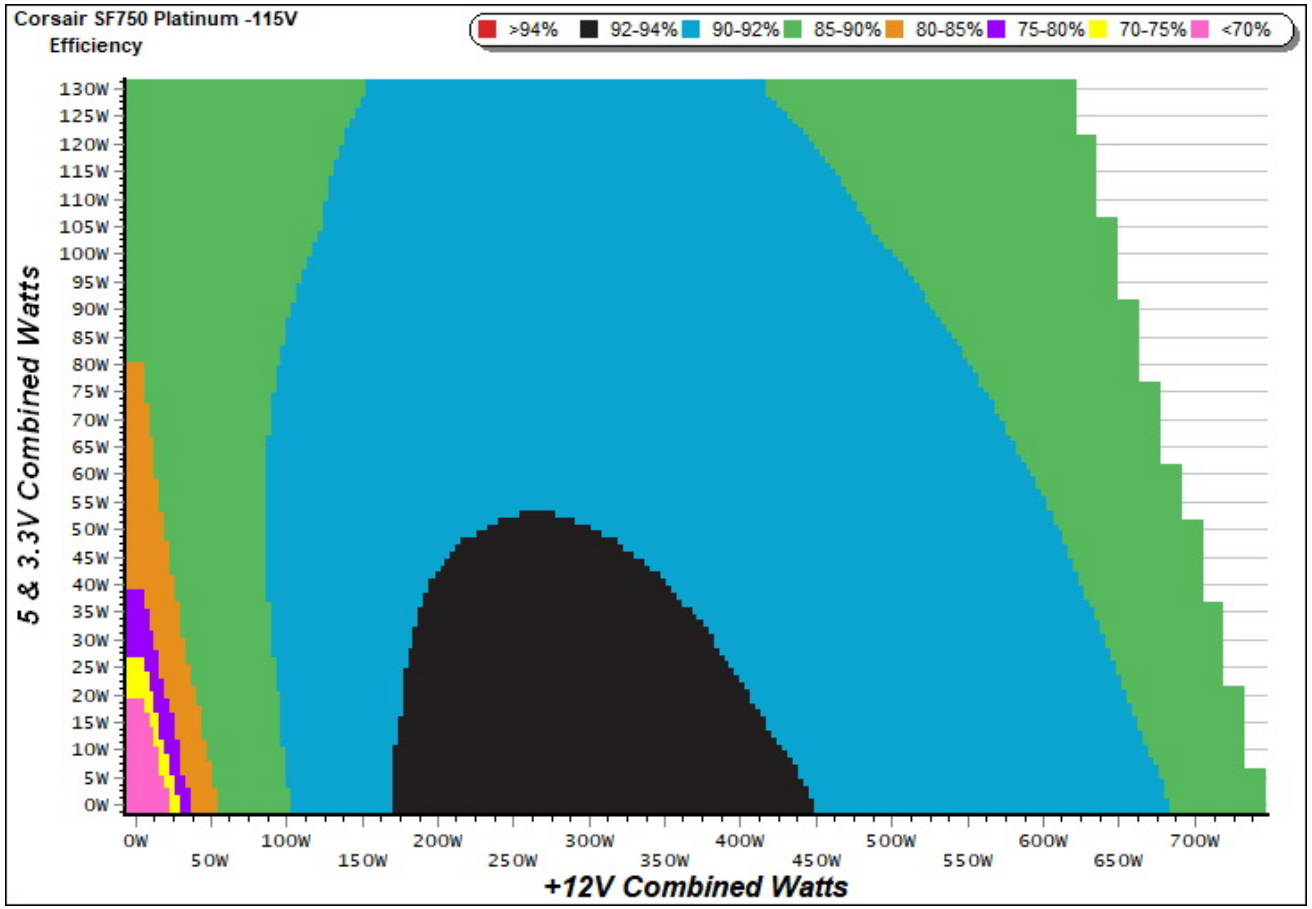


230V



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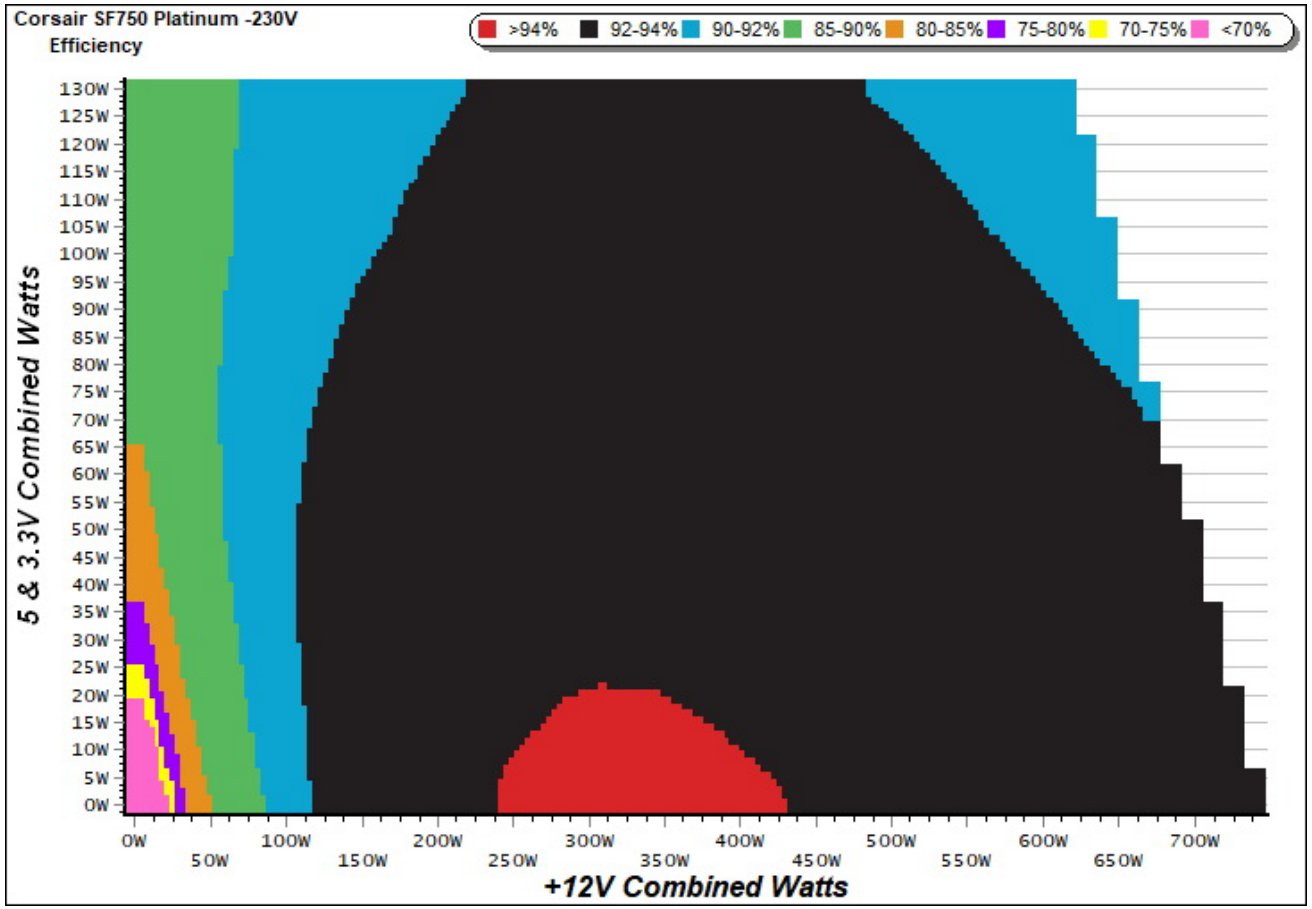
115V



□□

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.

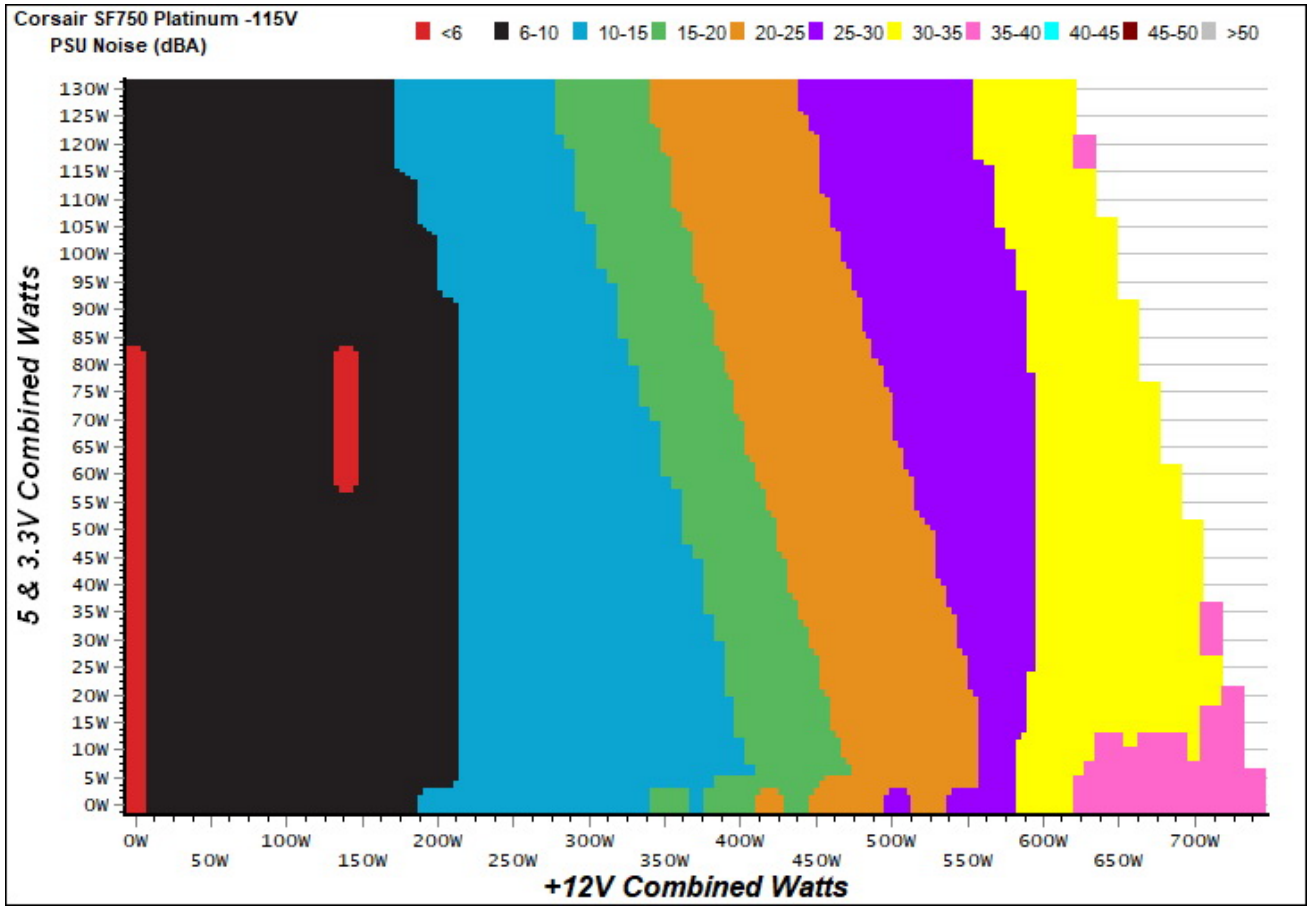
230V



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.

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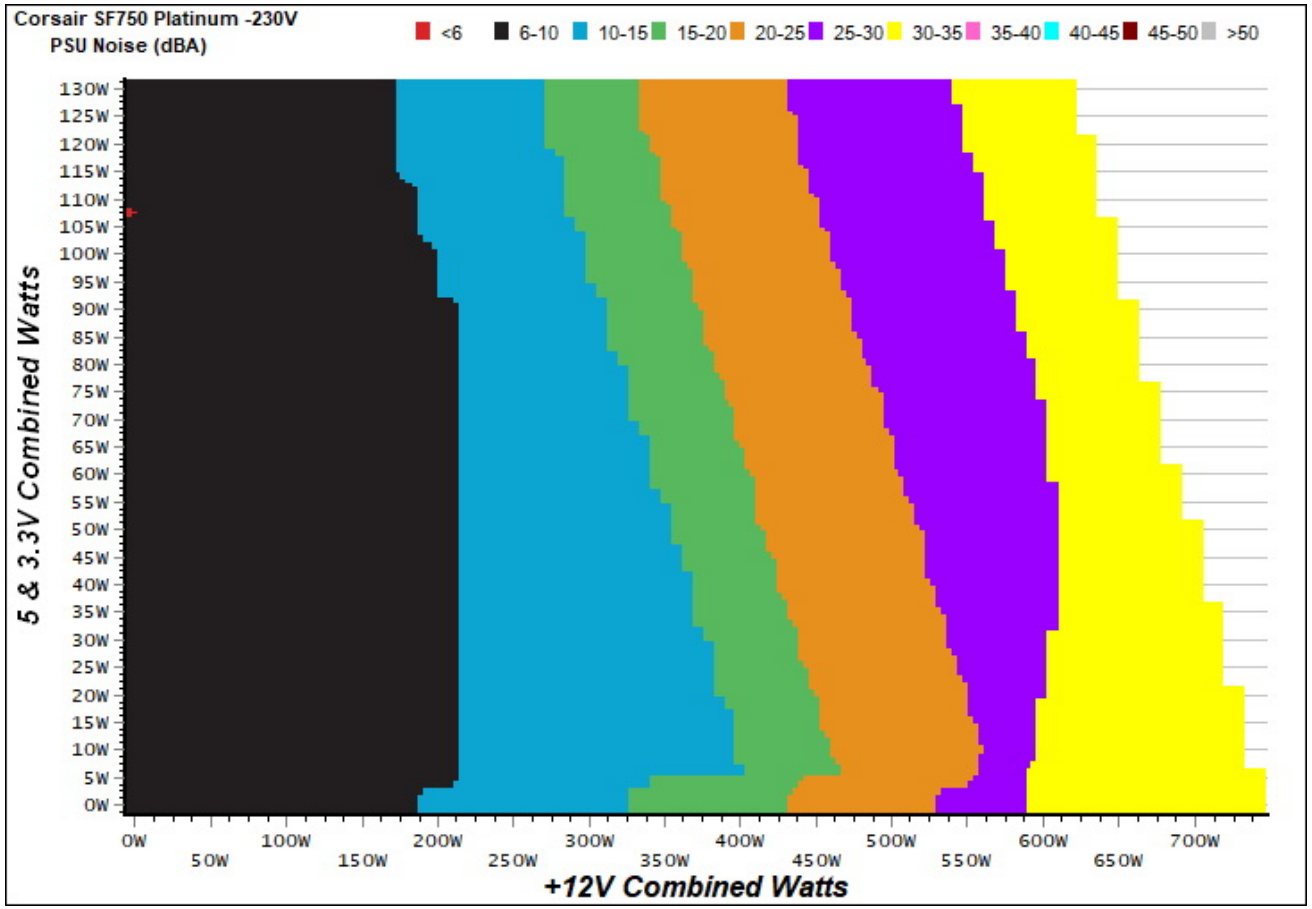
115V



□□

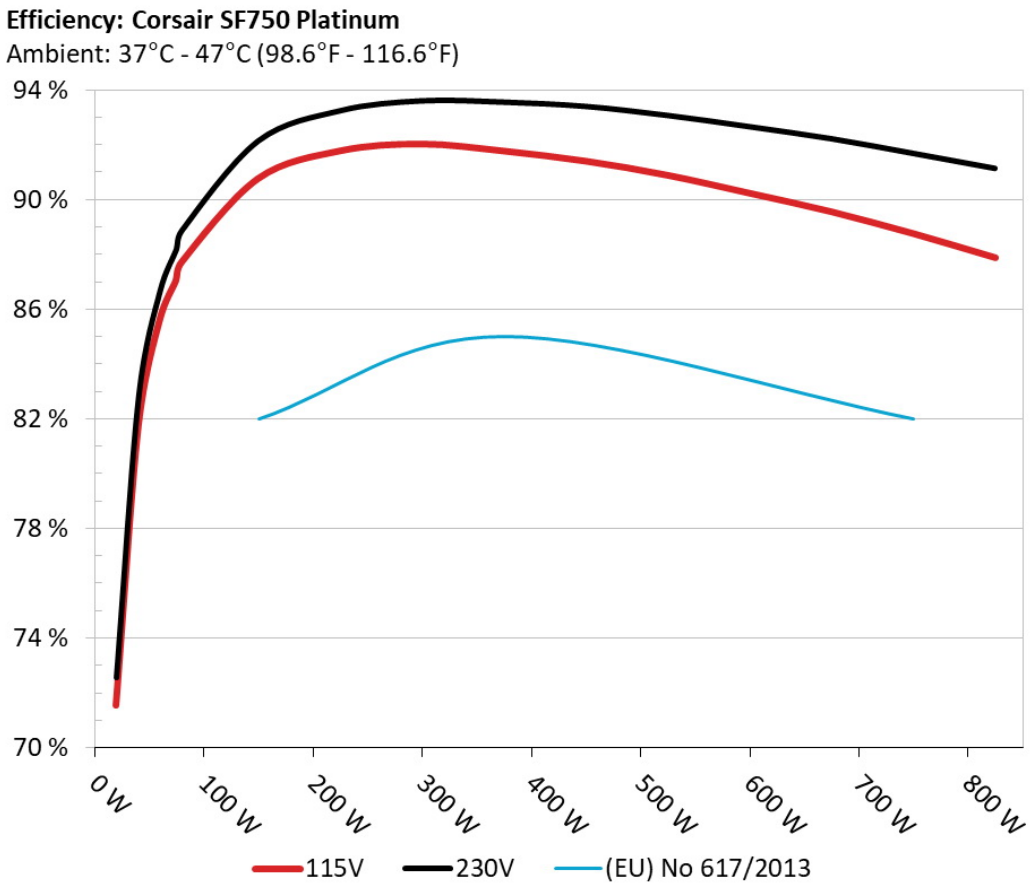
The PSU`s noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails.

230V



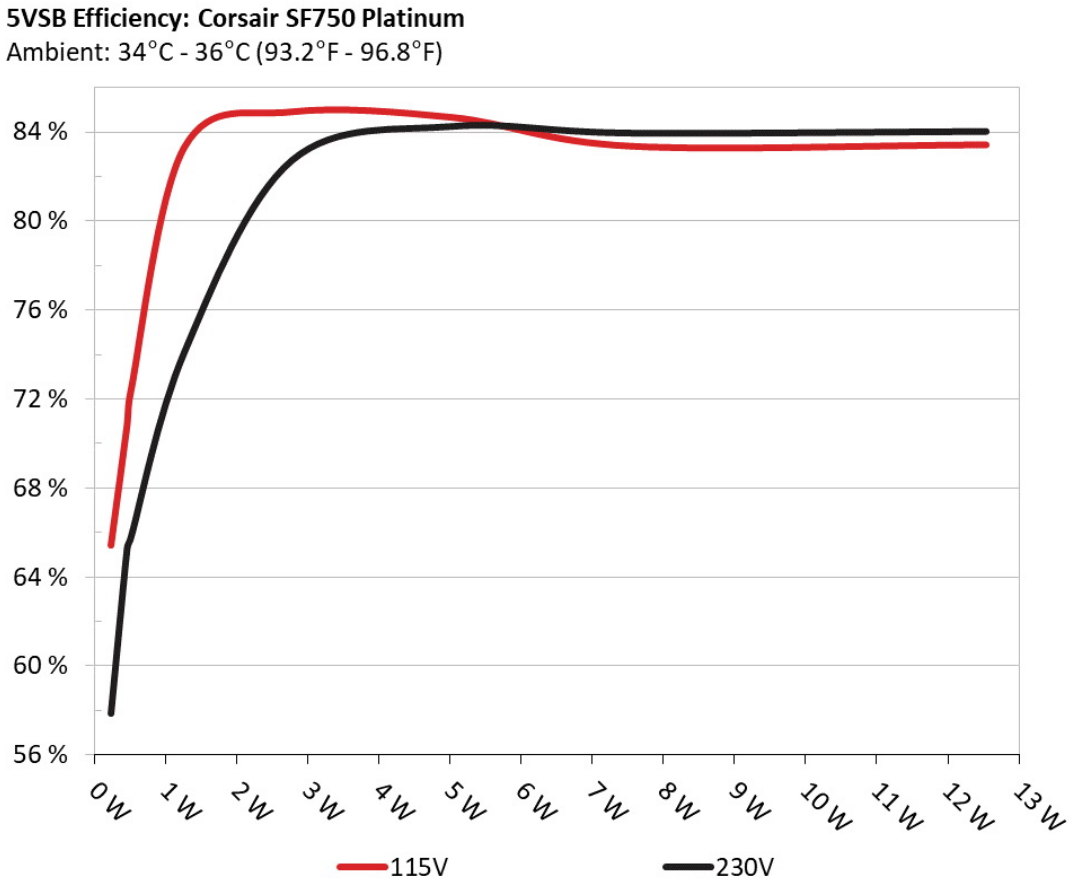
The PSU`s noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails.

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 LOT 3/6□ CEC□

115V

□□ #	5VSB	DC/AC (□)	□□	PF/AC □□
1	0.045A	0.227	65.418%	0.049
	5.045V	0.347		115.06V
2	0.090A	0.455	70.872%	0.088
	5.044V	0.642		115.06V
3	0.550A	2.772	84.926%	0.304
	5.038V	3.264		115.06V
4	1.000A	5.033	84.674%	0.387
	5.033V	5.944		115.06V
5	1.500A	7.540	83.379%	0.432
	5.026V	9.043		115.07V
6	2.500A	12.535	83.439%	0.472
	5.013V	15.023		115.06V

230V

□□ #	5VSB	DC/AC (□)	□□	PF/AC □□
1	0.045A	0.228	57.868%	0.017
	5.045V	0.394		230.03V
2	0.090A	0.455	65.280%	0.030
	5.044V	0.697		230.21V
3	0.550A	2.772	82.746%	0.132
	5.038V	3.350		230.20V
4	1.000A	5.033	84.277%	0.208
	5.032V	5.972		230.21V
5	1.500A	7.540	83.974%	0.269
	5.026V	8.979		230.21V
6	2.500A	12.534	84.047%	0.338
	5.013V	14.913		230.21V

Supplementary Tests (For Reference)

□□□□□□

115V

□□ #	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	PSU □□ (dB[A])	□□□□□□□□□	PF/AC □□
1	4.387A	1.973A	1.961A	0.994A	74.402	87.060%	0	<6.0	40.36°C	0.941
	12.038V	5.069V	3.361V	5.029V	85.461				46.52°C	115.05V
2	9.839A	2.959A	2.947A	1.195A	149.290	90.769%	0	<6.0	40.67°C	0.965
	12.033V	5.067V	3.360V	5.023V	164.473				47.57°C	115.04V
3	15.693A	3.454A	3.424A	1.395A	224.798	91.788%	0	<6.0	41.48°C	0.973
	12.031V	5.066V	3.358V	5.017V	244.911				49.44°C	115.04V
4	21.482A	3.948A	3.933A	1.596A	299.577	92.039%	0	<6.0	41.93°C	0.980
	12.028V	5.064V	3.356V	5.012V	325.488				50.47°C	115.04V
5	26.935A	4.938A	4.915A	1.799A	374.556	91.783%	1363	13.2	42.23°C	0.985
	12.031V	5.064V	3.355V	5.005V	408.090				52.15°C	115.05V
6	32.388A	5.927A	5.901A	2.001A	449.464	91.415%	1516	18.1	42.84°C	0.989
	12.031V	5.063V	3.354V	4.999V	491.674				53.78°C	115.04V
7	37.878A	6.917A	6.893A	2.204A	524.787	90.898%	2033	27.5	43.44°C	0.991
	12.030V	5.061V	3.352V	4.992V	577.337				54.73°C	115.04V
8	43.375A	7.906A	7.880A	2.407A	600.118	90.240%	2691	35.2	43.70°C	0.992
	12.028V	5.060V	3.350V	4.986V	665.024				56.06°C	115.04V
9	49.237A	8.404A	8.362A	2.409A	674.640	89.567%	3210	40.0	44.59°C	0.993
	12.026V	5.059V	3.348V	4.983V	753.228				58.12°C	115.04V
10	55.100A	8.901A	8.875A	2.511A	749.785	88.769%	3723	44.3	45.98°C	0.994
	12.025V	5.057V	3.346V	4.978V	844.649				60.26°C	115.03V
11	61.359A	8.903A	8.881A	2.513A	825.003	87.888%	3879	44.7	46.74°C	0.995
	12.024V	5.056V	3.345V	4.975V	938.701				62.50°C	115.03V
CL1	0.141A	16.005A	16.000A	0.000A	136.603	85.739%	1744	21.9	42.00°C	0.965
	12.043V	5.067V	3.363V	5.032V	159.324				52.82°C	115.06V

CL2	62.514A	1.000A	1.000A	1.000A	765.140	89.163%	3678	43.8	45.16°C	0.994
	12.025V	5.060V	3.346V	5.003V	858.132				60.64°C	115.03V

□□□□□□□□□□□

230V

□□ #	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	PSU □□ (dB[A])	□□□□□□□□□	PF/AC □□
1	4.387A	1.973A	1.962A	0.994A	74.410	88.198%	0	<6.0	39.72°C	0.835
	12.039V	5.069V	3.361V	5.029V	84.367				46.23°C	230.20V
2	9.840A	2.960A	2.946A	1.195A	149.302	92.153%	0	<6.0	40.82°C	0.913
	12.033V	5.067V	3.359V	5.023V	162.015				48.13°C	230.20V
3	15.694A	3.454A	3.422A	1.395A	224.802	93.264%	0	<6.0	41.33°C	0.941
	12.031V	5.066V	3.358V	5.017V	241.039				50.14°C	230.20V
4	21.481A	3.949A	3.932A	1.597A	299.594	93.625%	0	<6.0	41.85°C	0.954
	12.029V	5.065V	3.356V	5.011V	319.992				51.59°C	230.20V
5	26.935A	4.939A	4.917A	1.798A	374.508	93.574%	1363	13.2	42.15°C	0.963
	12.029V	5.064V	3.355V	5.005V	400.226				52.45°C	230.20V
6	32.398A	5.926A	5.905A	2.001A	449.388	93.421%	1510	18.1	42.63°C	0.968
	12.025V	5.062V	3.353V	5.000V	481.037				54.22°C	230.20V
7	37.885A	6.918A	6.891A	2.204A	524.751	93.090%	1855	24.6	43.24°C	0.973
	12.027V	5.061V	3.351V	4.993V	563.703				56.19°C	230.20V
8	43.378A	7.906A	7.883A	2.407A	600.078	92.677%	2545	33.8	43.84°C	0.976
	12.026V	5.060V	3.350V	4.986V	647.495				57.32°C	230.20V
9	49.238A	8.404A	8.364A	2.409A	674.601	92.241%	3120	39.3	44.58°C	0.979
	12.025V	5.058V	3.348V	4.983V	731.343				59.36°C	230.21V
10	55.099A	8.902A	8.875A	2.512A	749.728	91.707%	3684	43.9	45.63°C	0.981
	12.024V	5.057V	3.346V	4.978V	817.521				60.84°C	230.19V
11	61.362A	8.902A	8.881A	2.513A	824.964	91.157%	3885	44.8	46.61°C	0.982
	12.023V	5.056V	3.344V	4.975V	904.991				62.46°C	230.20V
CL1	0.142A	16.003A	15.999A	0.000A	136.570	87.009%	1631	21.1	42.78°C	0.911
	12.042V	5.066V	3.362V	5.032V	156.961				52.39°C	230.20V

CL2	62.513A	1.001A	1.001A	1.000A	765.011	92.171%	3537	42.4	45.91°C	0.981
	12.023V	5.059V	3.346V	5.003V	829.989				60.71°C	230.20V

上述结果不用于认证过程

轻载测试

115V

测试 #	12V	5V	3.3V	5VSB	DC/AC (瓦)	效率	风扇转速 (RPM)	PSU 噪音 (dB[A])	PF/AC 电压
1	1.195A	0.492A	0.475A	0.198A	19.459	71.556%	0	<6.0	0.865
	12.025V	5.069V	3.361V	5.042V	27.194				115.04V
2	2.458A	0.985A	0.983A	0.397A	39.857	81.721%	0	<6.0	0.911
	12.026V	5.069V	3.360V	5.039V	48.772				115.05V
3	3.655A	1.479A	1.455A	0.596A	59.355	85.602%	0	<6.0	0.936
	12.030V	5.068V	3.360V	5.035V	69.338				115.04V
4	4.918A	1.973A	1.963A	0.795A	79.788	87.741%	0	<6.0	0.949
	12.036V	5.068V	3.360V	5.031V	90.936				115.05V

上述结果不用于认证过程

230V

测试 #	12V	5V	3.3V	5VSB	DC/AC (瓦)	效率	风扇转速 (RPM)	PSU 噪音 (dB[A])	PF/AC 电压
1	1.198A	0.492A	0.476A	0.198A	19.503	72.559%	0	<6.0	0.580
	12.029V	5.069V	3.361V	5.042V	26.879				230.19V
2	2.461A	0.986A	0.980A	0.397A	39.896	82.830%	0	<6.0	0.729
	12.029V	5.069V	3.361V	5.038V	48.166				230.20V
3	3.657A	1.478A	1.457A	0.596A	59.386	86.658%	0	<6.0	0.805
	12.031V	5.069V	3.360V	5.035V	68.529				230.20V
4	4.919A	1.973A	1.962A	0.795A	79.806	88.907%	0	<6.0	0.844
	12.038V	5.068V	3.360V	5.031V	89.763				230.20V

上述结果不用于认证过程

□□□□

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	11.3 mV	11.3 mV	5.4 mV	7.0 mV	Pass
20% Load	11.4 mV	11.4 mV	6.3 mV	8.1 mV	Pass
30% Load	8.7 mV	13.4 mV	8.5 mV	8.9 mV	Pass
40% Load	11.5 mV	13.3 mV	8.4 mV	9.6 mV	Pass
50% Load	13.4 mV	15.5 mV	9.8 mV	10.5 mV	Pass
60% Load	15.5 mV	15.1 mV	10.9 mV	12.1 mV	Pass
70% Load	17.6 mV	17.1 mV	11.9 mV	14.4 mV	Pass
80% Load	20.5 mV	17.5 mV	13.5 mV	16.6 mV	Pass
90% Load	22.4 mV	17.9 mV	14.5 mV	18.8 mV	Pass
100% Load	29.5 mV	20.2 mV	16.7 mV	20.9 mV	Pass
110% Load	32.5 mV	21.3 mV	17.7 mV	23.3 mV	Pass
Crossload 1	17.3 mV	18.0 mV	15.5 mV	16.7 mV	Pass
Crossload 2	29.4 mV	18.5 mV	11.6 mV	21.6 mV	Pass

□□□□□□□□□□

230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	12.9 mV	11.0 mV	5.4 mV	6.8 mV	Pass
20% Load	12.6 mV	11.5 mV	6.4 mV	8.1 mV	Pass
30% Load	9.4 mV	14.1 mV	8.4 mV	8.7 mV	Pass
40% Load	11.6 mV	13.2 mV	8.4 mV	9.4 mV	Pass
50% Load	13.5 mV	15.2 mV	9.6 mV	10.8 mV	Pass
60% Load	15.7 mV	15.3 mV	10.8 mV	12.6 mV	Pass
70% Load	18.1 mV	16.5 mV	12.0 mV	14.5 mV	Pass
80% Load	21.0 mV	18.5 mV	14.4 mV	16.6 mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
90% Load	23.1 mV	18.3 mV	14.7 mV	19.1 mV	Pass
100% Load	30.8 mV	19.2 mV	16.2 mV	20.9 mV	Pass
110% Load	33.9 mV	20.8 mV	16.9 mV	23.4 mV	Pass
Crossload 1	18.2 mV	19.3 mV	15.2 mV	16.8 mV	Pass
Crossload 2	30.4 mV	18.3 mV	11.7 mV	21.7 mV	Pass

Corsair SF750 Platinum



Top side



Power specifications label