

Anex

Corsair RM550x (2018)

Lab ID#: 327

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	90.708
Efficiency With 10W ($\leq 500W$) or 2% ($> 500W$) Load -115V	0.000
Average Efficiency 5VSB	77.429
Standby Power Consumption (W) -115V	0.0401198
Standby Power Consumption (W) -230V	0.0665482
Average PF	0.954
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓
Avg Noise Output	14.51
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	A++

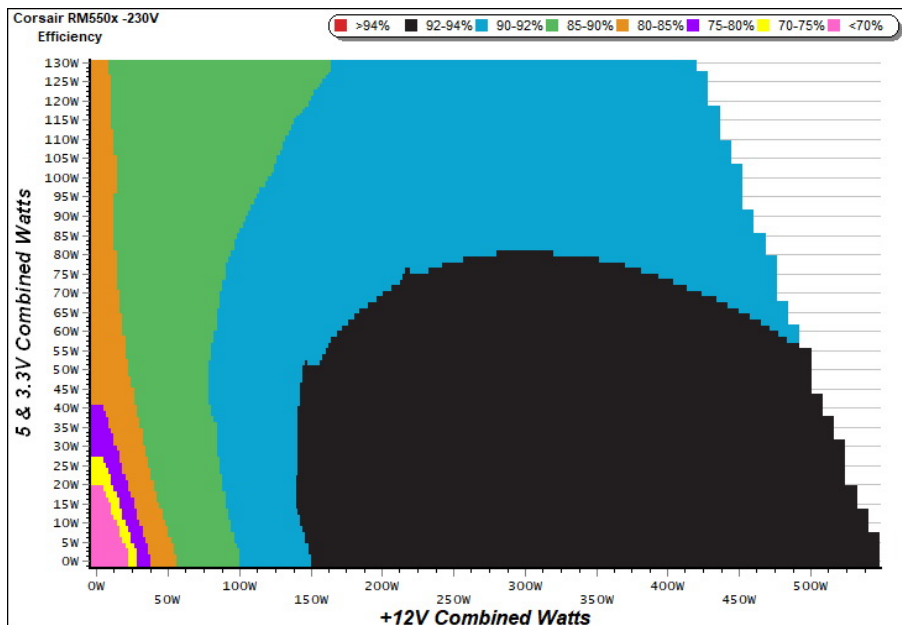
TEST EQUIPMENT		
Electronic Loads	Chroma 6314A x2 63123A x6 63102A 63101A	Chroma 63601-5 x2 Chroma 63600-2 63640-80-80 x10 63610-80-20
AC Sources	Chroma 6530, Chroma 61604	
Power Analyzers	N4L PPA1530, N4L PPA5530	
Oscilloscopes	Picoscope 4444 & 3424, Keysight DSOX3024A, Rigol DS2072A	
Voltmeter	Keithley 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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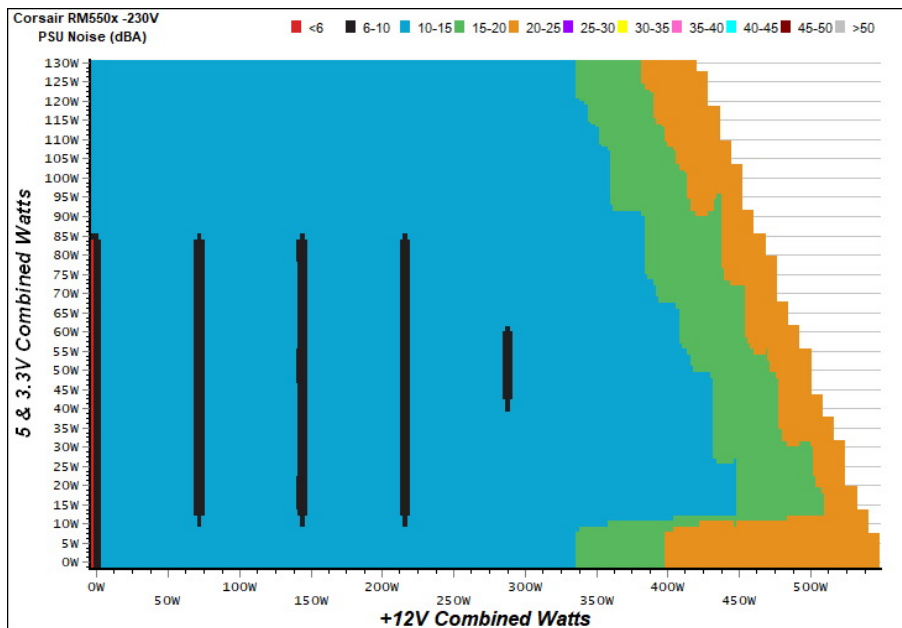
EFFICIENCY GRAPH



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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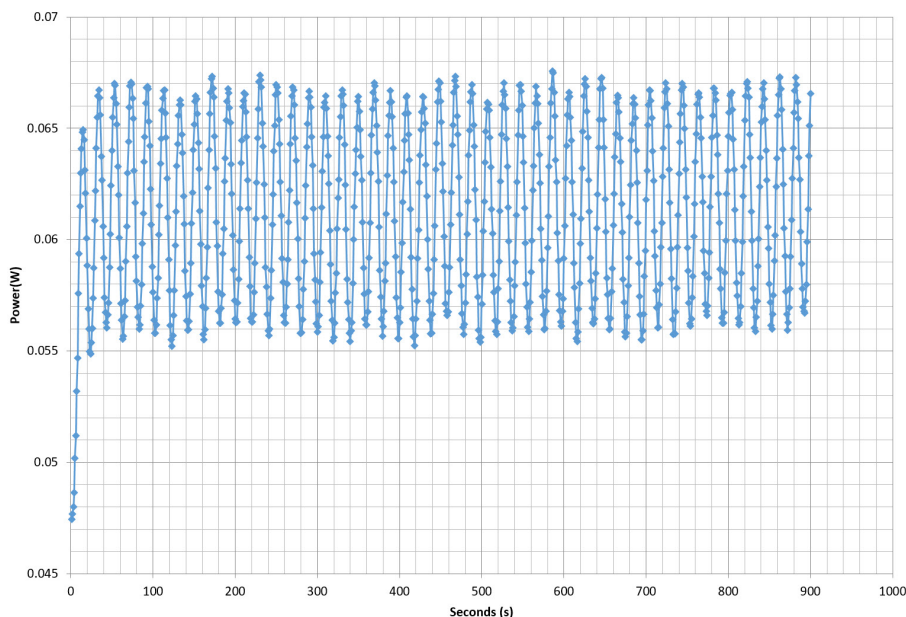
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5VSB EFFICIENCY -115V (ERP LOT 3/6 & CEC)				
Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.227	70.497%	0.024
	5.045V	0.322		115.38V
2	0.090A	0.454	75.415%	0.044
	5.044V	0.602		115.38V
3	0.550A	2.767	79.580%	0.211
	5.030V	3.477		115.37V
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 -230V

Power - 17477136000034430139 - 16/03/2018 - 14:04



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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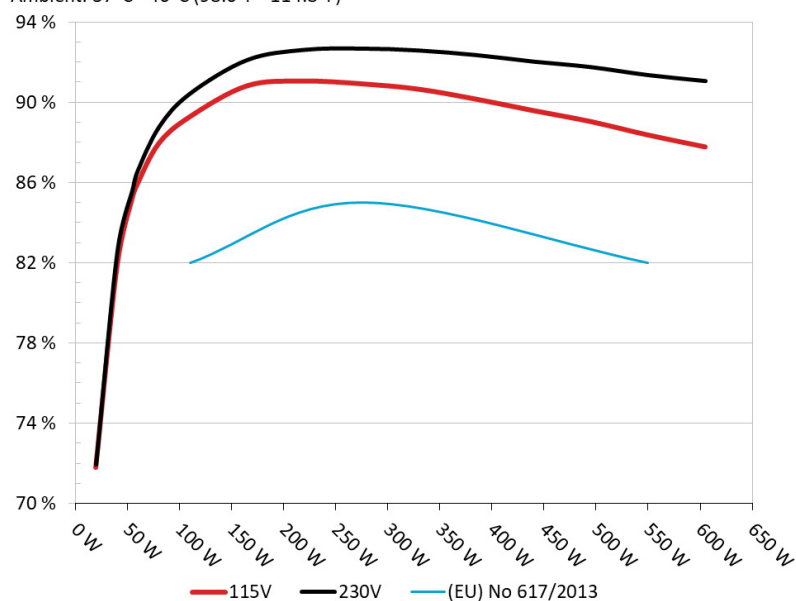
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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Corsair RM550x

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



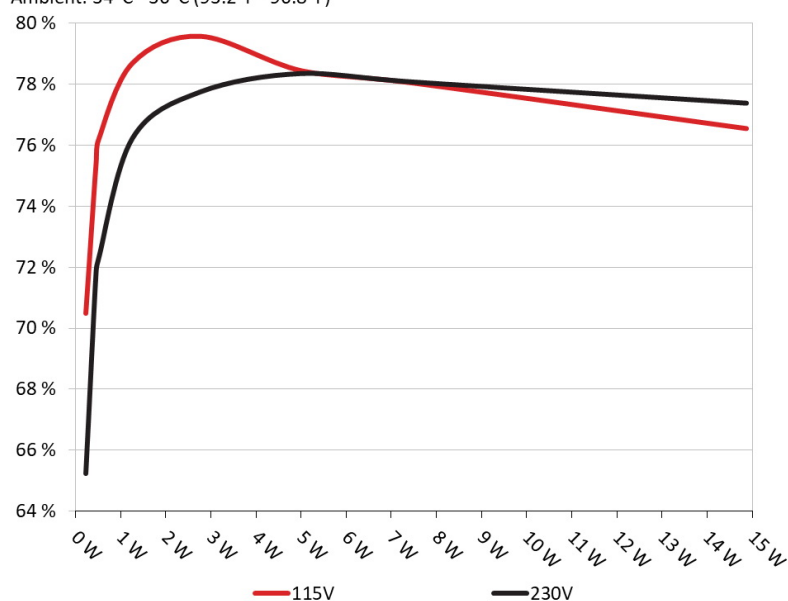
INFO

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	2.728A	1.983A	1.985A	0.997A	54.435	85.603%	0	<6.0	45.49°C	0.753
	12.040V	5.039V	3.322V	5.019V	63.590				40.29°C	230.91V
2	6.518A	2.978A	2.979A	1.197A	109.361	90.396%	0	<6.0	46.70°C	0.897
	12.038V	5.038V	3.320V	5.015V	120.980				41.16°C	230.87V
3	10.708A	3.475A	3.466A	1.398A	164.858	92.090%	0	<6.0	47.98°C	0.942
	12.033V	5.037V	3.318V	5.010V	179.019				41.85°C	230.83V
4	14.842A	3.972A	3.980A	1.599A	219.663	92.594%	655	11.2	42.26°C	0.961
	12.024V	5.036V	3.316V	5.005V	237.233				48.56°C	230.79V
5	18.652A	4.967A	4.979A	1.801A	274.549	92.656%	610	10.2	42.75°C	0.972
	12.012V	5.033V	3.314V	4.998V	296.310				49.34°C	230.75V
6	22.468A	5.965A	5.978A	2.003A	329.466	92.561%	610	10.2	43.39°C	0.977
	12.002V	5.030V	3.312V	4.993V	355.943				50.41°C	230.71V
7	26.324A	6.960A	6.979A	2.205A	384.780	92.331%	610	10.2	44.12°C	0.981
	11.992V	5.029V	3.310V	4.989V	416.740				51.46°C	230.66V
8	30.187A	7.957A	7.980A	2.408A	440.110	92.006%	705	15.9	44.89°C	0.984
	11.982V	5.028V	3.308V	4.985V	478.348				52.49°C	230.71V
9	34.416A	8.458A	8.469A	2.408A	494.626	91.735%	843	20.4	45.26°C	0.986
	11.974V	5.027V	3.307V	4.985V	539.192				53.27°C	230.67V
10	38.454A	8.957A	8.989A	3.020A	549.826	91.335%	943	24.5	45.80°C	0.987
	11.965V	5.025V	3.305V	4.969V	601.985				54.15°C	230.63V
11	43.097A	8.959A	8.991A	3.021A	605.023	91.040%	1071	28.0	46.35°C	0.989
	11.957V	5.024V	3.303V	4.967V	664.567				55.52°C	230.59V
CL1	0.137A	16.004A	16.000A	0.000A	135.233	84.443%	633	10.9	43.52°C	0.932
	12.015V	5.033V	3.315V	5.074V	160.147				50.98°C	230.92V
CL2	45.839A	1.002A	1.000A	1.000A	562.412	92.141%	995	26.3	45.52°C	0.988
	11.978V	5.029V	3.308V	5.005V	610.379				53.82°C	230.63V

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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	1.198A	0.495A	0.481A	0.199A	19.528	71.932%	0	<6.0	0.463
	12.047V	5.039V	3.325V	5.035V	27.148				230.93V
2	2.465A	0.993A	0.993A	0.398A	39.992	82.556%	0	<6.0	0.666
	12.043V	5.039V	3.323V	5.030V	48.442				230.92V
3	3.658A	1.489A	1.473A	0.597A	59.439	86.550%	0	<6.0	0.775
	12.040V	5.039V	3.322V	5.027V	68.676				230.91V
4	4.925A	1.985A	1.985A	0.797A	79.881	88.742%	0	<6.0	0.842
	12.037V	5.039V	3.322V	5.023V	90.015				230.89V

RIPPLE MEASUREMENTS

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	2.4 mV	3.3 mV	2.7 mV	2.1 mV	Pass
20% Load	9.6 mV	3.7 mV	3.0 mV	2.3 mV	Pass
30% Load	8.9 mV	3.8 mV	3.8 mV	2.2 mV	Pass
40% Load	8.2 mV	7.1 mV	5.0 mV	4.9 mV	Pass
50% Load	8.9 mV	9.0 mV	4.8 mV	6.9 mV	Pass
60% Load	8.2 mV	5.4 mV	4.1 mV	3.1 mV	Pass
70% Load	8.3 mV	5.3 mV	4.7 mV	2.9 mV	Pass
80% Load	8.7 mV	6.1 mV	5.7 mV	3.3 mV	Pass
90% Load	9.3 mV	7.2 mV	5.9 mV	4.1 mV	Pass
100% Load	9.6 mV	7.4 mV	7.9 mV	4.4 mV	Pass
110% Load	10.1 mV	7.6 mV	8.6 mV	4.9 mV	Pass
Crossload 1	11.9 mV	8.0 mV	7.1 mV	4.3 mV	Pass
Crossload 2	9.5 mV	5.5 mV	7.1 mV	4.0 mV	Pass

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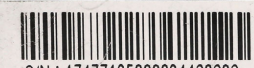
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HOLD-UP TIME & POWER OK SIGNAL (230V)

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

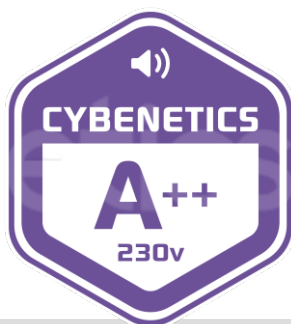


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MODEL / 型号 / 型號 / 모델 : RPS0107 POWER SUPPLY / 전원 공급 장치					
PART NUMBER: 75-003442					
交流輸入 AC 입력	AC INPUT	100V - 240V • 10A • 47Hz - 63Hz			
直流輸出 DC 출력	DC OUTPUT	+3.3V	+5V	+12V	-12V +5Vsb
最大電流 최대 부하	MAX LOAD	25A	25A	45.8A	0.8A 3A
最大瓦特數 총 전력	MAXIMUM COMBINED WATTAGE	130W	550W	9.6W	15W
TOTAL POWER: 550W					
					
 S/N : 17477135000034420202					
Q.C. PASSED					

Power specifications label

CERTIFICATIONS



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