

Anex

Corsair RM550x (2018)

Lab ID#: 326

Receipt Date: -

Test Date: -

Report:

Report Date: Mar 20, 2018

DUT INFORMATION	
Brand	Corsair
Manufacturer (OEM)	Channel Well Technology
Series	RMx
Model Number	RM550x (2018)
Serial Number	17477135000034420202
DUT Notes	CP-9020090

DUT SPECIFICATIONS	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	10-5
Rated Frequency (Hz)	47-63
Rated Power (W)	550
Type	ATX12V
Cooling	135mm Rifle Bearing Fan (NR135L)
Semi-Passive Operation	✓
Cable Design	Fully Modular

POWER SPECIFICATIONS						
Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	25	25	45.8	3	0.8
	Watts	130		550	15	9.6
Total Max. Power (W)		550				

CABLES AND CONNECTORS				
Modular Cables				
Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 20+4 pin (600mm)	1	1	18-20AWG	Yes
4+4 pin EPS12V (650mm)	1	1	18AWG	Yes
6+2 pin PCIe (600mm+150mm)	1	2	18AWG	Yes
SATA (520mm+110mm+110mm)	2	6	18AWG	No
4 pin Molex (450mm+100mm+100mm+100mm)	1	4	18AWG	No
FDD Adapter (+100mm)	1	1	20AWG	No
AC Power Cord (1430mm) - C13 coupler	1	1	18AWG	-

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RESULTS	
Temperature Range (°C /°F)	30-32 / 86-89.6
Average Efficiency	88.789
Efficiency With 10W ($\leq 500W$) or 2% ($> 500W$) Load -115V	0.000
Average Efficiency 5VSB	77.610
Standby Power Consumption (W) -115V	0.0401198
Standby Power Consumption (W) -230V	0.0665482
Average PF	0.989
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓
Avg Noise Output	14.52
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	A++

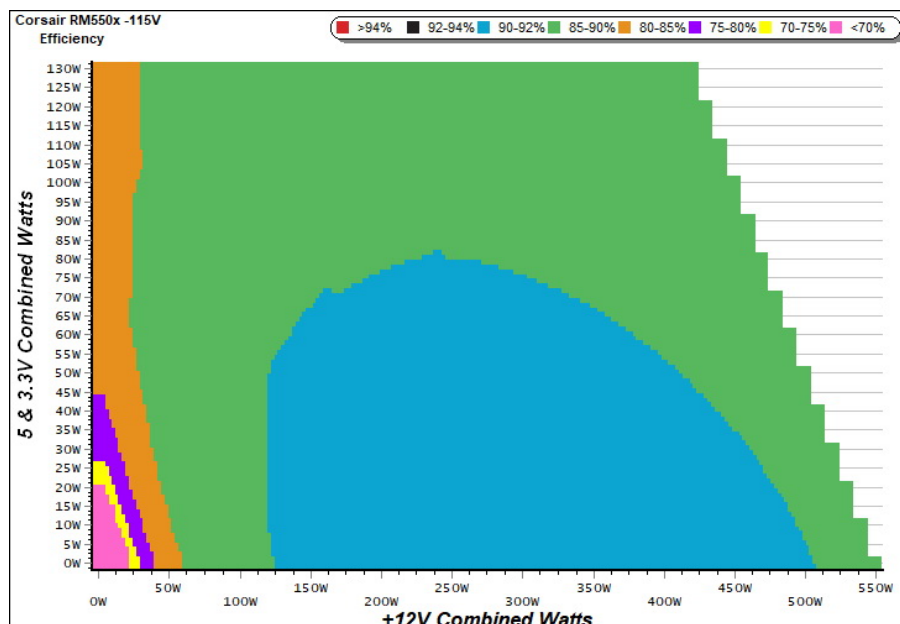
TEST EQUIPMENT		
Electronic Loads	Chroma 6314A x2 63123A x6 63102A 63101A	Chroma 63601-5 x2 Chroma 63600-2 63640-80-80 x10 63610-80-20
AC Sources	Chroma 6530, Chroma 61604	
Power Analyzers	N4L PPA1530, N4L PPA5530	
Oscilloscopes	Picoscope 4444 & 3424, Keysight DSOX3024A, Rigol DS2072A	
Voltmeter	Keithley 2015 THD 6.5 Digit	
Sound Analyzer	Bruel & Kjaer 2250-L G4	
Microphone	Bruel & Kjaer Type 4955-A, Bruel & Kjaer Type 4189	
Data Loggers	Picoscope TC-08 x2, Labjack U3-HV x2	

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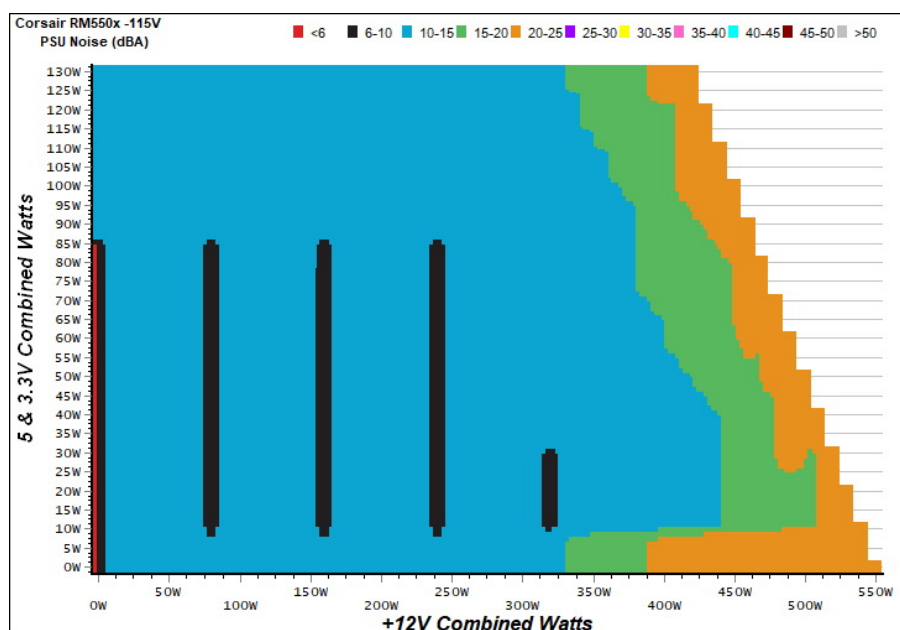
EFFICIENCY GRAPH



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



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

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5VSB EFFICIENCY -115V (ERP LOT 3/6 & CEC)

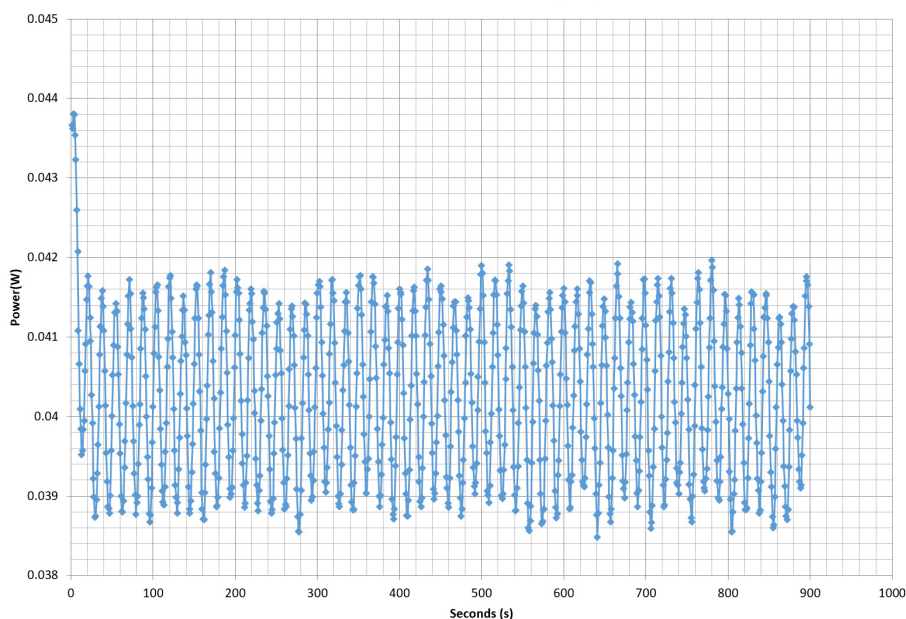
Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.227	70.497%	0.024
	5.045V	0.322		115.38V
2	0.090A	0.454	75.415%	0.044
	5.044V	0.602		115.38V
3	0.550A	2.767	79.580%	0.211
	5.030V	3.477		115.37V
4	1.000A	5.016	78.449%	0.307
	5.016V	6.394		115.37V
5	1.500A	7.504	78.045%	0.366
	5.002V	9.615		115.37V
6	3.000A	14.878	76.557%	0.445
	4.959V	19.434		115.36V

5VSB EFFICIENCY -230V (ERP LOT 3/6 & CEC)

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.227	65.230%	0.009
	5.045V	0.348		230.84V
2	0.090A	0.454	71.835%	0.016
	5.044V	0.632		230.83V
3	0.550A	2.767	77.747%	0.087
	5.029V	3.559		230.84V
4	1.000A	5.016	78.351%	0.147
	5.016V	6.402		230.84V
5	1.500A	7.504	78.069%	0.203
	5.002V	9.612		230.83V
6	3.000A	14.871	77.377%	0.308
	4.957V	19.219		230.83V

VAMPIRE POWER -115V

Power - 17477135000034420150 - 19/03/2018 - 07:51



INFO

This graph is generated by the PPA Standby Power Analysis software which takes full control of the power analyzer during the whole procedure. This application features all of the EN50564 & IEC62301 test limits for standby power software testing

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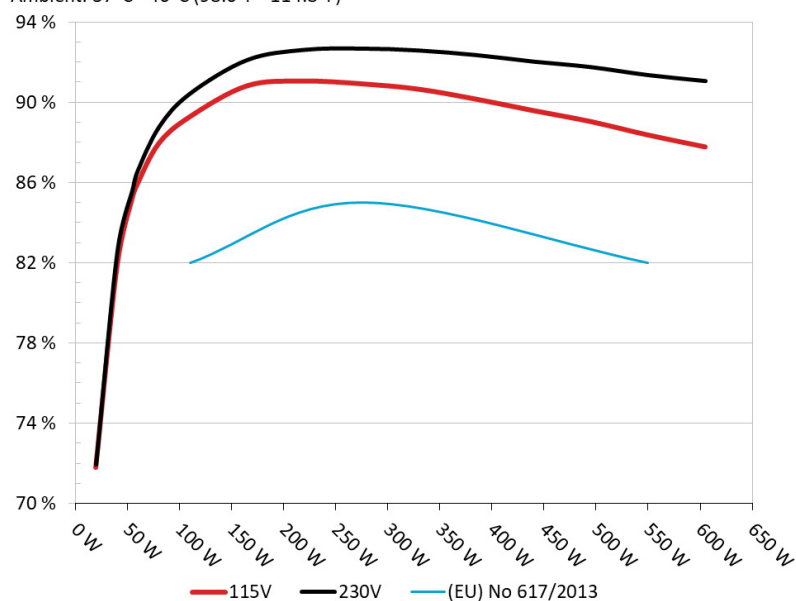
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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Corsair RM550x

Ambient: 37°C - 46°C (98.6°F - 114.8°F)



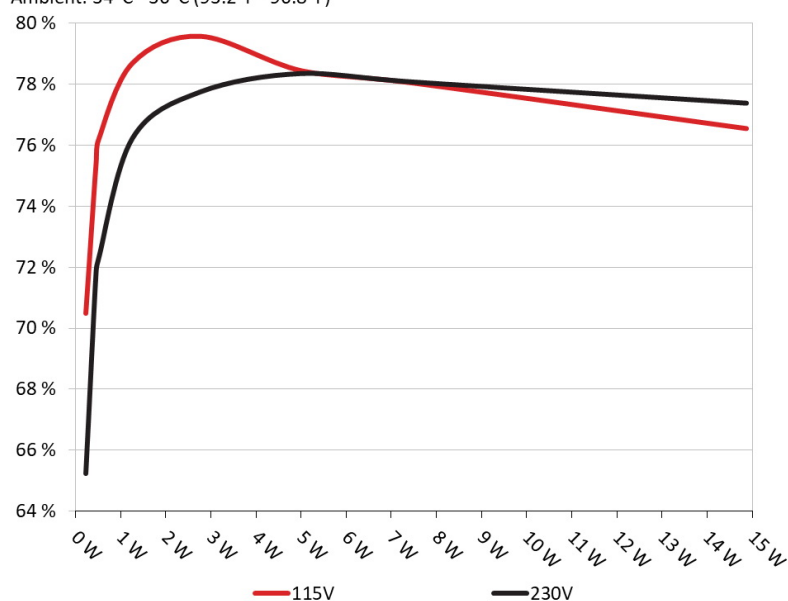
INFO

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 RM550x

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

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10-110% LOAD TESTS

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
1	2.722A	1.983A	1.986A	0.996A	54.373	85.229%	0	<6.0	44.62°C	0.953
	12.043V	5.040V	3.322V	5.020V	63.796				39.58°C	115.29V
2	6.513A	2.977A	2.981A	1.196A	109.307	89.277%	0	<6.0	45.78°C	0.981
	12.039V	5.039V	3.320V	5.016V	122.436				40.33°C	115.22V
3	10.705A	3.474A	3.465A	1.397A	164.823	90.840%	0	<6.0	46.88°C	0.989
	12.034V	5.038V	3.318V	5.011V	181.444				41.06°C	115.14V
4	14.841A	3.972A	3.980A	1.599A	219.631	91.074%	610	10.2	41.71°C	0.991
	12.023V	5.035V	3.316V	5.004V	241.156				47.78°C	115.07V
5	18.649A	4.969A	4.976A	1.801A	274.527	90.939%	633	10.9	42.20°C	0.993
	12.013V	5.032V	3.314V	4.998V	301.882				48.62°C	115.09V
6	22.465A	5.964A	5.975A	2.003A	329.444	90.672%	610	10.2	42.74°C	0.994
	12.003V	5.031V	3.312V	4.994V	363.335				49.48°C	115.01V
7	26.321A	6.960A	6.978A	2.205A	384.783	90.174%	670	12.6	43.35°C	0.993
	11.993V	5.030V	3.311V	4.990V	426.713				50.54°C	114.93V
8	30.183A	7.957A	7.980A	2.408A	440.110	89.601%	705	15.9	44.07°C	0.994
	11.983V	5.029V	3.309V	4.986V	491.188				51.94°C	114.85V
9	34.415A	8.456A	8.468A	2.408A	494.636	89.061%	843	20.4	44.72°C	0.995
	11.975V	5.027V	3.307V	4.985V	555.393				52.90°C	114.87V
10	38.451A	8.958A	8.987A	3.020A	549.836	88.388%	955	24.8	45.24°C	0.995
	11.966V	5.026V	3.305V	4.969V	622.068				53.76°C	114.77V
11	43.097A	8.960A	8.991A	3.021A	605.072	87.792%	1119	30.0	46.43°C	0.996
	11.958V	5.024V	3.303V	4.967V	689.208				55.43°C	114.69V
CL1	0.142A	16.004A	15.999A	0.000A	135.275	83.190%	633	10.9	42.33°C	0.987
	12.015V	5.032V	3.315V	5.073V	162.609				49.59°C	115.16V
CL2	45.842A	1.002A	0.999A	1.000A	562.444	89.131%	980	25.7	45.07°C	0.995
	11.978V	5.029V	3.308V	5.005V	631.031				53.36°C	114.77V

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20-80W LOAD TESTS

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	PF/AC Volts
1	1.189A	0.495A	0.480A	0.199A	19.419	71.803%	0	<6.0	0.824
	12.049V	5.041V	3.325V	5.037V	27.045				115.35V
2	2.457A	0.991A	0.993A	0.398A	39.892	81.872%	0	<6.0	0.928
	12.045V	5.040V	3.324V	5.032V	48.725				115.31V
3	3.651A	1.488A	1.472A	0.597A	59.358	85.938%	0	<6.0	0.959
	12.042V	5.040V	3.323V	5.028V	69.071				115.28V
4	4.917A	1.984A	1.986A	0.796A	79.793	87.953%	0	<6.0	0.971
	12.039V	5.040V	3.322V	5.024V	90.722				115.26V

RIPPLE MEASUREMENTS

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	2.6 mV	3.3 mV	2.8 mV	2.2 mV	Pass
20% Load	8.6 mV	3.4 mV	3.2 mV	2.2 mV	Pass
30% Load	8.6 mV	3.6 mV	4.1 mV	2.4 mV	Pass
40% Load	8.4 mV	7.0 mV	4.5 mV	5.2 mV	Pass
50% Load	8.7 mV	9.6 mV	4.8 mV	6.7 mV	Pass
60% Load	7.8 mV	5.0 mV	4.4 mV	2.8 mV	Pass
70% Load	7.9 mV	5.2 mV	4.8 mV	2.9 mV	Pass
80% Load	8.4 mV	6.3 mV	5.7 mV	3.2 mV	Pass
90% Load	8.8 mV	6.7 mV	6.3 mV	4.0 mV	Pass
100% Load	9.3 mV	7.4 mV	8.2 mV	4.5 mV	Pass
110% Load	9.4 mV	8.0 mV	8.4 mV	5.3 mV	Pass
Crossload 1	11.2 mV	8.6 mV	7.3 mV	4.8 mV	Pass
Crossload 2	8.7 mV	5.7 mV	7.6 mV	3.7 mV	Pass

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HOLD-UP TIME & POWER OK SIGNAL (230V)


Hold-Up Time (ms)	22.10
AC Loss to PWR_OK Hold Up Time (ms)	20.40
PWR_OK Inactive to DC Loss Delay (ms)	1.70



Top side


MODEL / 型号 / 型號 / 모델 : RPS0107					
POWER SUPPLY / 전원 공급 장치					
PART NUMBER: 75-003442					
交流輸入 AC 입력 直流輸出 DC 출력 最大電流 최대 부하 最大瓦特數 총 입력	AC INPUT AC 입력	100V ~ 240V • 10A • 5A • 47Hz ~ 63Hz			
	DC OUTPUT DC 출력	+3.3V	+5V	+12V	-12V +5Vsb
	MAX LOAD	25A	25A	45.8A	0.8A 3A
最大瓦特數 총 출력	MAXIMUM COMBINED WATTAGE 최대 결합 와트	130W	550W	9.6W	15W
	總功率 TOTAL POWER: 550W				

FC




C

UL




TÜV Rheinland

certified

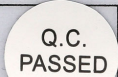



CCC

S&E



CE

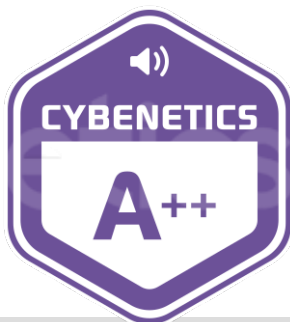




S/N : 17477135000034420202

Power specifications label

CERTIFICATIONS



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