

Anex

Corsair TX650M (Sample #2)

Lab ID#: 183

Receipt Date: -

Test Date: -

Report:

Report Date: Sep 29, 2018

DUT INFORMATION	
Brand	Corsair
Manufacturer (OEM)	Great Wall
Series	TXM
Model Number	TX650M (Sample #2)
Serial Number	17284854000040772420
DUT Notes	CP-9020132

DUT SPECIFICATIONS	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	10-5
Rated Frequency (Hz)	47-63
Rated Power (W)	650
Type	ATX12V
Cooling	120mm Rifle Bearing Fan (NR120L)
Semi-Passive Operation	x
Cable Design	Semi Modular

POWER SPECIFICATIONS						
Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	25	25	51	3	0.8
	Watts	130		612	15	9.6
Total Max. Power (W)		650				

CABLES AND CONNECTORS			
Native Cables			
Description	Cable Count	Connector Count (Total)	Gauge
ATX connector 20+4 pin (600mm)	1	1	16-20AWG
4+4 pin EPS12V (650mm)	1	1	18AWG
Modular Cables			
6+2 pin PCIe (600mm+150mm)	2	4	18AWG
SATA (500mm+90mm+90mm)	2	6	18AWG
4 pin Molex (450mm+100mm+100mm+100mm)	1	4	18AWG
FDD Adapter (+100mm)	1	1	20AWG

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RESULTS	
Temperature Range (°C /°F)	30-32 / 86-89.6
Average Efficiency	88.369
Efficiency With 10W (≤500W) or 2% (>500W) Load -115V	0.000
Average Efficiency 5VSB	79.107
Standby Power Consumption (W) -115V	0.0684592
Standby Power Consumption (W) -230V	0.0984768
Average PF	0.987
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓
Avg Noise Output	35.83
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	Standard+

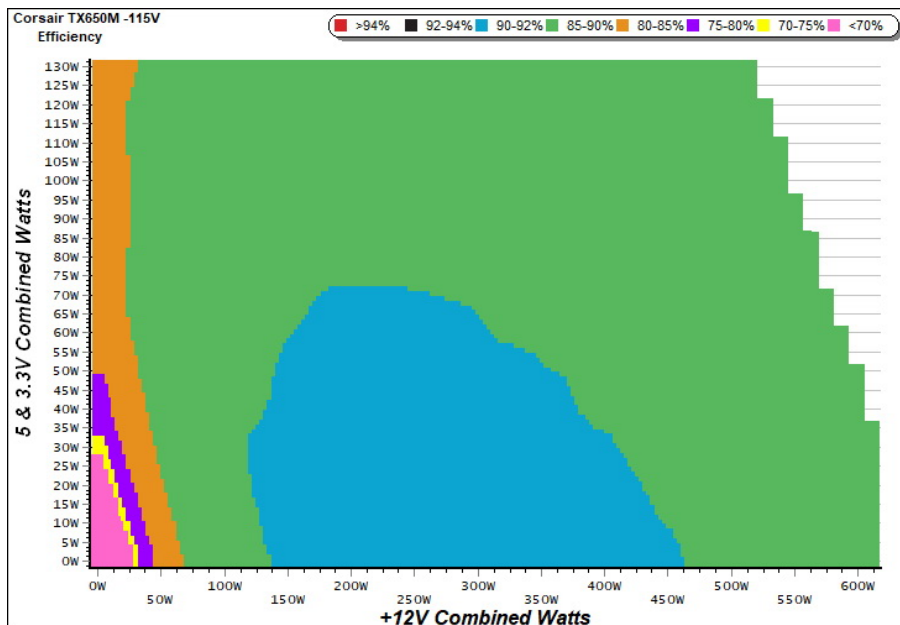
TEST EQUIPMENT		
Electronic Loads	Chroma 6314A x2 63123A x6 63102A 63101A	Chroma 63601-5 x2 Chroma 63600-2 63640-80-80 x10 63610-80-20
AC Sources	Chroma 6530, Chroma 61604	
Power Analyzers	N4L PPA1530, N4L PPA5530	
Oscilloscopes	Picoscope 4444 & 3424, Keysight DSOX3024A, Rigol DS2072A	
Voltmeter	Keithley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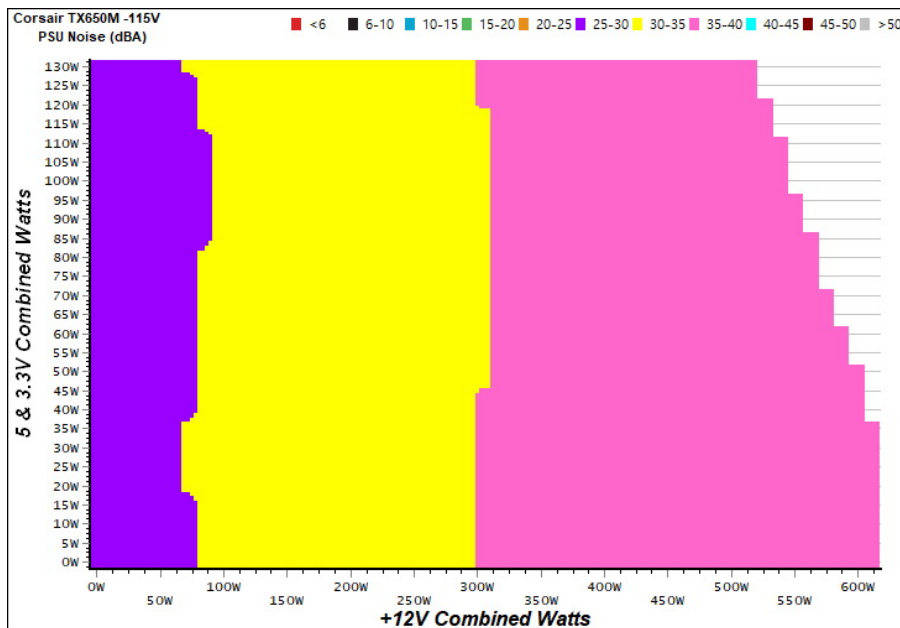
EFFICIENCY GRAPH



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)

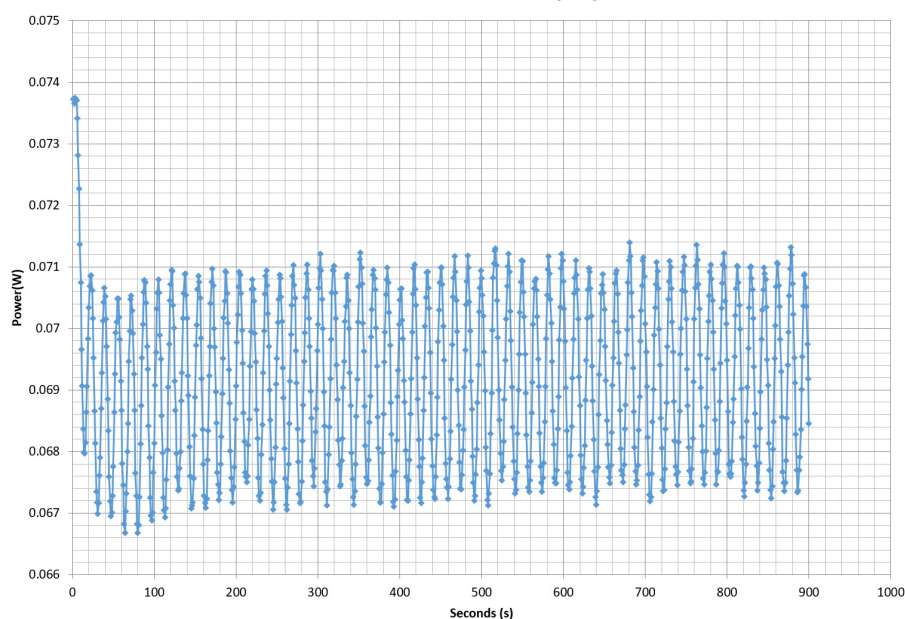
Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.229	66.764%	0.026
	5.082V	0.343		115.29V
2	0.090A	0.458	74.351%	0.047
	5.081V	0.616		115.29V
3	0.550A	2.790	79.920%	0.224
	5.071V	3.491		115.28V
4	1.000A	5.062	80.006%	0.325
	5.061V	6.327		115.28V
5	1.500A	7.575	79.796%	0.387
	5.050V	9.493		115.27V
6	3.000A	15.047	77.895%	0.468
	5.015V	19.317		115.26V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.229	60.743%	0.021
	5.082V	0.377		230.86V
2	0.090A	0.458	70.462%	0.016
	5.081V	0.650		230.87V
3	0.550A	2.789	79.098%	0.084
	5.071V	3.526		230.86V
4	1.000A	5.061	79.575%	0.143
	5.060V	6.360		230.86V
5	1.500A	7.575	79.561%	0.198
	5.049V	9.521		230.85V
6	3.000A	15.046	78.837%	0.308
	5.015V	19.085		230.85V

VAMPIRE POWER -115V

Power - 17284854000040772420 - 27/09/2017 - 15:47



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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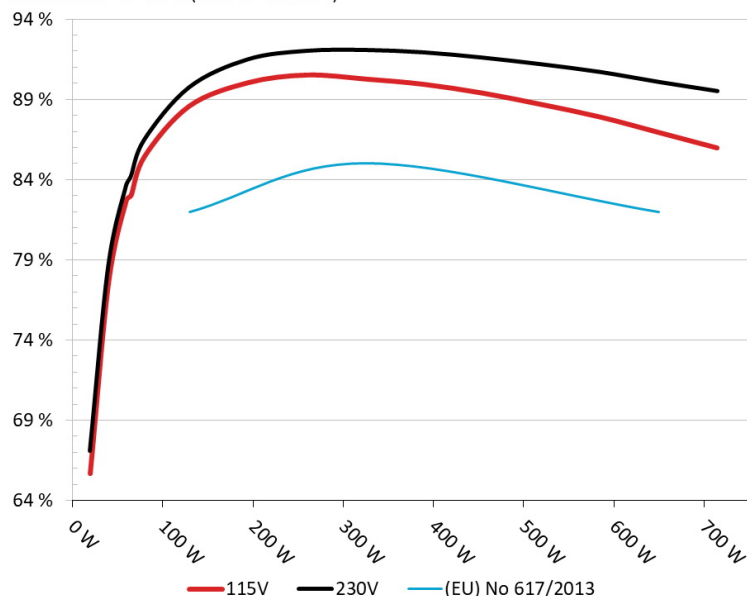
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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Corsair TX650M

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



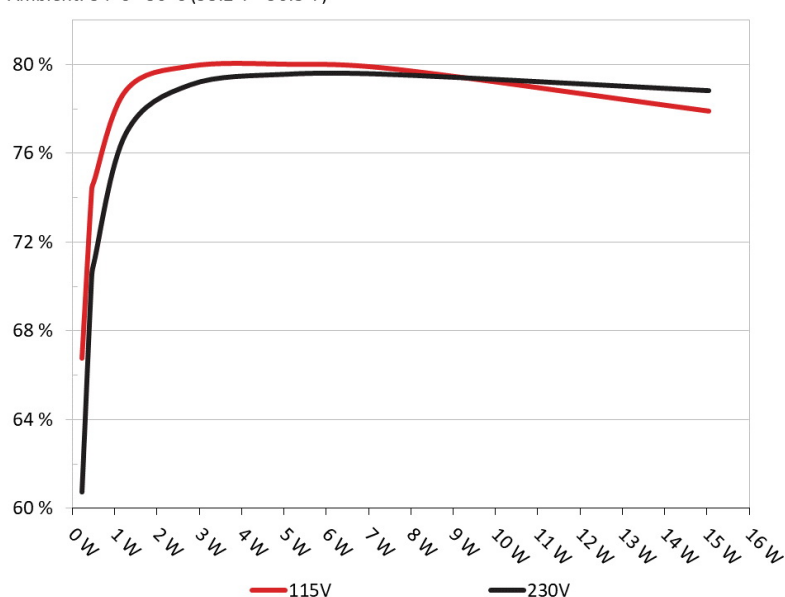
INFO

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 TX650M

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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Corsair TX650M (Sample #2)

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	3.590A	1.995A	1.981A	0.989A	64.823	83.006%	111	36.1	38.22°C	0.962
	12.038V	5.014V	3.333V	5.057V	78.094				41.09°C	115.29V
2	8.184A	2.994A	2.973A	1.189A	129.342	88.564%	113	36.6	38.36°C	0.980
	12.029V	5.010V	3.328V	5.048V	146.043				41.64°C	115.21V
3	13.178A	3.497A	3.460A	1.389A	194.446	90.021%	115	37.4	38.83°C	0.987
	12.023V	5.006V	3.324V	5.040V	216.001				42.84°C	115.12V
4	18.178A	3.999A	3.974A	1.590A	259.663	90.500%	116	37.5	39.11°C	0.989
	12.018V	5.003V	3.320V	5.031V	286.919				43.93°C	115.12V
5	22.847A	5.003A	4.977A	1.792A	324.946	90.249%	123	39.8	39.67°C	0.991
	12.012V	4.998V	3.316V	5.022V	360.054				45.64°C	115.02V
6	27.459A	6.008A	5.981A	1.995A	389.492	89.922%	122	39.6	40.51°C	0.992
	12.006V	4.995V	3.312V	5.013V	433.143				47.86°C	114.93V
7	32.137A	7.015A	6.984A	2.199A	454.796	89.374%	123	39.8	41.56°C	0.992
	12.001V	4.991V	3.308V	5.004V	508.867				50.57°C	114.94V
8	36.823A	8.023A	7.992A	2.404A	520.114	88.665%	123	39.8	42.67°C	0.992
	11.995V	4.987V	3.304V	4.994V	586.603				53.90°C	114.84V
9	41.908A	8.530A	8.484A	2.406A	585.033	87.887%	122	39.6	44.62°C	0.993
	11.991V	4.984V	3.300V	4.989V	665.663				57.85°C	114.74V
10	46.734A	9.037A	9.011A	3.019A	649.863	86.928%	122	39.6	46.22°C	0.994
	11.986V	4.980V	3.296V	4.970V	747.588				62.33°C	114.74V
11	52.163A	9.044A	9.020A	3.022A	714.683	85.961%	123	39.8	46.82°C	0.995
	11.981V	4.977V	3.293V	4.965V	831.402				66.46°C	114.63V
CL1	0.739A	16.003A	15.999A	0.000A	142.075	83.497%	122	39.6	44.73°C	0.985
	12.016V	5.001V	3.323V	5.062V	170.156				55.65°C	115.17V
CL2	51.008A	1.002A	1.000A	1.000A	625.274	88.039%	123	39.8	45.80°C	0.994
	11.997V	4.991V	3.306V	5.024V	710.220				59.57°C	114.70V

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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	1.196A	0.499A	0.477A	0.197A	19.489	65.681%	102	33.8	0.859
	12.035V	5.018V	3.337V	5.079V	29.672				115.36V
2	2.462A	0.996A	0.988A	0.394A	39.922	77.612%	105	34.5	0.931
	12.035V	5.017V	3.336V	5.072V	51.438				115.33V
3	3.655A	1.496A	1.469A	0.592A	59.402	82.684%	106	35.4	0.958
	12.039V	5.015V	3.334V	5.067V	71.842				115.30V
4	4.922A	1.992A	1.980A	0.791A	79.830	85.442%	111	36.1	0.967
	12.036V	5.014V	3.332V	5.061V	93.432				115.27V

RIPPLE MEASUREMENTS

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	23.3 mV	4.9 mV	5.5 mV	9.5 mV	Pass
20% Load	17.1 mV	6.4 mV	5.7 mV	10.3 mV	Pass
30% Load	14.7 mV	6.6 mV	5.9 mV	11.9 mV	Pass
40% Load	13.3 mV	6.8 mV	6.0 mV	13.3 mV	Pass
50% Load	14.1 mV	8.3 mV	6.5 mV	13.9 mV	Pass
60% Load	15.5 mV	7.9 mV	6.9 mV	16.0 mV	Pass
70% Load	16.4 mV	9.2 mV	7.8 mV	20.6 mV	Pass
80% Load	16.8 mV	10.3 mV	9.6 mV	24.2 mV	Pass
90% Load	21.1 mV	11.6 mV	10.8 mV	25.7 mV	Pass
100% Load	21.3 mV	12.3 mV	11.5 mV	33.6 mV	Pass
110% Load	24.7 mV	15.5 mV	12.5 mV	39.7 mV	Pass
Crossload 1	15.4 mV	7.9 mV	10.7 mV	32.0 mV	Pass
Crossload 2	20.9 mV	9.1 mV	6.8 mV	17.4 mV	Pass

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

Hold-Up Time (ms)	13.1
AC Loss to PWR_OK Hold Up Time (ms)	9.3
PWR_OK Inactive to DC Loss Delay (ms)	3.8



Top side

MODEL 型号 / 型號 / 모델 : RPS0069

POWER SUPPLY / 전원 공급 장치

PART NUMBER: CP-9020132 / 75-002624

交流輸入 AC 입력	AC INPUT AC 입력	100V - 240V • 10A • 5A • 47Hz - 63Hz				
直流輸出 DC 출력	DC OUTPUT DC 출력	+3.3V	+5V	+12V	-12V	+5Vsb
最大電流 최대 부하	MAX LOAD 최대 부하	25A	25A	51A	0.8A	3A
最大瓦特數 최대 결합 와트	MAXIMUM COMBINED WATTAGE 최대 결합 와트	130W		612W	9.6W	15W
		總功率 / 總功率 / 총 전력 TOTAL POWER : 650W				

Power specifications table

CERTIFICATIONS



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