

Anex

Corsair AX1200i

Lab ID#: 103
 Receipt Date: Feb 21, 2018
 Test Date: Mar 1, 2018

Report:
 Report Date: Mar 5, 2018

DUT INFORMATION

| | |
|--------------------|----------------------|
| Brand | Corsair |
| Manufacturer (OEM) | Flextronics |
| Series | AXi |
| Model Number | |
| Serial Number | 16399523001003440077 |
| DUT Notes | CP-9020008 |

DUT SPECIFICATIONS

| | |
|------------------------|--|
| Rated Voltage (Vrms) | 100-240 |
| Rated Current (Arms) | 15 |
| Rated Frequency (Hz) | 50-60 |
| Rated Power (W) | 1200 |
| Type | ATX12V |
| Cooling | 140mm Double Ball-Bearing Fan (D14BH-12) |
| Semi-Passive Operation | ✓ (selectable) |
| Cable Design | Fully Modular |

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 | Briel & Kjaer 2250-L G4 | |
| Microphone | Briel & Kjaer Type 4189 | |
| Data Loggers | Picoscope TC-08 x2, Labjack U3-HV x2 | |

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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 | 89.489% |
| Efficiency With 10W (≤500W) or 2% (>500W) | 0.000 |
| Average Efficiency 5VSB | 82.769% |
| Standby Power Consumption (W) | 0.0539247 |
| Average PF | 0.995 |
| Avg Noise Output | 22.64 dB(A) |
| Efficiency Rating (ETA) | PLATINUM |
| Noise Rating (LAMBDA) | A |

POWER SPECIFICATIONS

| Rail | | 3.3V | 5V | 12V | 5VSB | -12V |
|----------------------|-------|--------|----|--------|------|------|
| Max. Power | Amps | 30 | 30 | 100.4 | 3.5 | 0.8 |
| | Watts | 180 | | 1204.8 | 17.5 | 9.6 |
| Total Max. Power (W) | | 1204.8 | | | | |

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

| | |
|---------------------------------------|-------|
| Hold-Up Time (ms) | 30.06 |
| AC Loss to PWR_OK Hold Up Time (ms) | 25.6 |
| PWR_OK Inactive to DC Loss Delay (ms) | 4.46 |

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CABLES AND CONNECTORS

Modular Cables

| Description | Cable Count | Connector Count (Total) | Gauge |
|---------------------------------------|-------------|-------------------------|---------------|
| ATX connector 20+4 pin (600mm) | 1 | 1 | 16-22AWG |
| 4+4 pin EPS12V (650mm) | 2 | 2 | 18AWG |
| 6+2 pin PCIe (600mm+150mm) / (600mm) | 2 / 4 | 4 / 4 | 16-18 / 18AWG |
| SATA (400mm+95mm+95mm+95mm) | 3 | 12 | 18AWG |
| SATA (550mm+95mm+95mm+95mm) | 1 | 4 | 18AWG |
| 4 pin Molex (450mm+100mm+100mm+100mm) | 3 | 12 | 18AWG |
| FDD Adapter (+105mm) | 2 | 2 | 22AWG |
| C-Link USB Cable (800mm) | 1 | 1 | 24-28AWG |

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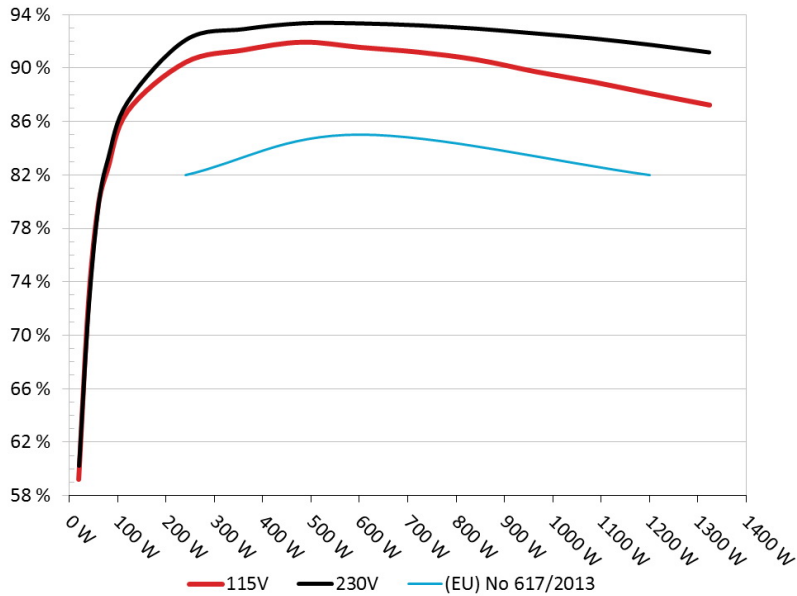
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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Corsair AX1200i

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



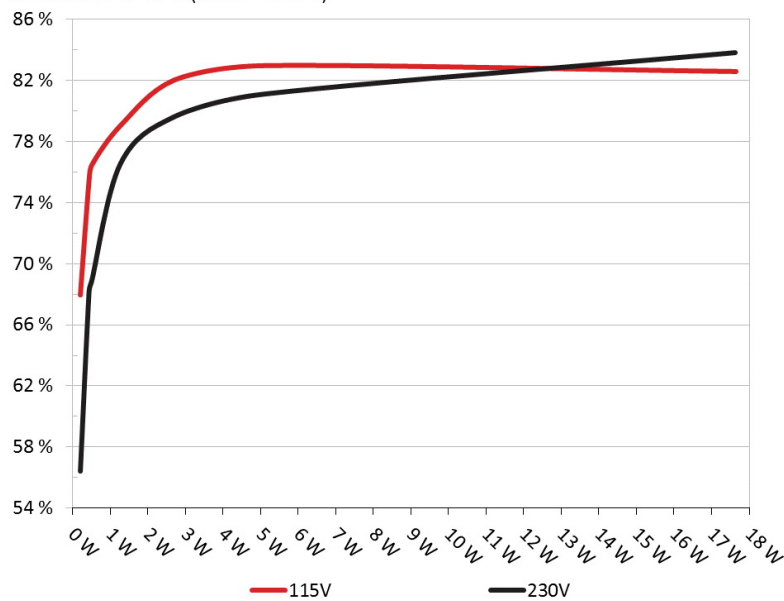
INFO

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 AX1200i

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 | 67.949% | 0.030 |
| | 5.083V | 0.312 | | 115.08V |
| 2 | 0.087A | 0.444 | 75.510% | 0.055 |
| | 5.082V | 0.588 | | 115.09V |
| 3 | 0.532A | 2.700 | 79.295% | 0.264 |
| | 5.077V | 3.405 | | 115.10V |
| 4 | 3.501A | 17.640 | 82.604% | 0.549 |
| | 5.038V | 21.355 | | 115.07V |

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

| Test # | 5VSB | DC/AC (Watts) | Efficiency | PF/AC Volts |
|--------|--------|---------------|------------|-------------|
| 1 | 0.042A | 0.211 | 56.417% | 0.011 |
| | 5.082V | 0.374 | | 230.27V |
| 2 | 0.087A | 0.443 | 68.154% | 0.018 |
| | 5.082V | 0.650 | | 230.26V |
| 3 | 0.532A | 2.700 | 79.599% | 0.093 |
| | 5.076V | 3.392 | | 230.29V |
| 4 | 3.501A | 17.636 | 83.805% | 0.370 |
| | 5.037V | 21.044 | | 230.26V |

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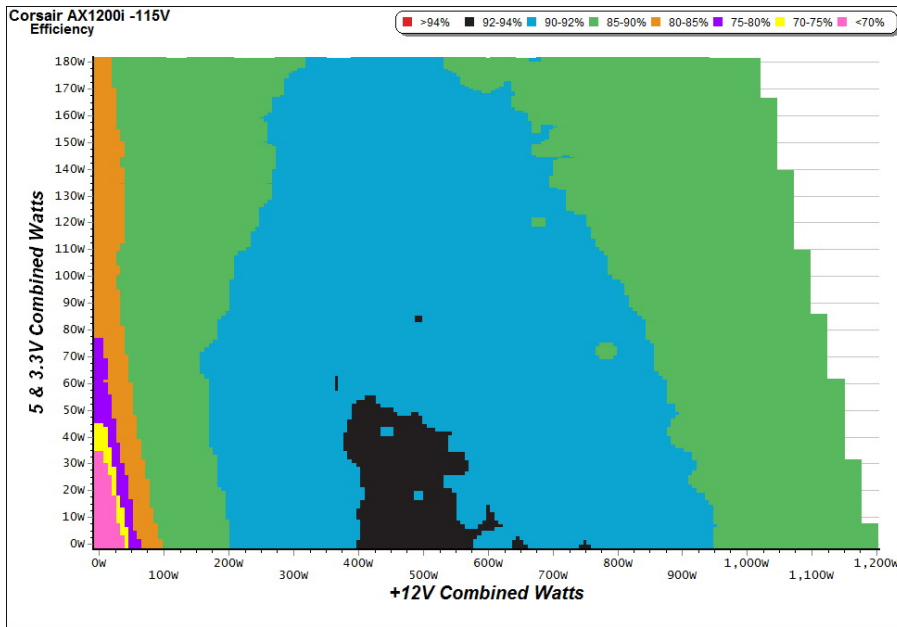
115V

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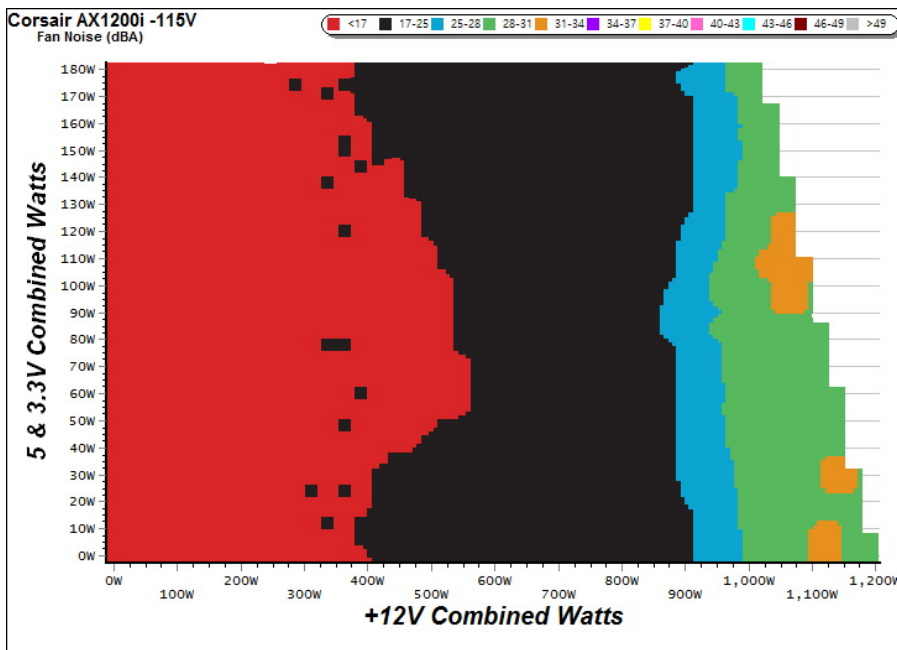
EFFICIENCY GRAPH 115V



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

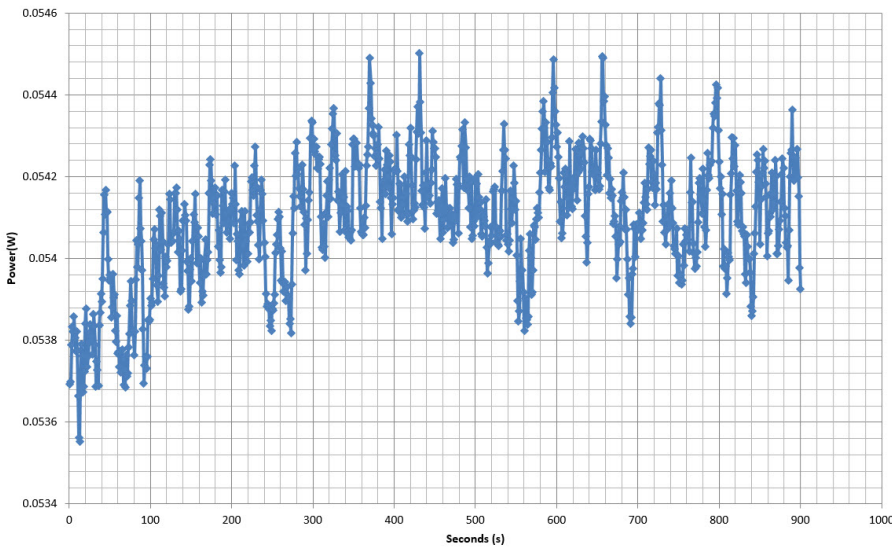
The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

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VAMPIRE POWER -115V

Power - 16399523001003440077 - 02/05/2017 - 09:55



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 | 8.207A | 1.996A | 1.997A | 0.986A | 120.319 | 86.731% | 0 | 0 | 51.37°C | 0.984 |
| | 12.030V | 5.013V | 3.303V | 5.058V | 138.727 | | | | 39.53°C | 115.12V |
| 2 | 17.431A | 2.990A | 3.003A | 1.187A | 240.646 | 90.405% | 0 | 0 | 52.95°C | 0.993 |
| | 12.036V | 5.004V | 3.294V | 5.049V | 266.188 | | | | 40.09°C | 115.14V |
| 3 | 27.013A | 3.498A | 3.514A | 1.386A | 361.277 | 91.325% | 0 | 0 | 54.65°C | 0.997 |
| | 12.038V | 5.009V | 3.298V | 5.039V | 395.595 | | | | 40.82°C | 115.14V |
| 4 | 36.583A | 3.995A | 3.998A | 1.591A | 481.666 | 91.909% | 584 | 18.2 | 48.99°C | 0.998 |
| | 12.040V | 5.009V | 3.300V | 5.029V | 524.066 | | | | 46.45°C | 115.13V |
| 5 | 45.805A | 5.001A | 5.006A | 1.791A | 602.100 | 91.519% | 600 | 18.3 | 43.13°C | 0.999 |
| | 12.043V | 4.997V | 3.294V | 5.020V | 657.896 | | | | 47.88°C | 115.13V |
| 6 | 55.028A | 6.016A | 6.022A | 1.995A | 722.541 | 91.159% | 744 | 20.6 | 43.61°C | 0.999 |
| | 12.044V | 4.986V | 3.287V | 5.010V | 792.619 | | | | 47.54°C | 115.13V |
| 7 | 64.234A | 7.031A | 7.040A | 2.197A | 842.888 | 90.598% | 860 | 22.3 | 44.22°C | 0.999 |
| | 12.047V | 4.975V | 3.280V | 5.002V | 930.362 | | | | 47.73°C | 115.16V |
| 8 | 73.453A | 8.031A | 8.027A | 2.401A | 963.360 | 89.711% | 1080 | 27.2 | 44.62°C | 0.999 |
| | 12.048V | 4.982V | 3.289V | 4.993V | 1073.850 | | | | 48.04°C | 115.13V |
| 9 | 83.088A | 8.539A | 8.560A | 2.406A | 1083.725 | 88.934% | 1360 | 31.8 | 45.04°C | 0.999 |
| | 12.049V | 4.978V | 3.282V | 4.986V | 1218.567 | | | | 48.58°C | 115.13V |
| 10 | 92.285A | 9.064A | 9.065A | 3.521A | 1204.264 | 88.047% | 1704 | 37.8 | 45.92°C | 0.999 |
| | 12.050V | 4.970V | 3.276V | 4.966V | 1367.747 | | | | 49.31°C | 115.12V |
| 11 | 102.216A | 9.068A | 9.080A | 3.525A | 1324.205 | 87.212% | 1904 | 39.9 | 46.95°C | 0.999 |
| | 12.053V | 4.964V | 3.271V | 4.959V | 1518.371 | | | | 50.00°C | 115.14V |
| CL1 | 0.098A | 22.030A | 19.998A | 0.003A | 177.028 | 83.806% | 0 | 0 | 48.97°C | 0.988 |
| | 12.004V | 4.997V | 3.288V | 5.049V | 211.236 | | | | 43.36°C | 115.15V |
| CL2 | 100.358A | 1.003A | 1.003A | 1.002A | 1222.744 | 88.157% | 1760 | 38.1 | 46.57°C | 0.999 |
| | 12.051V | 4.996V | 3.290V | 5.008V | 1387.000 | | | | 49.88°C | 115.14V |

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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 | 1.212A | 0.492A | 0.482A | 0.195A | 19.657 | 59.233% | 0 | 0 | 0.910 |
| | 12.047V | 5.020V | 3.311V | 5.075V | 33.186 | | | | 115.13V |
| 2 | 2.452A | 0.991A | 0.995A | 0.390A | 39.770 | 72.403% | 0 | 0 | 0.957 |
| | 12.043V | 5.018V | 3.308V | 5.070V | 54.929 | | | | 115.13V |
| 3 | 3.690A | 1.488A | 1.508A | 0.590A | 59.860 | 79.638% | 0 | 0 | 0.980 |
| | 12.039V | 5.016V | 3.307V | 5.067V | 75.165 | | | | 115.12V |
| 4 | 4.921A | 1.996A | 1.996A | 0.789A | 79.824 | 82.448% | 0 | 0 | 0.973 |
| | 12.035V | 5.014V | 3.305V | 5.062V | 96.817 | | | | 115.12V |

RIPPLE MEASUREMENTS 115V

| Test | 12V | 5V | 3.3V | 5VSB | Pass/Fail |
|-------------|---------|--------|---------|---------|-----------|
| 10% Load | 3.2 mV | 3.8 mV | 9.7 mV | 4.0 mV | Pass |
| 20% Load | 5.4 mV | 3.6 mV | 9.7 mV | 4.4 mV | Pass |
| 30% Load | 6.2 mV | 3.7 mV | 9.6 mV | 4.6 mV | Pass |
| 40% Load | 5.2 mV | 4.7 mV | 9.8 mV | 4.6 mV | Pass |
| 50% Load | 14.0 mV | 8.1 mV | 9.2 mV | 16.6 mV | Pass |
| 60% Load | 7.6 mV | 4.2 mV | 10.7 mV | 5.4 mV | Pass |
| 70% Load | 7.4 mV | 4.2 mV | 11.8 mV | 5.5 mV | Pass |
| 80% Load | 7.9 mV | 4.7 mV | 12.5 mV | 6.6 mV | Pass |
| 90% Load | 9.1 mV | 4.4 mV | 12.5 mV | 6.6 mV | Pass |
| 100% Load | 12.0 mV | 6.0 mV | 14.0 mV | 9.2 mV | Pass |
| 110% Load | 14.6 mV | 6.1 mV | 13.9 mV | 9.1 mV | Pass |
| Crossload 1 | 6.5 mV | 6.0 mV | 20.3 mV | 17.2 mV | Pass |
| Crossload 2 | 12.3 mV | 5.0 mV | 8.4 mV | 7.0 mV | Pass |

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Anex

Corsair AX1200i




Top side



Power specifications label

CERTIFICATIONS 115V

Aristeidis Bitziopoulos
Lab Director

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