

Anex

Corsair CX550M

Lab ID#: 109

Receipt Date: May 2, 2018

Test Date: May 12, 2018

Report:

Report Date: May 15, 2018

DUT INFORMATION

Brand	Corsair
Manufacturer (OEM)	Channel Well Technology
Series	CXM
Model Number	
Serial Number	15477164000022330738
DUT Notes	CP-9020102

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 Sleeve Bearing Fan (HA1225H12S-Z)
Semi-Passive Operation	x
Cable Design	Semi Modular

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	25	20	45.8	3	0.8
	Watts	120		550	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	16-22AWG
4+4 pin EPS12V (650mm)	1	1	18AWG

Modular Cables

6+2 pin PCIe (600mm+150mm)	1	1	16-18AWG
SATA (360mm+120mm+120mm+120mm)	1	4	18AWG
SATA (490mm+120mm)	1	2	18AWG
4 pin Molex (450mm+100mm+100mm) / FDD (+100mm)	1	3 / 1	18-22AWG

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RESULTS

Temperature Range (°C /°F)	30-32 / 86-89.6
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓

115V

Average Efficiency	85.754%
Efficiency With 10W ($\leq 500W$) or 2% ($> 500W$)	0.000
Average Efficiency 5VSB	78.494%
Standby Power Consumption (W)	0.0391606
Average PF	0.993
Avg Noise Output	28.22 dB(A)
Efficiency Rating (ETA)	SILVER
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	

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

Hold-Up Time (ms)	8.38
AC Loss to PWR_OK Hold Up Time (ms)	6.30
PWR_OK Inactive to DC Loss Delay (ms)	2.08

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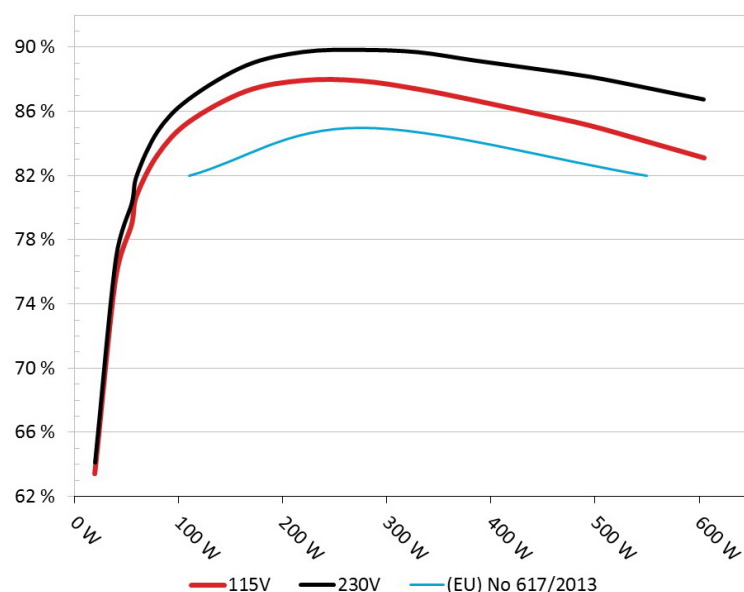
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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Corsair CX550M

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



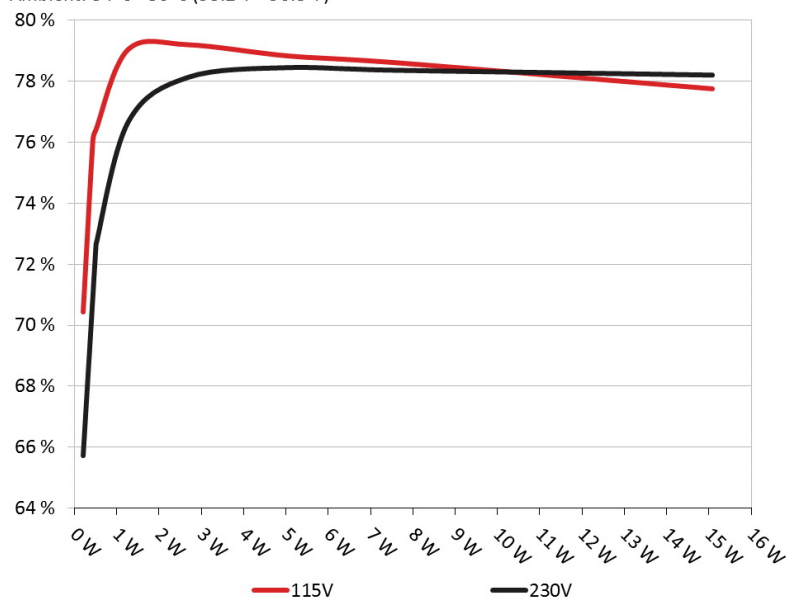
INFO

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 CX550M

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.042A	0.212	70.432%	0.032
	5.063V	0.301		115.09V
2	0.087A	0.442	76.076%	0.061
	5.062V	0.581		115.10V
3	0.532A	2.690	79.188%	0.262
	5.056V	3.397		115.07V
4	1.002A	5.061	78.819%	0.352
	5.049V	6.421		115.08V
5	1.502A	7.574	78.601%	0.399
	5.043V	9.636		115.08V
6	3.002A	15.074	77.745%	0.456
	5.022V	19.389		115.08V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.042A	0.211	65.732%	0.010
	5.063V	0.321		230.28V
2	0.087A	0.441	72.652%	0.018
	5.062V	0.607		230.27V
3	0.532A	2.689	78.123%	0.099
	5.056V	3.442		230.26V
4	1.002A	5.061	78.441%	0.170
	5.049V	6.452		230.27V
5	1.502A	7.573	78.355%	0.226
	5.043V	9.665		230.27V
6	3.001A	15.073	78.196%	0.321
	5.022V	19.276		230.27V

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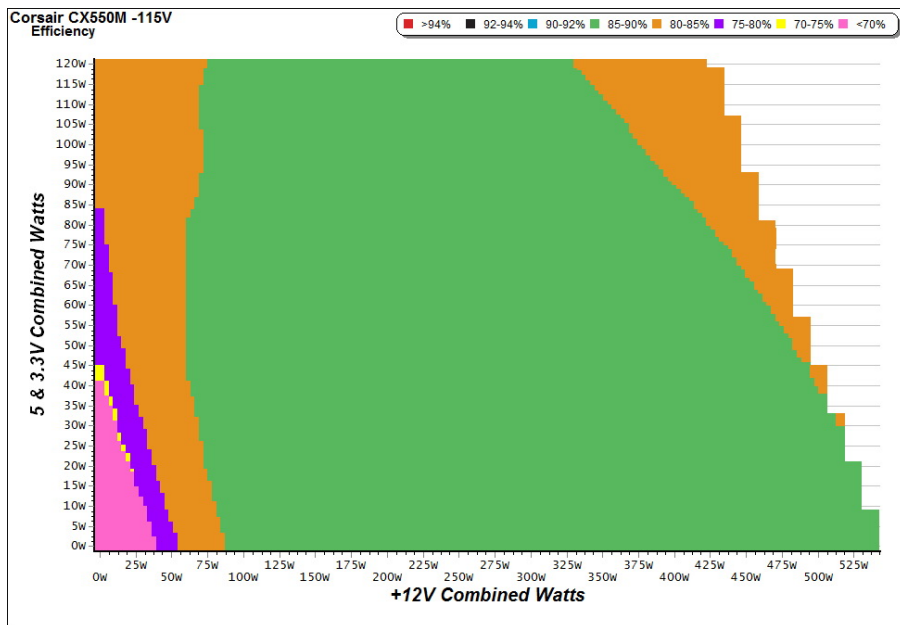
115V

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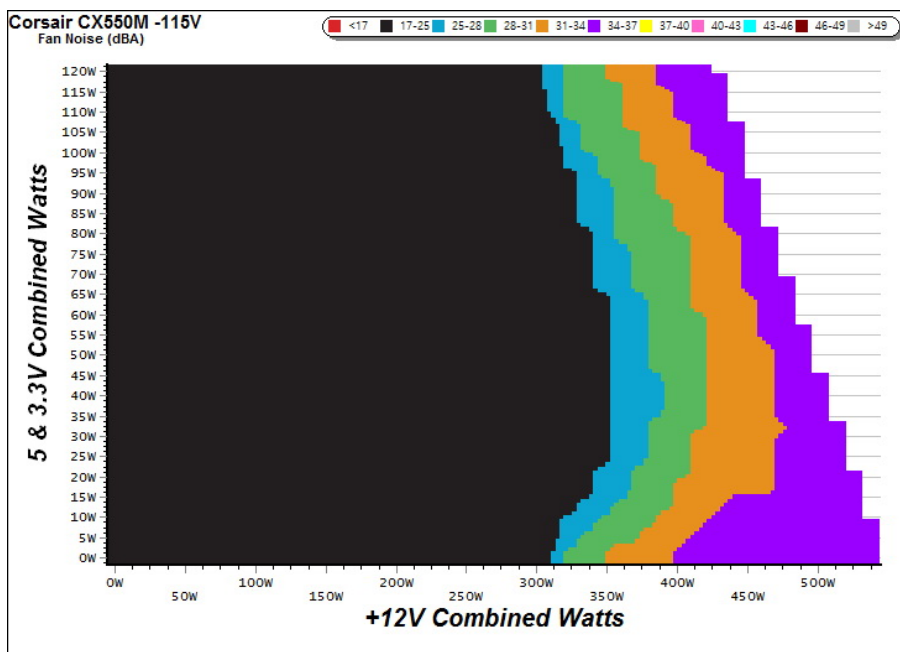
EFFICIENCY GRAPH 115V



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 115V



INFO

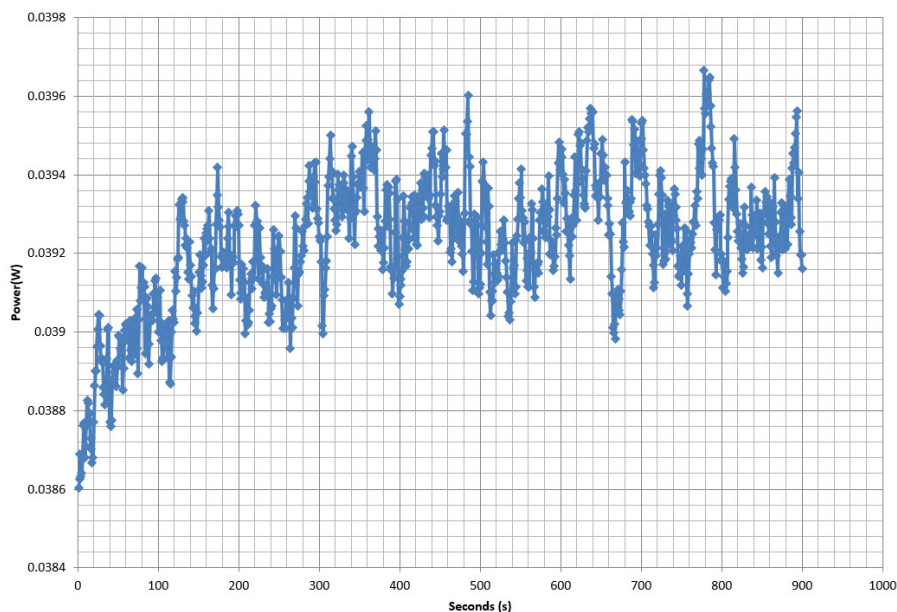
The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

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VAMPIRE POWER -115V

Power - 15477164000022330738 - 12/05/2017 - 10:13



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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10-110% LOAD TESTS 115V

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	Fan Noise (dB[A])	Temps (In/Out)	PF/AC Volts
1	2.727A	1.974A	1.999A	0.991A	54.846	78.903%	925	20.3	38.66°C	0.972
	12.190V	5.073V	3.299V	5.040V	69.511				43.02°C	115.10V
2	6.481A	2.953A	3.003A	1.191A	109.768	85.335%	925	20.3	38.93°C	0.988
	12.177V	5.069V	3.294V	5.029V	128.632				44.06°C	115.10V
3	10.590A	3.457A	3.518A	1.393A	164.903	87.260%	925	20.3	39.77°C	0.993
	12.164V	5.066V	3.292V	5.019V	188.978				45.70°C	115.10V
4	14.701A	3.949A	4.009A	1.596A	219.792	87.931%	925	20.3	40.41°C	0.995
	12.150V	5.063V	3.290V	5.007V	249.959				47.53°C	115.10V
5	18.484A	4.945A	5.019A	1.802A	274.819	87.901%	925	20.3	40.95°C	0.997
	12.135V	5.060V	3.286V	4.995V	312.645				50.40°C	115.12V
6	22.273A	5.933A	6.030A	2.005A	329.779	87.389%	1080	22.5	41.79°C	0.997
	12.122V	5.057V	3.282V	4.983V	377.367				51.89°C	115.11V
7	26.072A	6.930A	7.044A	2.210A	384.742	86.681%	1285	26.7	42.38°C	0.996
	12.107V	5.052V	3.278V	4.972V	443.862				52.51°C	115.11V
8	29.877A	7.924A	8.061A	2.415A	439.673	85.920%	1530	31.9	43.14°C	0.997
	12.093V	5.048V	3.274V	4.960V	511.722				53.52°C	115.12V
9	34.122A	8.433A	8.588A	2.420A	494.760	85.122%	1780	35.7	43.97°C	0.997
	12.079V	5.044V	3.270V	4.951V	581.233				54.72°C	115.11V
10	38.126A	8.931A	9.086A	3.037A	549.655	84.124%	2010	38.6	45.03°C	0.997
	12.064V	5.040V	3.269V	4.935V	653.385				56.33°C	115.11V
11	42.730A	8.939A	9.090A	3.041A	604.613	83.108%	2200	42.6	45.98°C	0.997
	12.050V	5.038V	3.267V	4.928V	727.506				58.46°C	115.10V
CL1	0.100A	14.025A	14.003A	0.004A	118.050	81.465%	925	20.3	43.44°C	0.990
	12.170V	5.054V	3.280V	5.023V	144.909				53.49°C	115.11V
CL2	45.787A	1.002A	1.002A	1.000A	565.617	84.530%	2080	38.6	45.15°C	0.997
	12.062V	5.056V	3.284V	4.978V	669.128				56.26°C	115.11V

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20-80W LOAD TESTS 115V

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	Fan Noise (dB[A])	PF/AC Volts
1	1.196A	0.492A	0.480A	0.196A	19.666	63.445%	925	20.3	0.919
	12.199V	5.078V	3.303V	5.057V	30.997				115.12V
2	2.419A	0.979A	0.999A	0.396A	39.766	75.624%	925	20.3	0.960
	12.194V	5.076V	3.302V	5.051V	52.584				115.10V
3	3.647A	1.467A	1.516A	0.591A	59.883	80.756%	925	20.3	0.974
	12.189V	5.075V	3.300V	5.045V	74.153				115.10V
4	4.861A	1.975A	1.998A	0.791A	79.820	83.284%	925	20.3	0.983
	12.184V	5.073V	3.298V	5.039V	95.841				115.10V

RIPPLE MEASUREMENTS 115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	8.5 mV	6.4 mV	7.9 mV	14.6 mV	Pass
20% Load	10.3 mV	7.1 mV	8.4 mV	15.6 mV	Pass
30% Load	11.5 mV	7.0 mV	9.6 mV	16.9 mV	Pass
40% Load	12.8 mV	6.9 mV	9.7 mV	17.6 mV	Pass
50% Load	14.9 mV	7.4 mV	10.5 mV	18.4 mV	Pass
60% Load	22.3 mV	8.5 mV	11.7 mV	20.5 mV	Pass
70% Load	24.8 mV	9.0 mV	12.4 mV	22.0 mV	Pass
80% Load	29.6 mV	9.7 mV	13.3 mV	23.0 mV	Pass
90% Load	31.5 mV	9.9 mV	13.9 mV	24.3 mV	Pass
100% Load	32.6 mV	11.6 mV	16.8 mV	26.9 mV	Pass
110% Load	34.8 mV	12.0 mV	17.6 mV	27.9 mV	Pass
Crossload 1	10.4 mV	7.7 mV	10.7 mV	15.3 mV	Pass
Crossload 2	32.7 mV	11.3 mV	17.0 mV	27.7 mV	Pass

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Power specifications label

CERTIFICATIONS 115V



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