

Lab ID#: 108
Receipt Date: Nov 23, 2018
Test Date: Dec 1, 2018

Report: 20PS108A
Report Date: Dec 5, 2018

DUT INFORMATION

Brand	Corsair
Manufacturer (OEM)	Channel Well Technology
Series	CXM
Model Number	
Serial Number	15477157000022290009
DUT Notes	CP-9020101

DUT SPECIFICATIONS

Rated Voltage (Vrms)	100-240
Rated Current (Arms)	6-3
Rated Frequency (Hz)	47-63
Rated Power (W)	450
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	20	20	37.4	3	0.8
	Watts	110		448.8	15	9.6
Total Max. Power (W)		450				

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	2	16-18AWG
SATA (350mm+120mm+120mm+120mm)	1	4	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 (+-2°C / +- 3.6°F)
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓

115V

Average Efficiency	85.032%
Efficiency With 10W ($\leq 500W$) or 2% ($> 500W$)	0.000
Average Efficiency 5VSB	78.991%
Standby Power Consumption (W)	0.0381528
Average PF	0.993
Avg Noise Output	26.19 dB(A)
Efficiency Rating (ETA)	SILVER
Noise Rating (LAMBDA)	A-

TEST EQUIPMENT

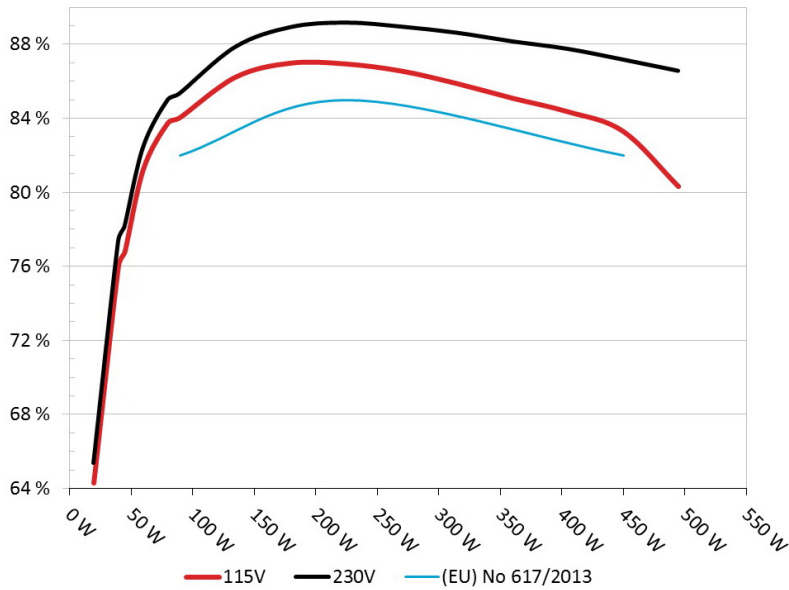
Electronic Loads	Chroma 6314A x2 63123A x6 63102A 63101A	Chroma 63601-5 x2 Chroma 63600-2 63640-80-80 x10 63610-80-20
AC Sources	Chroma 6530, Chroma 61604	
Power Analyzers	N4L PPA1530, N4L PPA5530	
Oscilloscopes	Picoscope 4444 & 3424, Keysight DSOX3024A, Rigol DS2072A	
Voltmeter	Keithley 2015 THD 6.5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

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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Corsair CX450M
Ambient: 37°C - 46°C (98.6°F - 114.8°F)

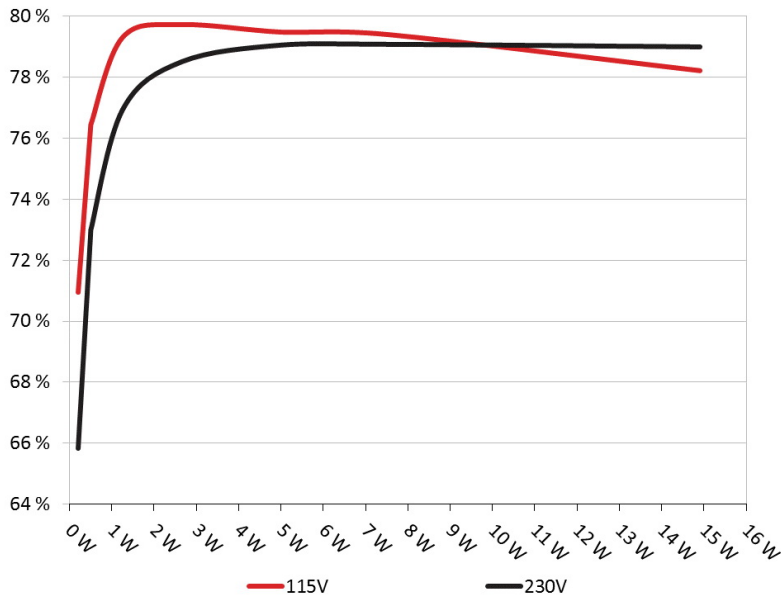


INFO

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 CX450M
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	0.210	70.946%	0.031
	5.009V	0.296		115.09V
2	0.087A	0.438	76.440%	0.059
	5.008V	0.573		115.10V
3	0.532A	2.662	79.724%	0.256
	5.002V	3.339		115.09V
4	1.002A	5.008	79.479%	0.347
	4.996V	6.301		115.11V
5	1.502A	7.494	79.402%	0.394
	4.989V	9.438		115.09V
6	3.001A	14.914	78.215%	0.452
	4.969V	19.068		115.08V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.042A	0.210	65.831%	0.010
	5.009V	0.319		230.27V
2	0.087A	0.438	73.000%	0.018
	5.008V	0.600		230.27V
3	0.532A	2.661	78.519%	0.096
	5.002V	3.389		230.25V
4	1.002A	5.008	79.065%	0.164
	4.996V	6.334		230.26V
5	1.502A	7.493	79.090%	0.220
	4.989V	9.474		230.26V
6	3.002A	14.913	79.005%	0.316
	4.968V	18.876		230.26V

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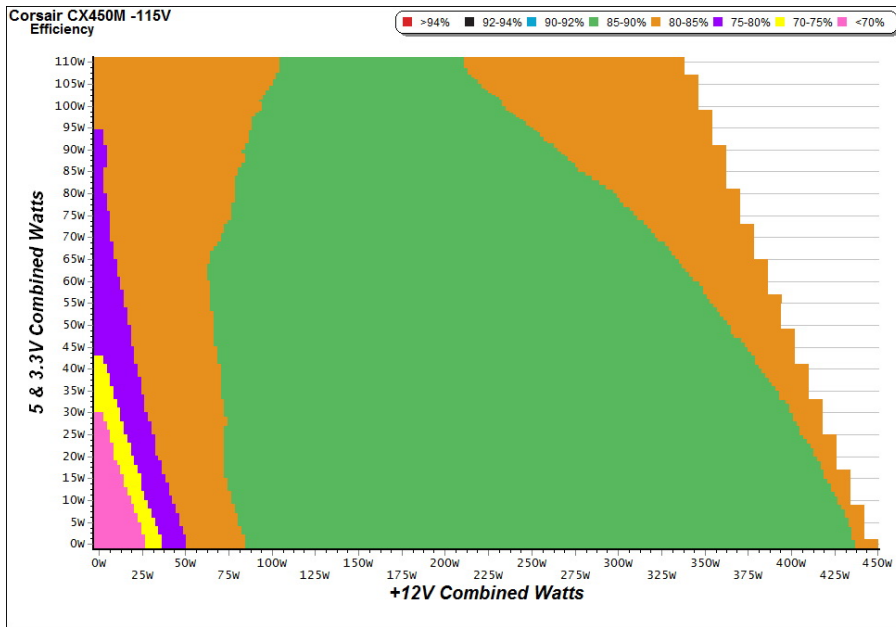
115V

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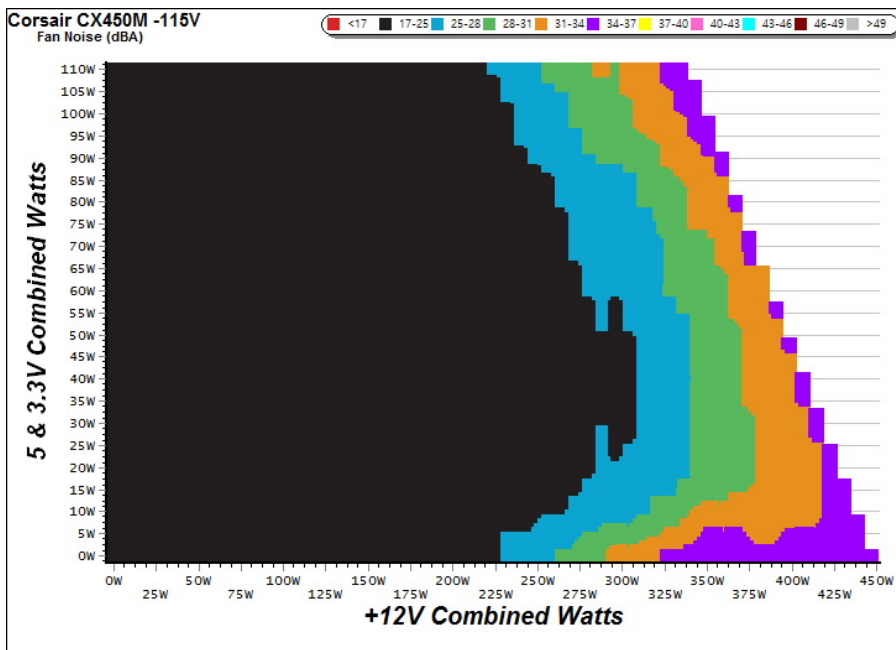
EFFICIENCY GRAPH 115V



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

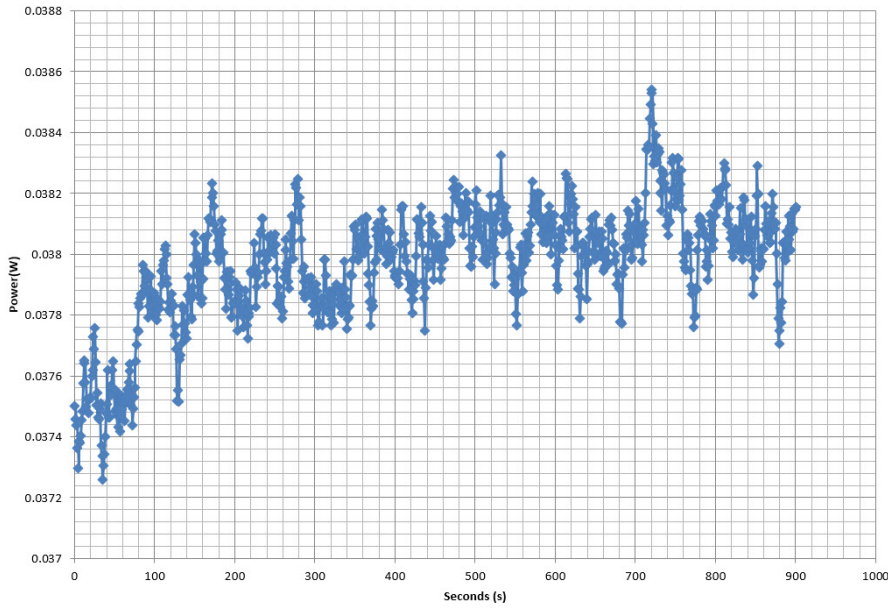
The PSU's noise in its entire operational range and under 30-32 °C (+2 °C) ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

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VAMPIRE POWER -115V

Power - 15477157000022290009 - 10/05/2017 - 10:08



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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COMMISSION REGULATION (EU) NO 617/2013 TESTING 115V

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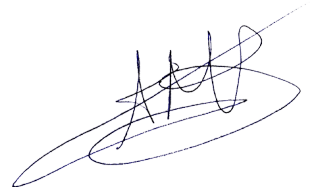


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Power specifications label

CERTIFICATIONS 115V

Aris Mpitsiopoulos
Lab Director

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