EFFICIENCY AND NOISE LEVEL CERTIFICATIONS

Anex

Corsair TX550M

Lab ID#: 415
Receipt Date: -
Test Date: -

Report:
Report Date: Jun 19, 2018

DUT INFORMATION

Brand	Corsair
Manufacturer (OEM)	Great Wall
Series	TXM
Model Number	TX550M
Serial Number	17284859000040690272
DUT Notes	CP-9020133-NA

DUT SPECIFICATIONS

Rated Voltage (Vrms)	100-240
Rated Current (Arms)	10-5
Rated Frequency (Hz)	47-63
Rated Power (W)	550
Type	ATX12V
Cooling	120mm Rifle Bearing Fan (NR120L)
Semi-Passive Operation	✗
Cable Design	Semi Modular

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	25	20	43	3	0.8
	Watts	120		516	15	9.6
Total Max. Power (W)		550				

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 (660mm)	1	1	18AWG
Modular Cables			
6+2 pin PCIe (600mm+150mm)	1	2	18AWG
SATA (500mm+95mm)	2	5	18AWG
4 pin Molex (450mm+100mm+100mm+100mm)	1	4	18AWG
FDD Adapter	1	1	20AWG

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RESULTS	
Temperature Range (°C /°F)	30-32 / 86-89.6
Average Efficiency	90.233
Efficiency With 10W (≤500W) or 2% (>500W) Load -115V	0.000
Average Efficiency 5VSB	78.669
Standby Power Consumption (W) -115V	0.0719416
Standby Power Consumption (W) -230V	0.0934057
Average PF	0.955
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓
Avg Noise Output	31.64
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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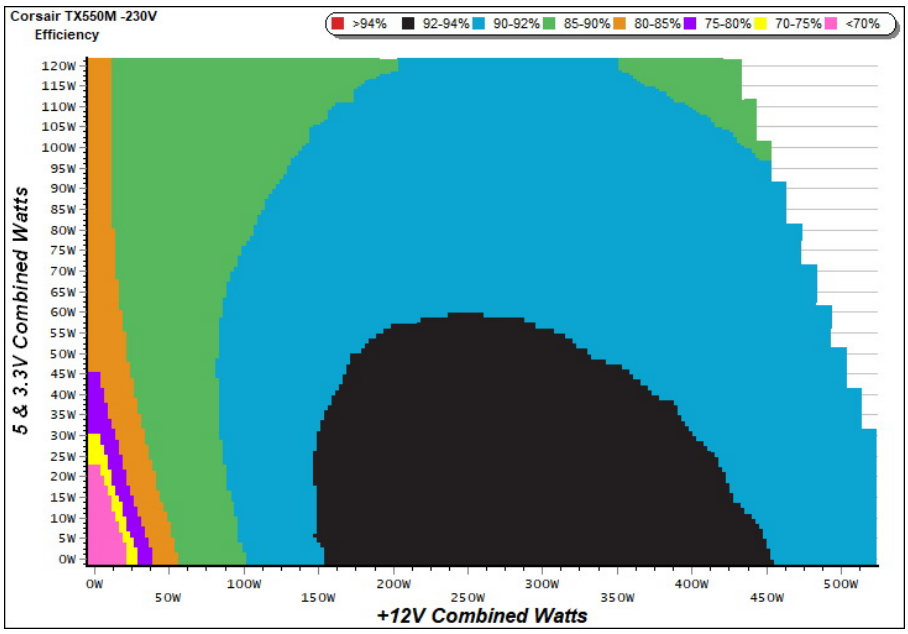
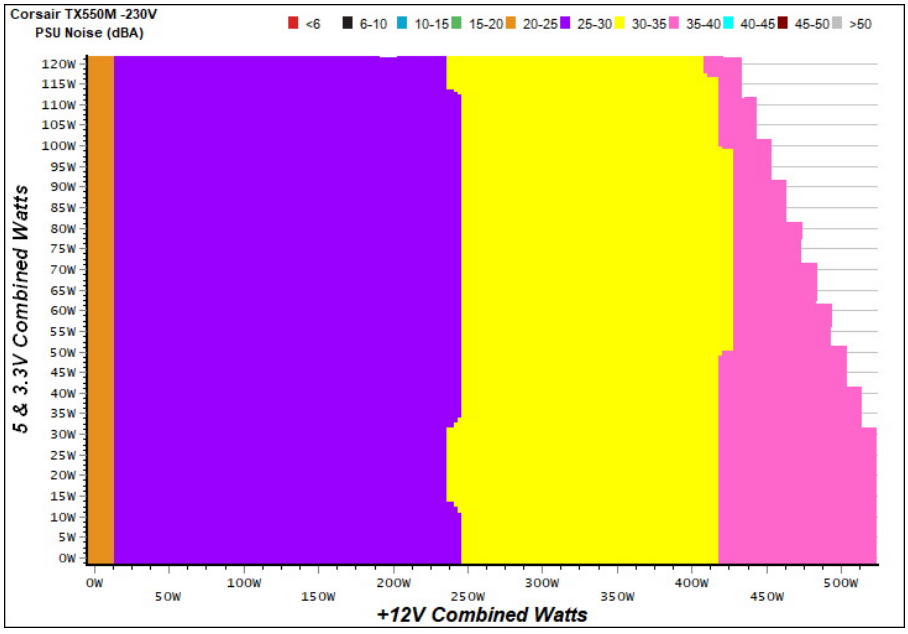
EFFICIENCY GRAPH



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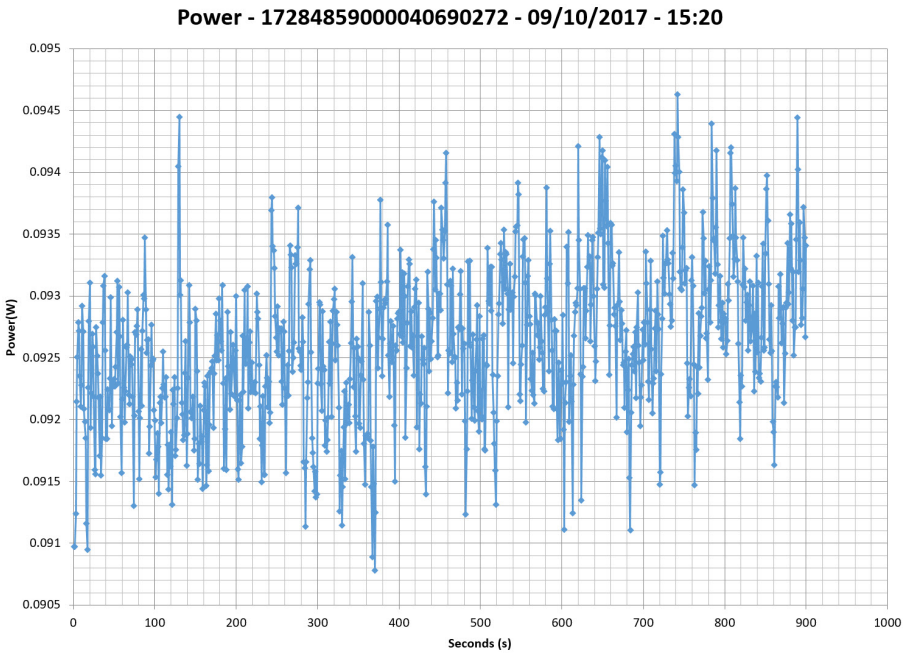
5VSB EFFICIENCY -115V (ERP LOT 3/6 & CEC)

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.042A	0.212	64.634%	0.030
	5.089V	0.328		115.13V
2	0.087A	0.445	74.290%	0.054
	5.088V	0.599		115.14V
3	0.542A	2.752	80.047%	0.246
	5.078V	3.438		115.11V
4	1.002A	5.078	80.171%	0.347
	5.067V	6.334		115.13V
5	1.502A	7.592	79.714%	0.404
	5.056V	9.524		115.13V
6	3.001A	15.070	77.405%	0.477
	5.021V	19.469		115.12V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.042A	0.212	61.095%	0.009
	5.089V	0.347		230.30V
2	0.087A	0.444	70.701%	0.017
	5.088V	0.628		230.31V
3	0.542A	2.753	78.973%	0.091
	5.078V	3.486		230.31V
4	1.002A	5.078	79.468%	0.155
	5.067V	6.390		230.31V
5	1.502A	7.593	79.591%	0.212
	5.056V	9.540		230.30V
6	3.001A	15.073	78.636%	0.321
	5.022V	19.168		230.30V

VAMPIRE POWER -230V



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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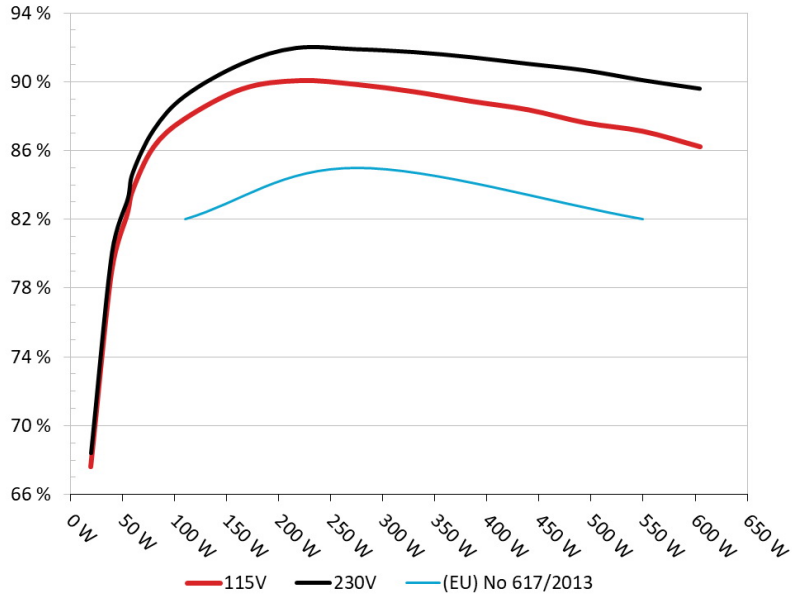
EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Corsair TX550M
Ambient: 37°C - 47°C (98.6°F - 116.6°F)

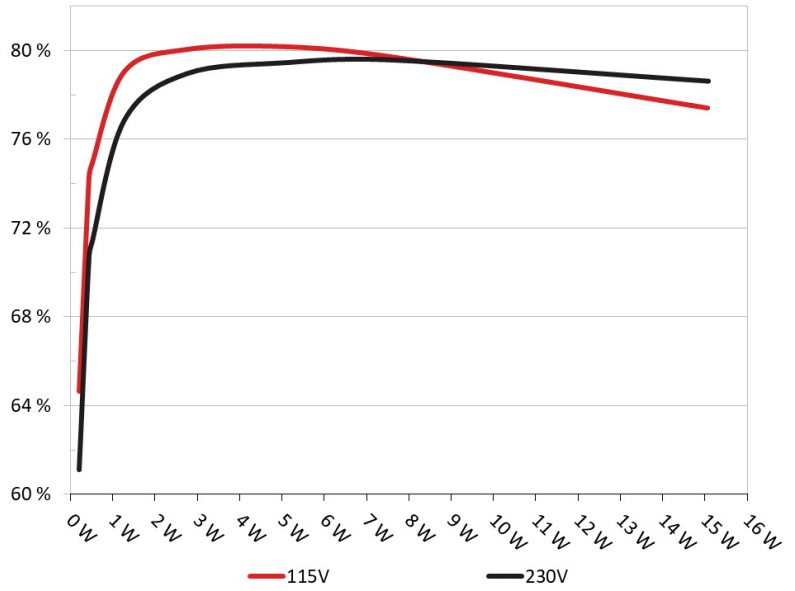


INFO

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 TX550M
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	2.738A	1.994A	1.989A	0.986A	54.779	83.177%	1494	33.4	40.10°C	0.794
	12.131V	5.007V	3.312V	5.063V	65.858				43.80°C	230.25V
2	6.512A	2.995A	2.992A	1.187A	109.797	89.183%	1524	33.8	40.81°C	0.907
	12.120V	5.001V	3.307V	5.054V	123.114				45.04°C	230.25V
3	10.636A	3.507A	3.510A	1.386A	164.924	91.071%	1571	34.5	41.03°C	0.945
	12.112V	4.996V	3.302V	5.043V	181.094				46.15°C	230.24V
4	14.756A	4.007A	3.999A	0.986A	216.787	91.976%	1659	36.1	41.62°C	0.961
	12.105V	4.991V	3.298V	5.048V	235.699				47.06°C	230.25V
5	18.545A	5.011A	5.007A	1.791A	274.788	91.901%	1730	37.4	42.17°C	0.971
	12.096V	4.985V	3.293V	5.025V	299.003				48.14°C	230.24V
6	22.335A	6.024A	6.022A	1.993A	329.774	91.735%	1829	39.6	42.83°C	0.977
	12.088V	4.980V	3.288V	5.012V	359.484				49.77°C	230.24V
7	26.133A	7.031A	7.033A	2.196A	384.714	91.436%	1838	39.8	43.31°C	0.981
	12.079V	4.975V	3.283V	5.002V	420.745				50.55°C	230.24V
8	29.930A	8.051A	8.051A	2.401A	439.674	91.052%	1838	39.8	43.91°C	0.984
	12.071V	4.970V	3.278V	4.991V	482.881				51.36°C	230.24V
9	34.167A	8.558A	8.584A	2.406A	494.756	90.669%	1838	39.8	44.55°C	0.986
	12.063V	4.967V	3.273V	4.986V	545.674				52.90°C	230.24V
10	38.153A	9.074A	9.084A	3.018A	549.636	90.100%	1838	39.8	45.01°C	0.987
	12.055V	4.962V	3.268V	4.967V	610.031				53.65°C	230.24V
11	42.739A	9.076A	9.095A	3.020A	604.544	89.609%	1838	39.8	46.57°C	0.987
	12.047V	4.958V	3.264V	4.961V	674.645				55.64°C	230.24V
CL1	0.101A	14.026A	14.005A	0.005A	117.455	83.795%	1838	39.8	42.88°C	0.924
	12.107V	4.991V	3.299V	5.069V	140.169				49.15°C	230.24V
CL2	42.972A	1.003A	1.003A	1.002A	531.862	91.290%	1847	39.9	44.93°C	0.986
	12.067V	4.975V	3.282V	5.026V	582.604				53.58°C	230.23V

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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	1.206A	0.491A	0.481A	0.196A	19.677	68.425%	1287	30.1	0.542
	12.127V	5.010V	3.316V	5.085V	28.757				230.25V
2	2.432A	0.991A	0.994A	0.392A	39.745	80.078%	1330	30.7	0.718
	12.128V	5.009V	3.315V	5.078V	49.633				230.25V
3	3.663A	1.487A	1.508A	0.591A	59.868	84.753%	1415	31.3	0.811
	12.130V	5.007V	3.312V	5.071V	70.638				230.25V
4	4.883A	1.994A	1.991A	0.786A	79.762	87.214%	1454	32.4	0.864
	12.126V	5.005V	3.310V	5.065V	91.455				230.24V

RIPPLE MEASUREMENTS

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	34.4 mV	5.1 mV	10.2 mV	13.2 mV	Pass
20% Load	31.8 mV	4.9 mV	10.8 mV	13.7 mV	Pass
30% Load	26.7 mV	5.0 mV	10.3 mV	14.6 mV	Pass
40% Load	26.0 mV	4.6 mV	10.9 mV	14.6 mV	Pass
50% Load	25.8 mV	4.7 mV	10.6 mV	16.4 mV	Pass
60% Load	28.7 mV	5.7 mV	12.0 mV	17.6 mV	Pass
70% Load	30.6 mV	5.7 mV	12.7 mV	19.9 mV	Pass
80% Load	32.8 mV	5.8 mV	12.9 mV	22.3 mV	Pass
90% Load	36.8 mV	6.3 mV	14.4 mV	21.9 mV	Pass
100% Load	44.0 mV	6.8 mV	16.2 mV	29.9 mV	Pass
110% Load	43.5 mV	6.9 mV	17.2 mV	28.5 mV	Pass
Crossload 1	30.3 mV	7.0 mV	14.3 mV	40.9 mV	Pass
Crossload 2	41.5 mV	6.7 mV	16.5 mV	19.7 mV	Pass

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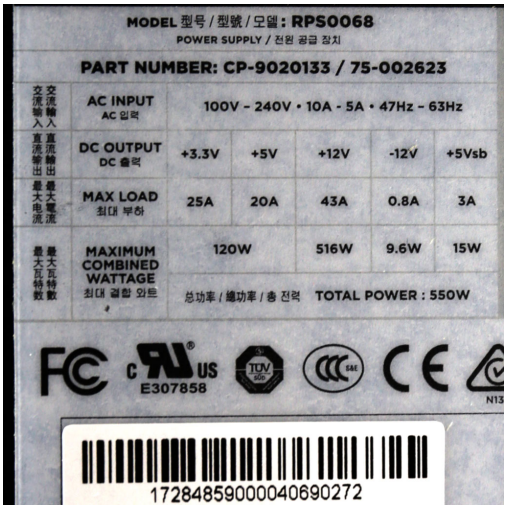
HOLD-UP TIME & POWER OK SIGNAL (230V)	
Hold-Up Time (ms)	12.10
AC Loss to PWR_OK Hold Up Time (ms)	9.48
PWR_OK Inactive to DC Loss Delay (ms)	2.62

Top side



Power specifications label

CERTIFICATIONS

CYBENETICS PLATINUM 230v

CYBENETICS STANDARD++ 230v

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