

## Anex

## Corsair TX750M

Lab ID#: 105

Receipt Date: -

Test Date: -

Report:

Report Date: Jun 5, 2018

DUT INFORMATION	
Brand	Corsair
Manufacturer (OEM)	Great Wall
Series	TXM
Model Number	TX750M
Serial Number	17144854000040880010
DUT Notes	CP-9020131

DUT SPECIFICATIONS	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	10-5
Rated Frequency (Hz)	47-63
Rated Power (W)	750
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	62	3	0.8
	Watts	130		744	15	9.6
Total Max. Power (W)		750				

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+100mm+100mm+100mm)	2	8	18AWG
4 pin Molex (450mm+100mm+100mm+100mm)	1	4	18AWG
4 pin Molex (450mm+100mm+100mm)	1	3	18AWG
FDD Adapter (+100mm)	2	2	20AWG

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General Data	
Manufacturer (OEM)	Great Wall
Primary Side	
Transient Filter	4x Y caps, 2x X caps, 2x CM chokes, 1x MOV
Inrush Protection	NTC Thermistor & Diode
Bridge Rectifier(s)	2x Shindengen U20K80R (800V, 20A)
APFC MOSFETS	2x APEC AP65SL099AWL (700V, 23.5A @ 100°C, 99 mOhm)
APFC Boost Diode	1x CREE C3D06060 (600V, 6A @ 154°C)
Hold-up Cap(s)	2x Nippon Chemi-Con (400V, 330uF, 2000h @ 105 °C, KMR)
Main Switchers	2x STi STP24N60DM2 (650V, 11A @ 100°C, 0.2Ohm)
APFC Controller	Champion CM6500UNX & CM03X Green PFC controller
Resonant Controller	Champion CM6901TX
Topology	Primary side: Half-Bridge & LLC Resonant Controller Secondary side: Synchronous Rectification & DC-DC converters
Secondary Side	
+12V MOSFETS	4x APEC AP4608P (40V, 195A @ 100°C, 1.7mOhm)
5V & 3.3V	DC-DC Converters: 6x APEC AP0403GH (30V, 50A @ 100°C, 4.5mOhm) PWM Controller: APW7159
Filtering Capacitors	Electrolytics: Nippon Chemi-Con (1-5,000h @ 105°C, KZE), Rubycon (6-10,000h @ 105°C, ZLJ), Rubycon (4-10,000h @ 105°C, YXF), Rubycon (6-10,000h @ 105°C, ZLH) Polymers: Chemi-Con
Supervisor IC	Sitronix/Infino ST9S429-PG14 (OVP, UVP, OCP, SCP, PG)
Fan Model	NR120L (120mm, 12V, 0.22A, Rifle Bearing)
5VSB Circuit	
MOSFET	1x AP04N60H-HF FET (600V, 4A, 2.5 Ohm) & CEF04N7G (700V, 4A, 3.3Ohm)
Standby PWM Controller	SI8016HSP8
-12V Circuit	
Rectifier	UTC 2SB834L

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RESULTS	
Temperature Range (°C /°F)	30-32 / 86-89.6
Average Efficiency	88.765
Efficiency With 10W (≤500W) or 2% (>500W) Load -115V	0.000
Average Efficiency 5VSB	80.810
Standby Power Consumption (W) -115V	0.0368301
Standby Power Consumption (W) -230V	0.0548178
Average PF	0.991
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓
Avg Noise Output	27.58
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	A-

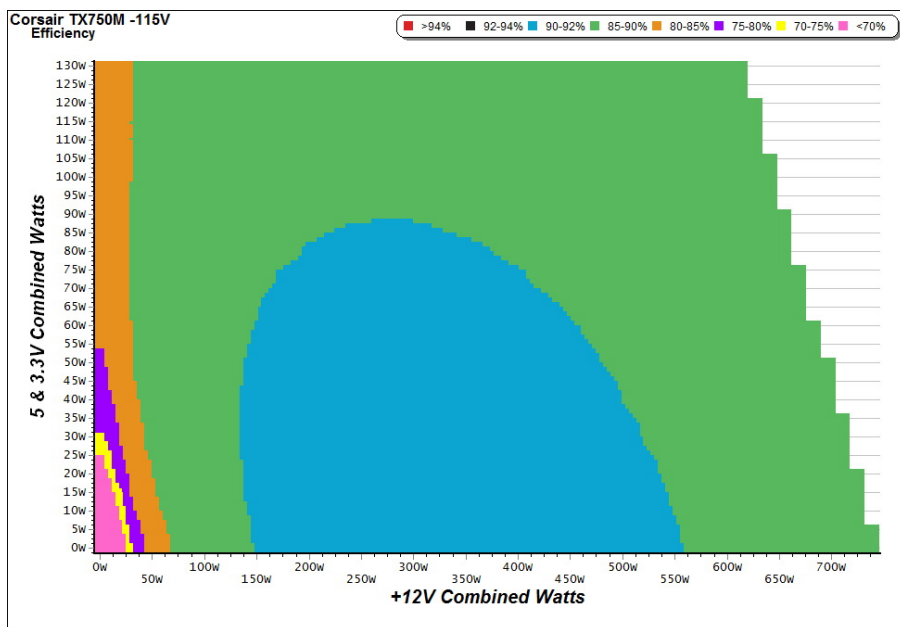
TEST EQUIPMENT		
Electronic Loads	Chroma 6314A x2 63123A x6 63102A 63101A	Chroma 63601-5 x2 Chroma 63600-2 63640-80-80 x10 63610-80-20
AC Sources	Chroma 6530, Chroma 61604	
Power Analyzers	N4L PPA1530, N4L PPA5530	
Oscilloscopes	Picoscope 4444 & 3424, Keysight DSOX3024A, Rigol DS2072A	
Voltmeter	Keithley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

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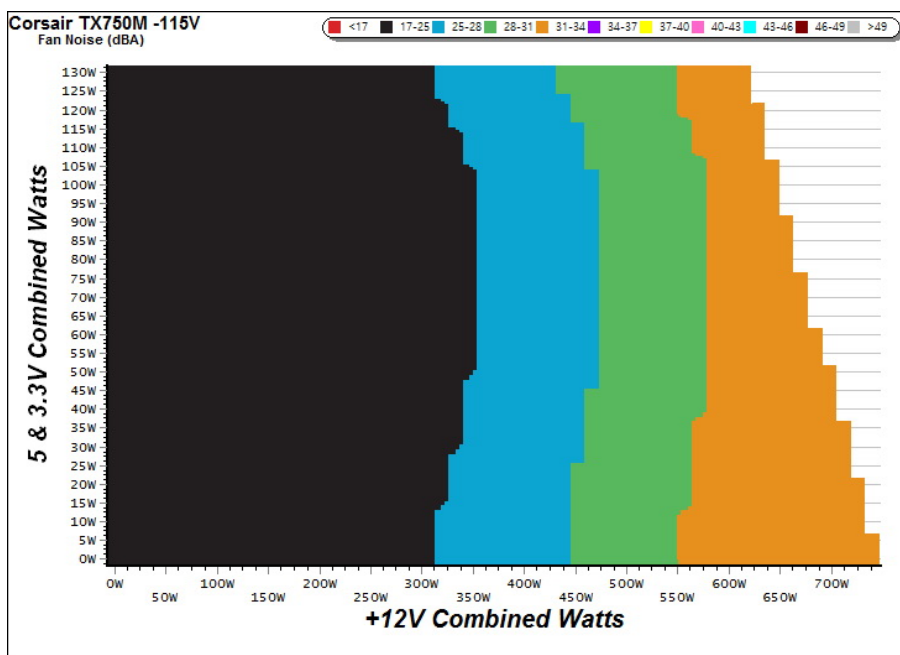
### EFFICIENCY GRAPH



#### 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)

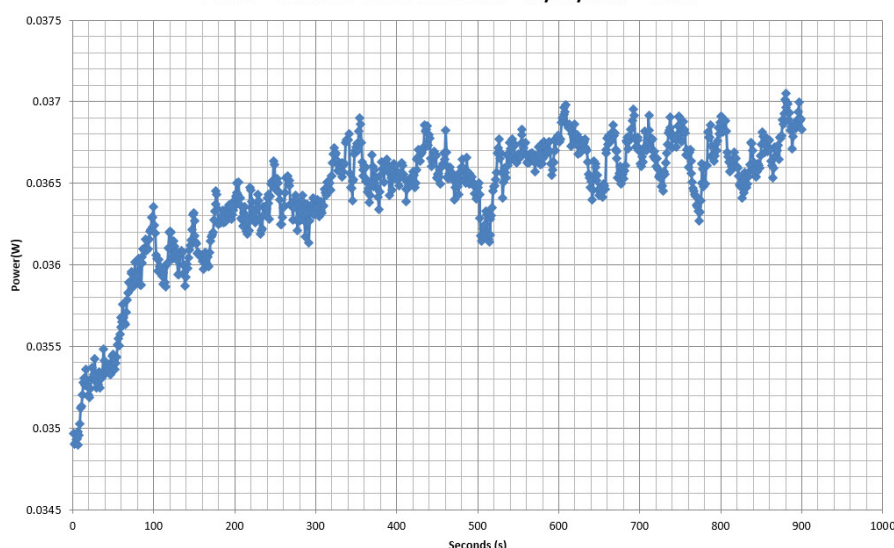
Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.229	73.397%	0.026
	5.076V	0.312		115.39V
2	0.090A	0.457	77.589%	0.049
	5.076V	0.589		115.38V
3	0.550A	2.790	81.722%	0.227
	5.072V	3.414		115.38V
4	1.000A	5.066	81.961%	0.317
	5.065V	6.181		115.37V
5	1.500A	7.589	82.561%	0.371
	5.059V	9.192		115.38V
6	2.500A	12.614	80.683%	0.427
	5.045V	15.634		115.37V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.229	67.552%	0.010
	5.076V	0.339		231.04V
2	0.090A	0.457	73.829%	0.018
	5.076V	0.619		231.04V
3	0.550A	2.790	80.288%	0.094
	5.072V	3.475		230.84V
4	1.000A	5.066	81.095%	0.156
	5.065V	6.247		230.94V
5	1.500A	7.589	80.967%	0.213
	5.059V	9.373		230.94V
6	2.500A	12.614	81.218%	0.288
	5.045V	15.531		230.93V

## VAMPIRE POWER -115V

Power - 17144854000040880010 - 05/05/2017 - 09:57



### 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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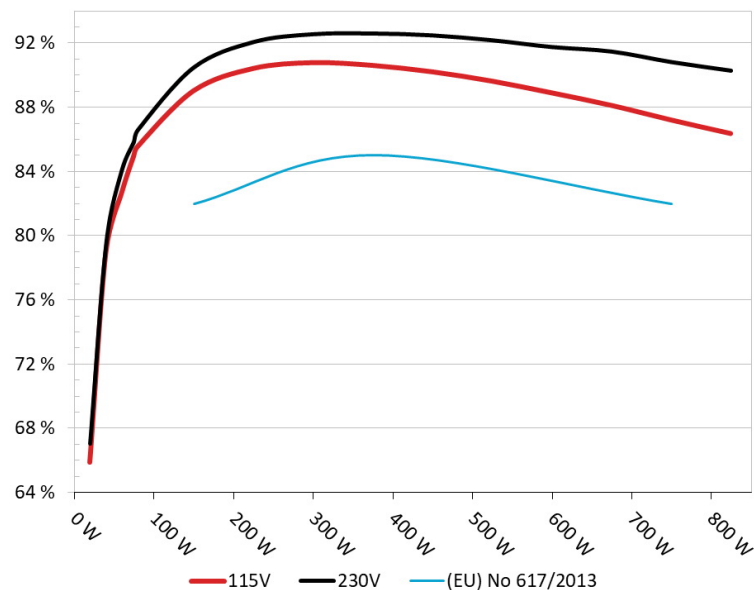
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### EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

#### Efficiency: Corsair TX750M

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



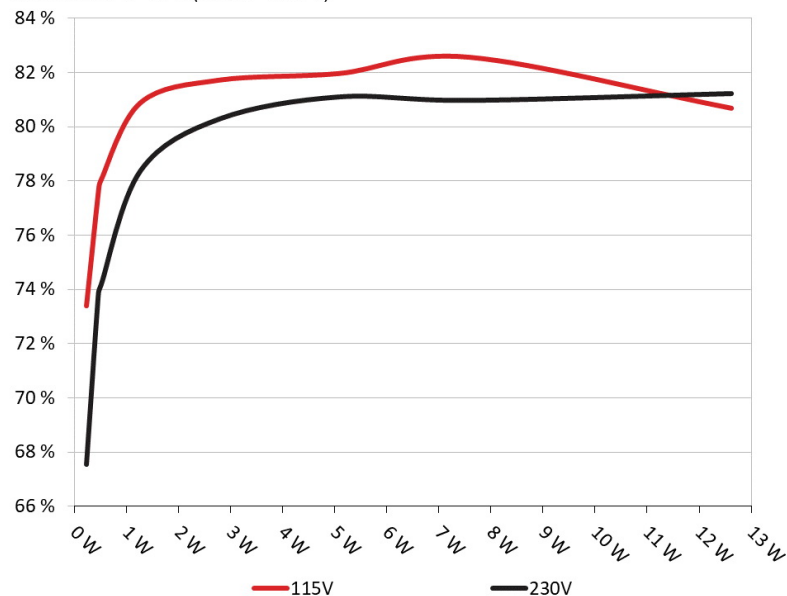
#### INFO

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 TX750M

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)	Fan Noise (dB[A])	Temps (In/Out)	PF/AC Volts
1	4.402A	1.985A	1.982A	0.986A	74.794	84.959%	1250	29.8	38.74°C	0.988
	12.088V	5.039V	3.329V	5.054V	88.035				40.59°C	115.12V
2	9.841A	2.971A	2.974A	1.186A	149.730	89.007%	1300	30.5	39.08°C	0.982
	12.081V	5.036V	3.326V	5.049V	168.223				41.34°C	115.11V
3	15.640A	3.478A	3.486A	1.385A	224.895	90.406%	1395	31.2	39.63°C	0.989
	12.073V	5.033V	3.323V	5.043V	248.760				42.16°C	115.11V
4	21.431A	3.975A	3.972A	1.587A	299.747	90.765%	1455	32.4	40.18°C	0.992
	12.065V	5.030V	3.321V	5.038V	330.246				43.09°C	115.11V
5	26.896A	4.973A	4.972A	1.784A	374.736	90.595%	1545	34.2	40.92°C	0.994
	12.056V	5.028V	3.318V	5.032V	413.641				44.37°C	115.11V
6	32.359A	5.973A	5.970A	1.987A	449.658	90.196%	1660	36.1	41.57°C	0.995
	12.048V	5.024V	3.316V	5.028V	498.537				45.75°C	115.11V
7	37.839A	6.976A	6.971A	2.190A	524.660	89.619%	1730	37.4	42.21°C	0.996
	12.039V	5.021V	3.313V	5.021V	585.434				46.88°C	115.10V
8	43.323A	7.972A	7.971A	2.391A	599.570	88.888%	1840	39.8	43.17°C	0.996
	12.030V	5.019V	3.311V	5.015V	674.525				48.58°C	115.10V
9	49.248A	8.476A	8.488A	2.393A	674.653	88.108%	1840	39.8	44.20°C	0.997
	12.022V	5.017V	3.308V	5.011V	765.713				50.41°C	115.10V
10	54.923A	8.981A	8.979A	3.000A	749.514	87.199%	1840	39.8	45.28°C	0.997
	12.013V	5.014V	3.307V	5.000V	859.544				52.71°C	115.12V
11	61.198A	8.984A	8.984A	3.000A	824.393	86.357%	1840	39.8	46.55°C	0.995
	12.005V	5.012V	3.305V	4.997V	954.631				55.15°C	115.11V
CL1	0.101A	16.027A	16.004A	0.004A	134.877	82.478%	1670	36.2	43.48°C	0.983
	12.075V	5.025V	3.318V	5.058V	163.530				47.58°C	115.12V
CL2	62.451A	1.003A	1.003A	1.002A	763.756	87.870%	1840	39.8	45.23°C	0.997
	12.015V	5.021V	3.316V	5.035V	869.185				51.93°C	115.11V

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## 20-80W LOAD TESTS

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	Fan Noise (dB[A])	PF/AC Volts
1	1.209A	0.491A	0.482A	0.196A	19.684	65.899%	1190	28.0	0.893
	12.084V	5.042V	3.332V	5.068V	29.870				115.12V
2	2.444A	0.990A	0.990A	0.392A	39.824	78.949%	1220	28.5	0.964
	12.090V	5.042V	3.331V	5.065V	50.443				115.11V
3	3.676A	1.477A	1.499A	0.591A	59.864	82.695%	1230	29.2	0.980
	12.089V	5.040V	3.330V	5.060V	72.391				115.11V
4	4.899A	1.986A	1.981A	0.789A	79.804	85.551%	1240	29.6	0.987
	12.087V	5.039V	3.328V	5.057V	93.282				115.11V

## RIPPLE MEASUREMENTS

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	16.5 mV	5.3 mV	7.9 mV	4.3 mV	Pass
20% Load	23.2 mV	6.3 mV	8.7 mV	6.0 mV	Pass
30% Load	21.3 mV	9.0 mV	17.2 mV	7.2 mV	Pass
40% Load	22.2 mV	7.1 mV	11.1 mV	8.8 mV	Pass
50% Load	25.0 mV	7.3 mV	11.9 mV	13.1 mV	Pass
60% Load	29.1 mV	7.7 mV	12.4 mV	13.2 mV	Pass
70% Load	32.1 mV	8.8 mV	15.2 mV	14.7 mV	Pass
80% Load	36.5 mV	8.7 mV	15.2 mV	17.1 mV	Pass
90% Load	43.1 mV	10.0 mV	15.3 mV	19.8 mV	Pass
100% Load	49.4 mV	14.4 mV	19.9 mV	24.9 mV	Pass
110% Load	53.7 mV	14.7 mV	20.1 mV	26.4 mV	Pass
Crossload 1	24.6 mV	9.4 mV	12.5 mV	10.3 mV	Pass
Crossload 2	52.5 mV	16.6 mV	20.7 mV	25.5 mV	Pass

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

Hold-Up Time (ms)	15.7
AC Loss to PWR_OK Hold Up Time (ms)	13.3
PWR_OK Inactive to DC Loss Delay (ms)	2.4



Top side



Power specifications table

## CERTIFICATIONS



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