

Anex

Corsair HX1200i

Lab ID#: 98

Receipt Date: Apr 17, 2018

Test Date: Apr 22, 2018

Report:

Report Date: Apr 26, 2018

DUT INFORMATION

Brand	Corsair
Manufacturer (OEM)	Channel Well Technology
Series	HXi
Model Number	
Serial Number	16367136000005840734
DUT Notes	CP-9020070

DUT SPECIFICATIONS

Rated Voltage (Vrms)	100-240
Rated Current (Arms)	15-7.5
Rated Frequency (Hz)	47-63
Rated Power (W)	1200
Type	ATX12V
Cooling	135mm Fluid Dynamic Bearing Fan (NR135P)
Semi-Passive Operation	✓ (selectable)
Cable Design	Fully Modular

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	30	30	100	3.5	0.8
	Watts	150		1200	17.5	9.6
Total Max. Power (W)		1200				

CABLES AND CONNECTORS

Modular Cables

Description	Cable Count	Connector Count (Total)	Gauge
ATX connector 20+4 pin (700mm)	1	1	16-18AWG
4+4 pin EPS12V (800mm) / (650mm)	1 / 1	1 / 1	18AWG
6+2 pin PCIe (600mm+150mm)	4	8	16-18AWG
SATA (550mm+100mm+100mm+100mm)	2	8	18AWG
SATA (500mm+100mm+100mm+100mm)	2	8	18AWG
4 pin Molex (450mm+100mm+100mm+100mm)	3	12	18AWG
FDD Adapter (+100mm)	2	2	22AWG
C-Link USB Cable (825mm) / C-Link I2C Cable (800mm)	1 / 1	1 / 1	24-28 / 29AWG

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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	90.025%
Efficiency With 10W ($\leq 500W$) or 2% ($> 500W$)	0.000
Average Efficiency 5VSB	81.537%
Standby Power Consumption (W)	0.0365110
Average PF	0.995
Avg Noise Output	20.49 dB(A)
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	

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

Hold-Up Time (ms)	27.8
AC Loss to PWR_OK Hold Up Time (ms)	24.5
PWR_OK Inactive to DC Loss Delay (ms)	3.3

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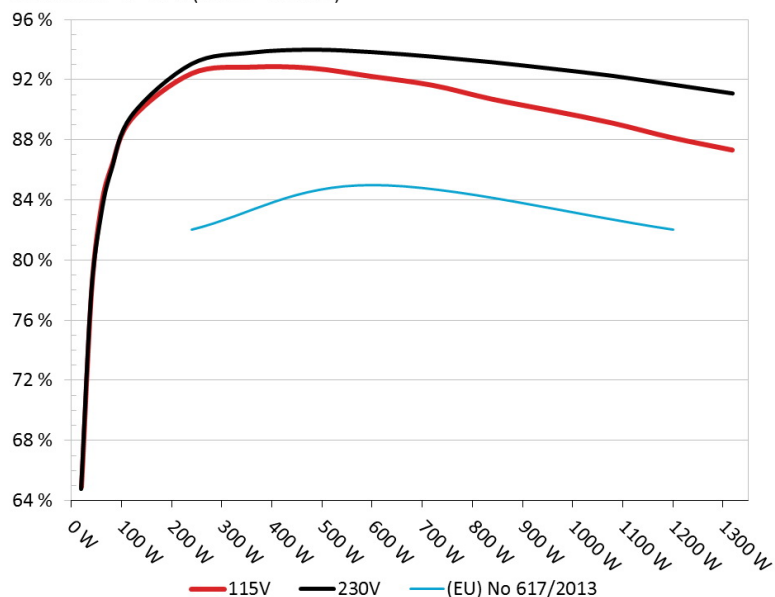
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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Corsair HX1200i

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



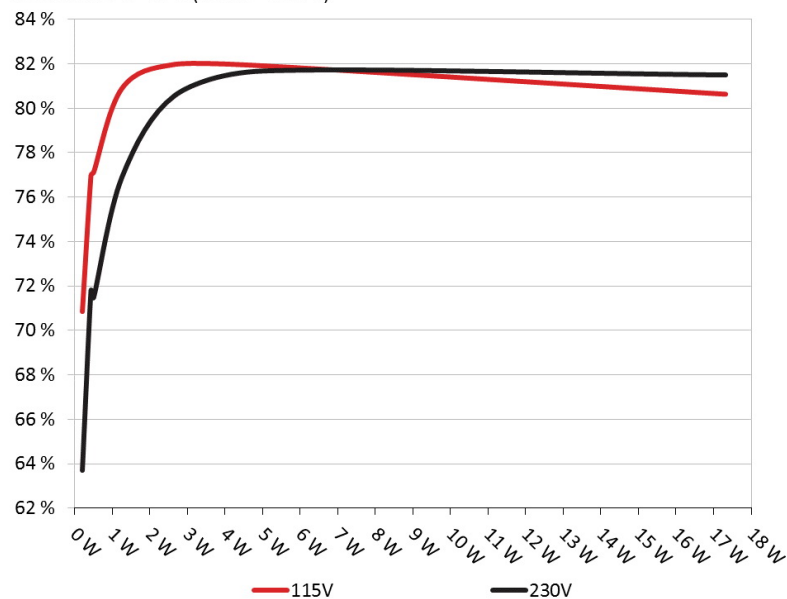
INFO

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 HX1200i

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	0.209	70.847%	0.030
	5.017V	0.295		115.13V
2	0.087A	0.438	76.977%	0.056
	5.016V	0.569		115.12V
3	0.532A	2.663	81.989%	0.263
	5.007V	3.248		115.12V
4	3.502A	17.313	80.646%	0.525
	4.944V	21.468		115.10V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.042A	0.209	63.720%	0.010
	5.017V	0.328		230.29V
2	0.087A	0.438	71.803%	0.018
	5.016V	0.610		230.30V
3	0.532A	2.663	80.575%	0.096
	5.007V	3.305		230.32V
4	3.502A	17.318	81.504%	0.371
	4.945V	21.248		230.29V

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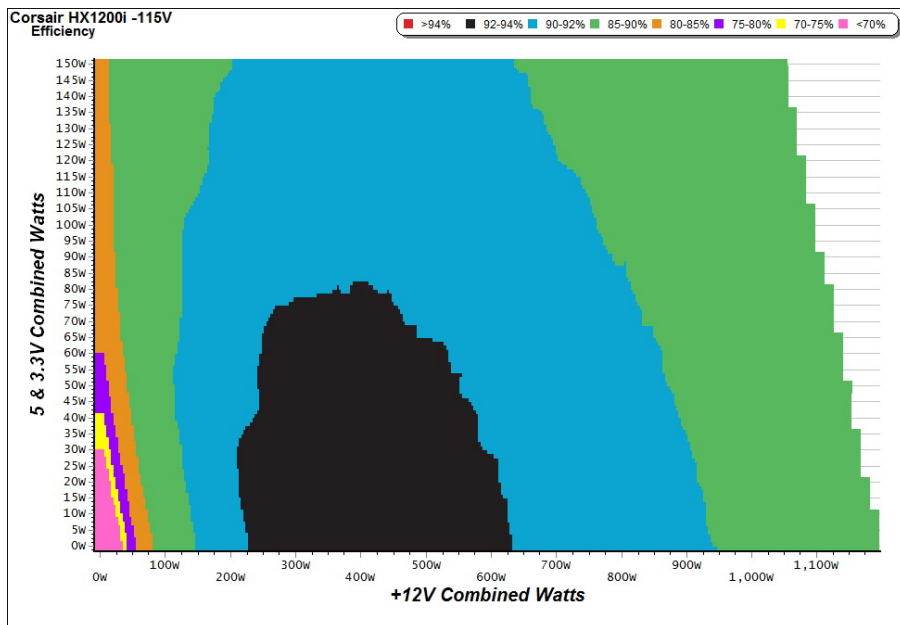
115V

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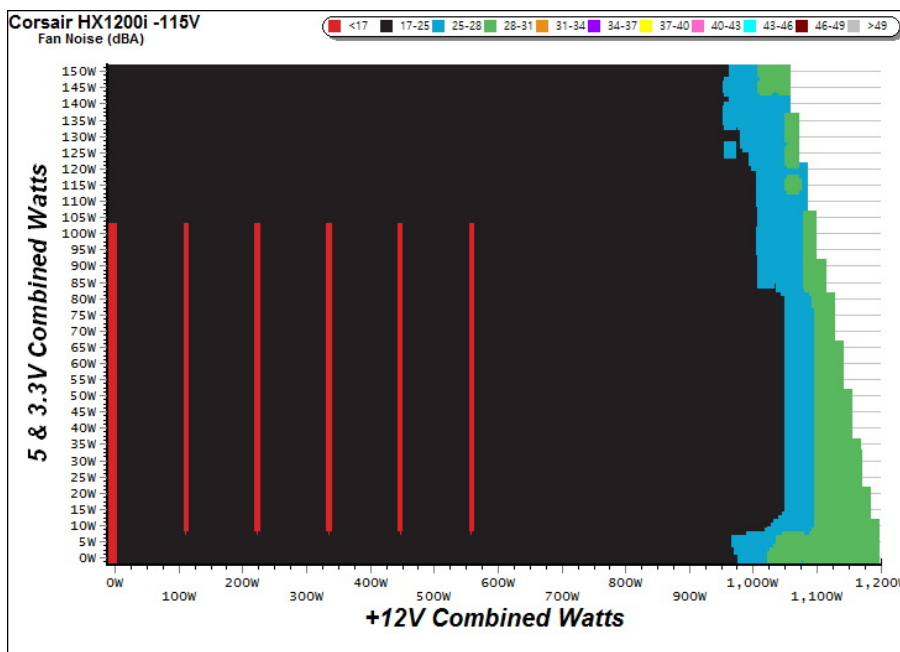
EFFICIENCY GRAPH 115V



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

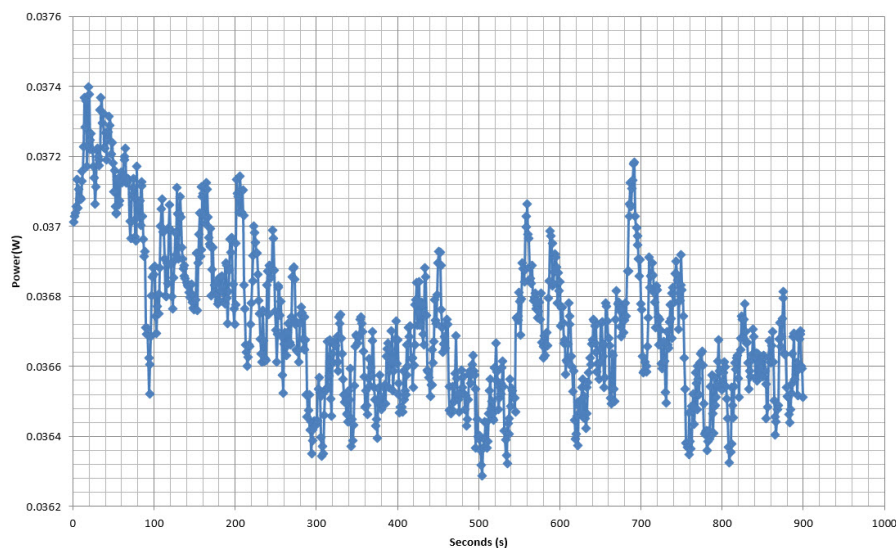
The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

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VAMPIRE POWER -115V

Power - 16367136000005840734 - 25/04/2017 - 16:46



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	8.087A	1.994A	1.989A	0.996A	119.813	89.389%	0	0	57.82°C	0.983
	12.146V	5.024V	3.312V	5.003V	134.036				37.95°C	115.10V
2	17.211A	2.991A	2.992A	1.201A	239.658	92.392%	0	0	56.58°C	0.991
	12.130V	5.015V	3.307V	4.991V	259.393				39.97°C	115.09V
3	26.721A	3.499A	3.509A	1.402A	359.822	92.816%	0	0	58.30°C	0.994
	12.115V	5.010V	3.300V	4.984V	387.671				40.06°C	115.09V
4	36.228A	3.990A	4.000A	1.604A	479.510	92.747%	0	0	60.12°C	0.995
	12.099V	5.013V	3.298V	4.984V	517.009				40.52°C	115.08V
5	45.436A	4.970A	4.990A	1.796A	599.552	92.192%	0	0	65.05°C	0.996
	12.084V	5.036V	3.304V	5.005V	650.329				41.04°C	115.08V
6	54.637A	5.965A	5.983A	2.002A	719.369	91.618%	617	17.5	43.29°C	0.997
	12.072V	5.029V	3.308V	4.996V	785.183				53.96°C	115.08V
7	63.830A	6.979A	6.973A	2.204A	839.298	90.689%	707	18.7	43.60°C	0.998
	12.066V	5.020V	3.313V	4.986V	925.472				55.51°C	115.08V
8	73.095A	7.986A	7.975A	2.411A	959.177	89.916%	812	20.1	44.40°C	0.998
	12.050V	5.010V	3.308V	4.974V	1066.745				56.96°C	115.08V
9	82.806A	8.499A	8.507A	2.416A	1079.164	89.106%	964	22.4	45.35°C	0.999
	12.035V	5.001V	3.302V	4.967V	1211.110				58.57°C	115.08V
10	92.102A	9.030A	9.011A	3.547A	1199.026	88.123%	1222	28.8	46.37°C	0.999
	12.017V	4.989V	3.295V	4.932V	1360.632				60.19°C	115.09V
11	102.222A	9.042A	9.027A	3.552A	1318.895	87.310%	1368	31.4	46.94°C	0.999
	12.000V	4.981V	3.290V	4.925V	1510.588				61.00°C	115.12V
CL1	0.099A	18.028A	18.003A	0.005A	152.236	84.919%	801	20.1	44.44°C	0.986
	12.142V	5.011V	3.370V	5.058V	179.273				54.11°C	115.10V
CL2	99.940A	1.003A	1.003A	1.002A	1214.084	88.399%	1248	29.0	46.30°C	0.999
	12.016V	4.967V	3.253V	4.950V	1373.409				58.72°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	1.202A	0.493A	0.479A	0.196A	19.675	64.936%	0	0	0.897
	12.160V	5.038V	3.315V	5.033V	30.299				115.11V
2	2.428A	0.991A	0.995A	0.395A	39.789	77.990%	0	0	0.947
	12.157V	5.034V	3.315V	5.026V	51.018				115.10V
3	3.656A	1.488A	1.504A	0.596A	59.896	83.690%	0	0	0.963
	12.154V	5.030V	3.314V	5.019V	71.569				115.10V
4	4.871A	1.988A	1.990A	0.796A	79.765	86.217%	0	0	0.973
	12.152V	5.026V	3.314V	5.009V	92.517				115.10V

RIPPLE MEASUREMENTS 115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	11.3 mV	4.7 mV	6.2 mV	4.3 mV	Pass
20% Load	16.2 mV	4.7 mV	6.9 mV	4.1 mV	Pass
30% Load	21.7 mV	5.0 mV	7.5 mV	4.5 mV	Pass
40% Load	26.0 mV	5.6 mV	7.8 mV	5.6 mV	Pass
50% Load	27.8 mV	6.3 mV	8.6 mV	5.0 mV	Pass
60% Load	29.2 mV	7.2 mV	9.8 mV	5.8 mV	Pass
70% Load	27.0 mV	6.7 mV	9.9 mV	5.8 mV	Pass
80% Load	27.4 mV	8.2 mV	10.2 mV	6.0 mV	Pass
90% Load	29.8 mV	9.4 mV	11.9 mV	7.3 mV	Pass
100% Load	34.9 mV	12.3 mV	14.9 mV	11.1 mV	Pass
110% Load	37.7 mV	13.1 mV	16.3 mV	11.5 mV	Pass
Crossload 1	16.3 mV	7.4 mV	14.5 mV	6.0 mV	Pass
Crossload 2	34.1 mV	10.3 mV	14.4 mV	8.4 mV	Pass

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Top side



Power specifications label

CERTIFICATIONS 115V



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