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# Cooler Master GX II 850 GOLD (MWE Gold 850 V3)

Serial Number PS58513CD2312020014A1GZ

Lab ID CM85002478

Certification ID 252478

Test Result Report ID: 24PS2478A

Certificate Issue Date: Jun 18, 2024

Scheme: ETA-EMI PSU

115V 230V

Scheme: LAMBDA PSU

115V 230V

Outside Validation Scope

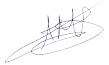
# General Information

## Test Equipment

| | |
|---|---|
| Electronic Loads | Chroma 63601-5 x2<br>Chroma 63600-2<br>Chroma 63640-80-80 x10<br>Chroma 63610-80-20 |
| AC Sources | Chroma 6530, APM SP300VAC4000W-P, GW Instek ASR-3500 |
| Power Analyzers | Rohde & Schwarz HMC8015 & NPA701 |
| Oscilloscopes | Picoscope 4444, Siglent SDS2104X PLUS |
| Sound Analyzer | Bruel & Kjaer 2270 G4 |
| Microphone | Bruel & Kjaer Type 4955-A |
| Temperature Logger | Picoscope TC-08 |
| Tachometer | UNI-T UT372 |
| Multimeters | Keysight 34465A |
| EMI Analyzer | TekBox TBMR-110M-EU |
| Isolation Transformer | 4kVA |
| UPS | FSP Champ Tower 3kVA, CyberPower OLS3000E 3kVA |
| Testing Methodology | Cybenetics PSU Test Protocol |

## DUT Information
## (Non-accredited measurements)

| | |
|---|---|
| Product Identification Details | |
| Brand | Cooler Master |
| Model | GX II 850 GOLD (MWE Gold 850 V3) |
| OEM/ODM | Lite-on |
| Serial Number | PS58513CD2312020014A1GZ |
| Product Specifications | |
| Manufacturer-Provided Information | |
| Rated Voltage (Vrms) | 100-240 |

| | |
|---|---|
| Rated Current (Arms) | 5-10 |
| Rated Frequency (Hz) | 50-60 |
| Rated Power (W) | 850 |
| Operating Temperature (Continuous Full Load) (°C) | |
| Type | ATX12V |
| Cable Design | Fully Modular |
| Warranty | - |
| Cybenetics Measurements | |
| Dimensions (W x H x D) | |
| Weight | |
| Cooling | 120mm Fluid Dynamic Bearing Fan<br>(HA1225H12F-Z) |
| Semi-Passive Operation | ✓ |
| Cybenetics Testing Information | |
| Lab ID | CM85002478 |
| Date of receipt | May 29, 2024 |
| Testing Date | Jun 17, 2024 |
| Report Issued Date | Jun 18, 2024 |
| DUT Notes | Also sold as: MWE Gold 850 V3 |
| Engineer Name | - |
| Authorized By the Laboratory Technical Manager | Aristeidis Bitziopoulos |
| Signature |  |

## Cables and Connectors
## (Non-accredited measurements)

| **Modular Cables** | | | | |
|---|---|---|---|---|
| **Description** | **Cable Count** | **Connector Count (Total)** | **Gauge** | In Cable Capacitors |
| ATX connector 20+4 pin (605mm) | 1 | 1 | 18-22AWG | No |
| 4+4 pin EPS12V (600mm) | 1 | 1 | 18AWG | No |
| 8 pin EPS12V (600mm) | 1 | 1 | 18AWG | No |

| | | | | |
|---|---|---|---|---|
| 6+2 pin PCIe (550mm) | 3 | 3 | 16-18AWG | No |
| 12+4 pin PCIe (650mm) (600W) | 1 | 1 | 16-28AWG | No |
| SATA (500mm+120mm+120mm+120mm) | 2 | 8 | 20AWG | No |
| 4 pin Molex (500mm+120mm+120mm+120mm) | 1 | 4 | 20AWG | No |
| AC Power Cord (1390mm) - C13 coupler | 1 | 1 | 18AWG | - |

### Protection Features

| | |
|---|---|
| Over Power Protection | ✓ |
| Over Current (+12V) Protection | ✓ |
| Over Temperature Protection | ✓ |
| Short Circuit Protection | ✓ |
| Surge Protection | ✓ |
| Inrush Current Protection | ✓ |
| Fan Failure Protection | ✗ |

### Power Specifications

| Rail | | 3.3V | 5V | 12V | 5VSB | -12V |
|---|---|---|---|---|---|---|
| Max. Power | Amps | 20 | 20 | 70.8 | 3 | 0.3 |
| | Watts | 120 | | 849.6 | 15 | 3.6 |
| Total Max. Power (W) | | 850 | | | | |

## Test Results

### Temperature & Compliance Info

| | |
|---|---|
| Temperature Range (°C /°F) | 28-32 / 82.4-89.6 |
| ErP Lot 3/6 Ready | ✓ |
| (EU) No 617/2013 Compliance | ✓ |
| ALPM (Alternative Low Power Mode) compatible | ✓ |
| ATX v3.1 PSU Power Excursion | ✓ |

## Performance Summary

### 115V

| | |
|---|---|
| Accredited | |
| Average Efficiency (>1450 load combinations) | 89.579% |
| Average Noise Output (>1450 Load Combinations) | 22.87dBA |
| Average PF (>1450 Load Combinations) | 0.992 |
| Efficiency With 10W (≤500W) or 2% (>500W) Load | 82.480% |
| Standby Power Consumption | 0.0680W |
| Non-Accredited | |
| 12V Ripple (Full Load) | 58.45mV |
| 5V Ripple (Full Load) | 17.33mV |
| 3.3V Ripple (Full Load) | 18.63mV |
| 5VSB Ripple (Full Load) | 16.20mV |
| 12V Load Regulation | 0.81% |
| 5V Load Regulation | 2.42% |
| 3.3V Load Regulation | 3.49% |
| 5VSB Load Regulation | 4.26% |
| Inrush Current | - |

### 230V

| | |
|---|---|
| Accredited | |
| Average Efficiency (>1450 load combinations) | 91.725% |
| Average Noise Output (>1450 Load Combinations) | 18.91dBA |
| Average PF (>1450 Load Combinations) | 0.981 |
| Efficiency With 10W (≤500W) or 2% (>500W) Load | 77.935% |
| Standby Power Consumption | 0.1253W |
| Non-Accredited | |
| 12V Ripple (Full Load) | 56.06mV |
| 5V Ripple (Full Load) | 17.50mV |
| 3.3V Ripple (Full Load) | 19.53mV |

| | | |
|---|---|---|
| 5VSB Ripple (Full Load) | | 16.10mV |
| 12V Load Regulation | | 0.75% |
| 5V Load Regulation | | 2.40% |
| 3.3V Load Regulation | | 3.42% |
| 5VSB Load Regulation | | 4.16% |
| Inrush Current | | - |
| 12V Transient Response (200%) | | 11.15V |
| 5V Transient Response (200%) | | 4.803V |
| 3.3V Transient Response (200%) | | 3.191V |
| 5VSB Transient Response (200%) | | 4.941V |
| Hold-Up Time & PWR_OK Signal | | 20.90ms |
| AC Loss to PWR_OK Hold Up Time | | 18.20ms |
| PWR_OK Inactive to DC Loss Delay | | 2.70ms |
| PSU Timings: T1 (20% / 100%) | 61.0ms | 36.0ms |
| PSU Timings: T3 (20% / 100%) | 125.0ms | 126.0ms |
| 12V OCP (26.3°C / °C) | - 5V | - 5V |
| 5V OCP (26.3°C / °C) | | |
| 3.3V OCP (26.3°C / °C) | | |
| 5VSB OCP (26.3°C / °C) | | |
| OPP (27.11°C / 0.00°C) | 126.90% | - |

## Hold-Up Time & PWR_OK Signal

| | |
|---|---|
| Hold-Up Time (ms) | 20.9 |
| AC Loss to PWR_OK Hold Up Time (ms) | 18.2 |
| PWR_OK Inactive to DC Loss Delay (ms) | 2.7 |

## Tables

### 115V

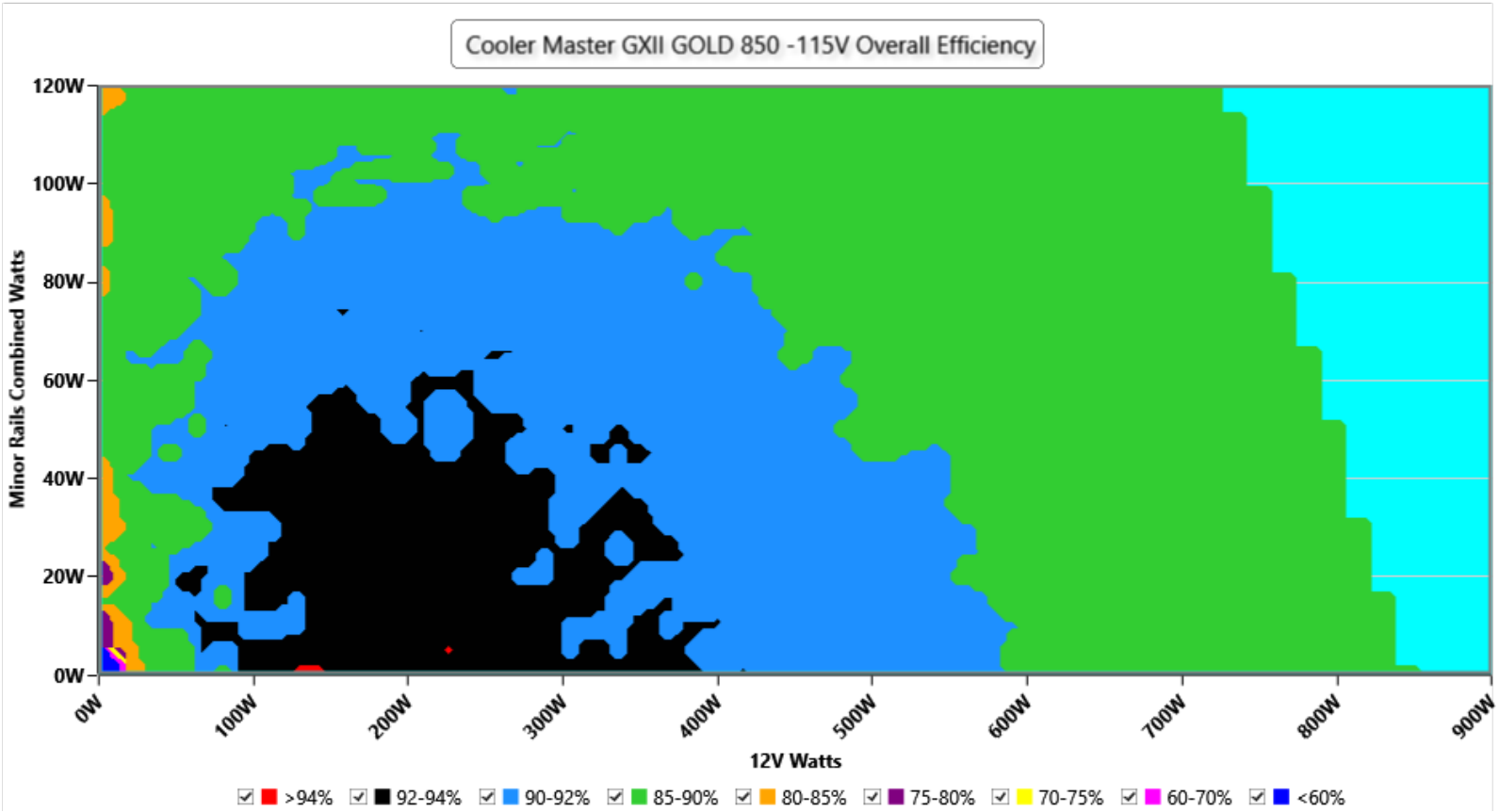
| Detailed Results | | | | | | |
|---|---|---|---|---|---|---|
| | Average | Min | Limit Min | Max | Limit Max | Result |
| Mains Voltage RMS: | 115.07 V | 115.04 V | 113.85 V | 115.11 V | 116.15 V | PASS |
| Mains Frequency: | 60.00 Hz | 59.99 Hz | 59.40 Hz | 60.01 Hz | 60.60 Hz | PASS |
| Mains Voltage CF: | 1.416 | 1.415 | 1.340 | 1.418 | 1.490 | PASS |
| Mains Voltage THD: | 0.13 % | 0.09 % | N/A | 0.18 % | 2.00 % | PASS |
| Real Power: | 0.068 W | -0.002 W | N/A | 0.125 W | N/A | N/A |
| Apparent Power: | 7.900 W | 7.539 W | N/A | 8.267 W | N/A | N/A |
| Power Factor: | 0.013 | N/A | N/A | N/A | N/A | N/A |

### 230V

| Detailed Results | | | | | | |
|---|---|---|---|---|---|---|
| | Average | Min | Limit Min | Max | Limit Max | Result |
| Mains Voltage RMS: | 231.03 V | 230.92 V | 227.70 V | 231.09 V | 232.30 V | PASS |
| Mains Frequency: | 50.00 Hz | 49.99 Hz | 49.50 Hz | 50.01 Hz | 50.50 Hz | PASS |
| Mains Voltage CF: | 1.417 | 1.416 | 1.340 | 1.419 | 1.490 | PASS |
| Mains Voltage THD: | 0.17 % | 0.14 % | N/A | 0.27 % | 2.00 % | PASS |
| Real Power: | 0.125 W | 0.079 W | N/A | 0.210 W | N/A | N/A |
| Apparent Power: | 25.453 W | 24.984 W | N/A | 25.920 W | N/A | N/A |
| Power Factor: | 0.004 | N/A | N/A | N/A | N/A | N/A |

## Efficiency Graph

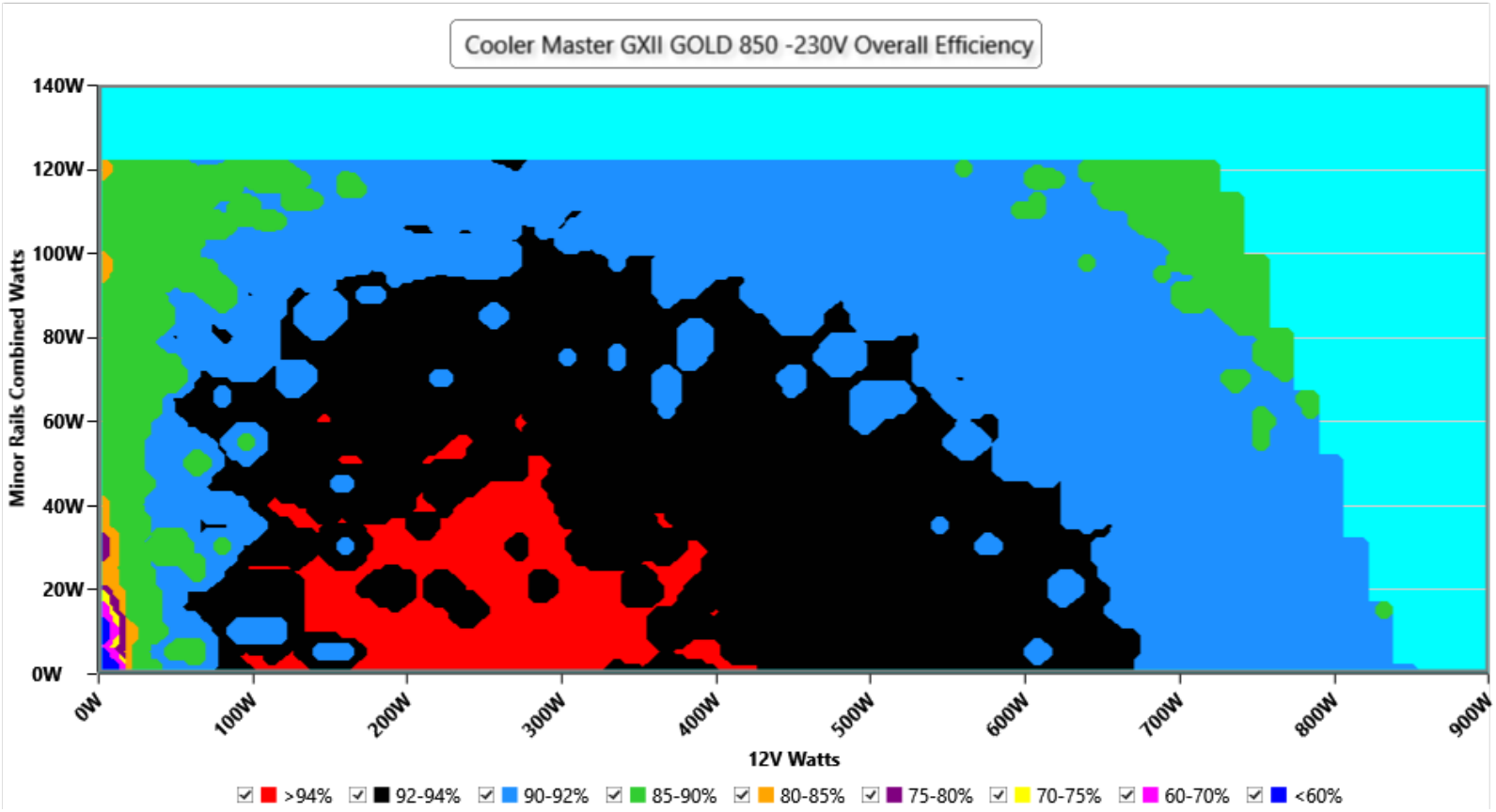
### 115V




### 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

## 230V

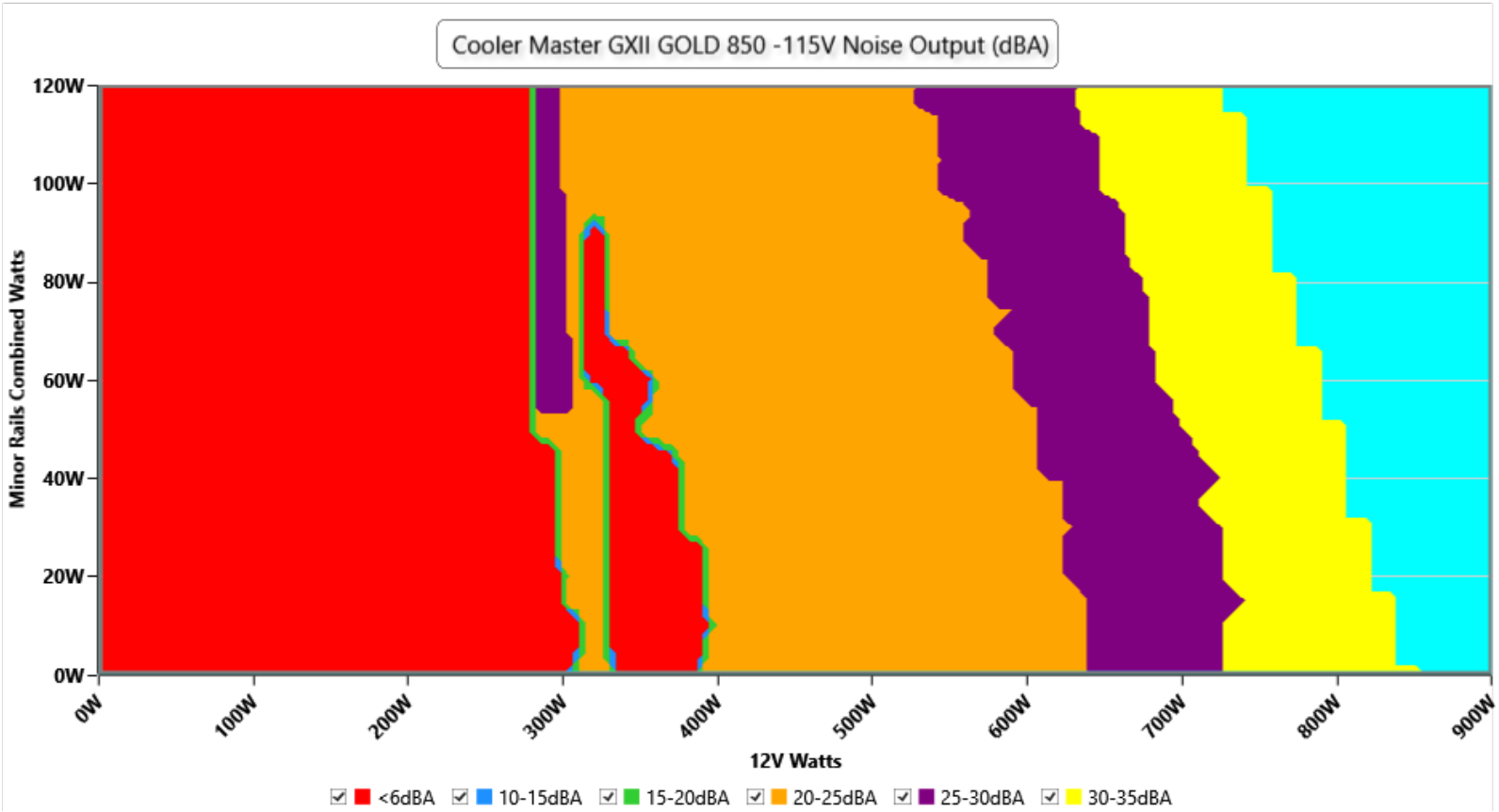



### INFO

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

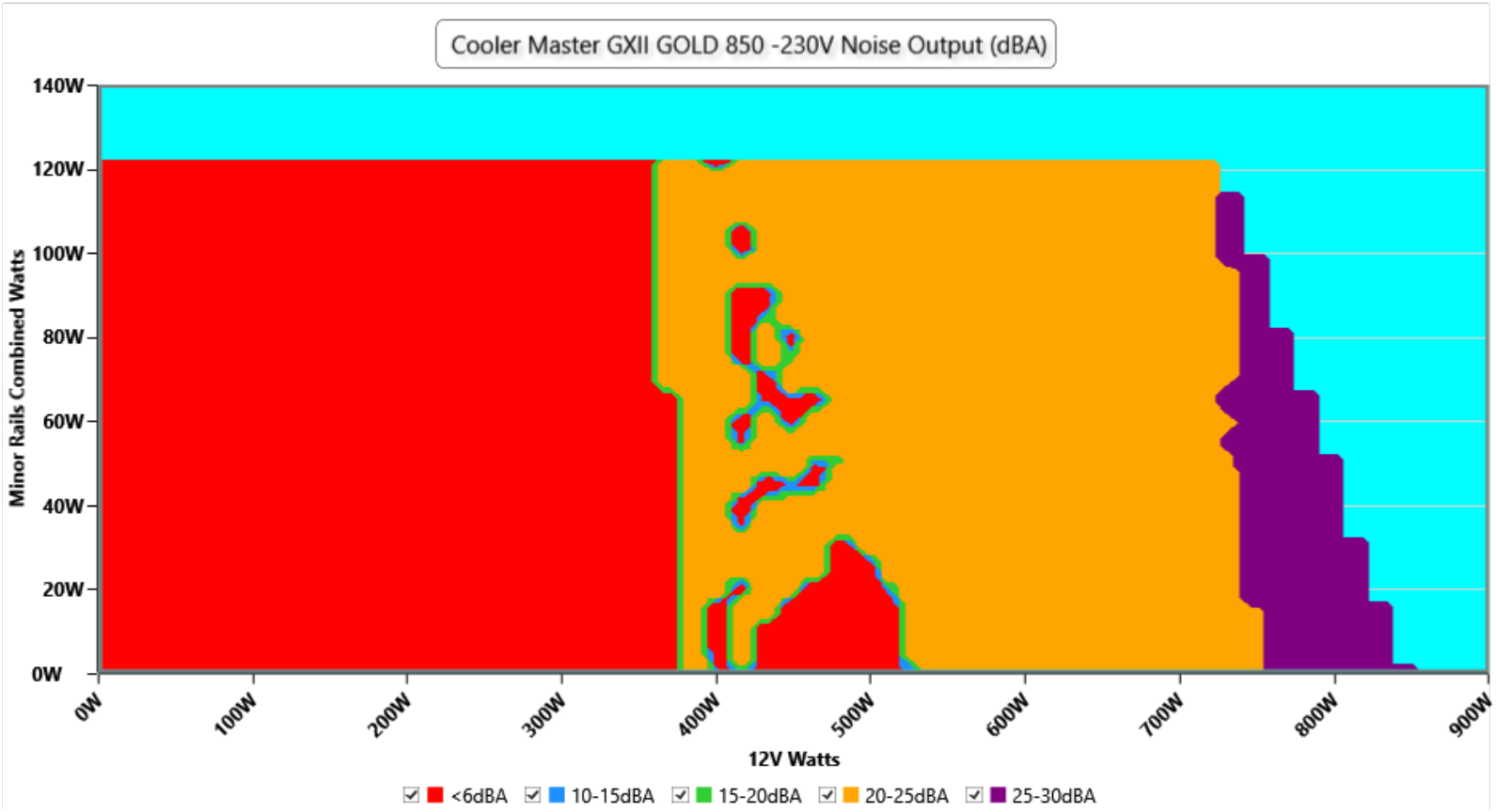
**115V**




**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

## 230V




### 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

## Noise under high ambient temperature (indicative)

### 115V

| Load | Normal ambient<br>fan · noise · intake | High ambient<br>fan · noise · intake | Noise change |
|---|---|---|---|
| 10% | 0 RPM · <6.0 dB(A) · 32.5 °C | 0 RPM · <6.0 dB(A) · 52.0 °C | fan off in both |
| 20% | 0 RPM · <6.0 dB(A) · 36.5 °C | 0 RPM · <6.0 dB(A) · 54.0 °C | fan off in both |
| 50% | 1232 RPM · 25.0 dB(A) · 30.2 °C | 1258 RPM · 25.5 dB(A) · 42.2 °C | **+0.5 dB(A)** |
| 100% | 1578 RPM · 31.9 dB(A) · 30.5 °C | 2868 RPM · 49.1 dB(A) · 45.5 °C | **+17.2 dB(A)** |

### 230V

| Load | Normal ambient<br>fan · noise · intake | High ambient<br>fan · noise · intake | Noise change |
|---|---|---|---|
| 10% | 0 RPM · <6.0 dB(A) · 39.3 °C | 0 RPM · <6.0 dB(A) · 48.7 °C | fan off in both |
| 20% | 0 RPM · <6.0 dB(A) · 40.0 °C | 0 RPM · <6.0 dB(A) · 49.0 °C | fan off in both |
| 50% | 1450 RPM · 29.6 dB(A) · 28.5 °C | 1254 RPM · 25.5 dB(A) · 42.1 °C | **-4.1 dB(A)** |
| 100% | 1497 RPM · 30.7 dB(A) · 29.5 °C | 2863 RPM · 49.0 dB(A) · 45.3 °C | **+18.3 dB(A)** |

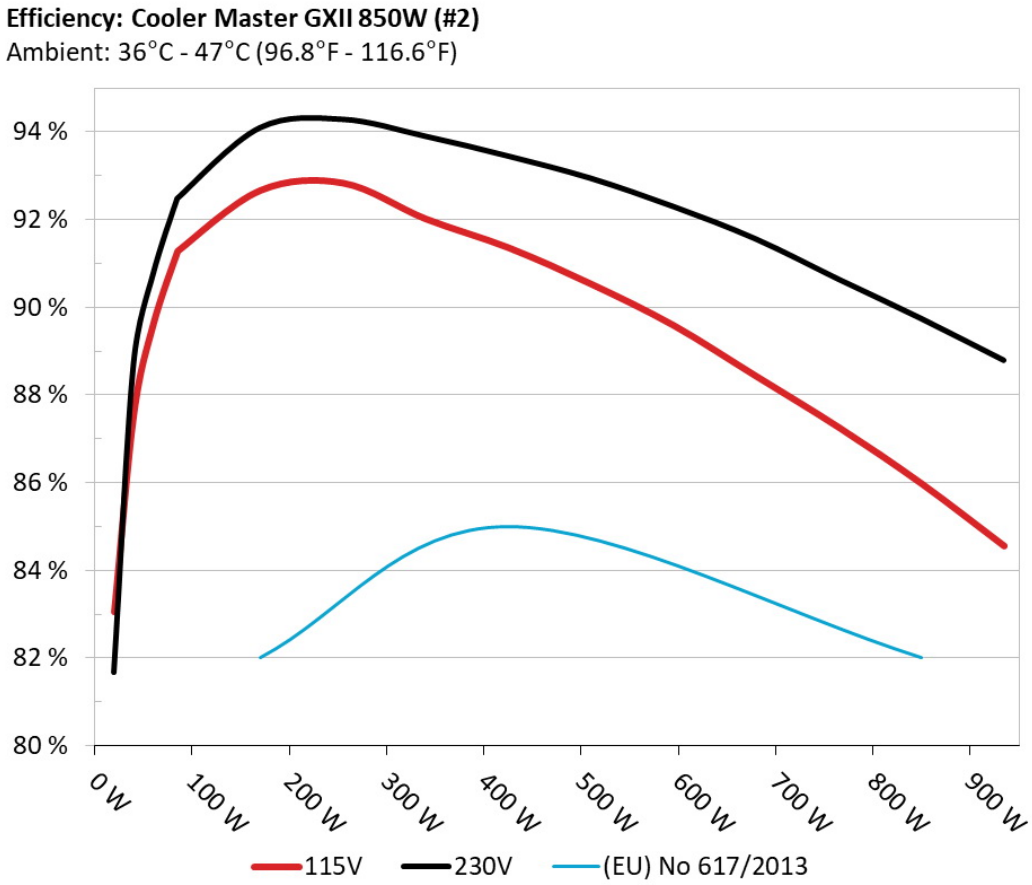
### INFO

Fan speed, noise and the measured intake temperature at 10, 20, 50 and 100 % load, from the two load regulation tests: at normal ambient (about 30-32 °C) and at high ambient (about 40-47 °C). These are stabilized readings at fixed loads, not averages over the certification sweep, so they are indicative of how the fan behaves when it is hot. "<6.0" is the floor of our sound meter: the fan is stopped or too quiet to measure (the fan speed column says which); with the fan stopped, the intake sensor can read higher than the chamber air.

*Informational. Not part of the ETA or LAMBDA rating.*

## Indicative Performance

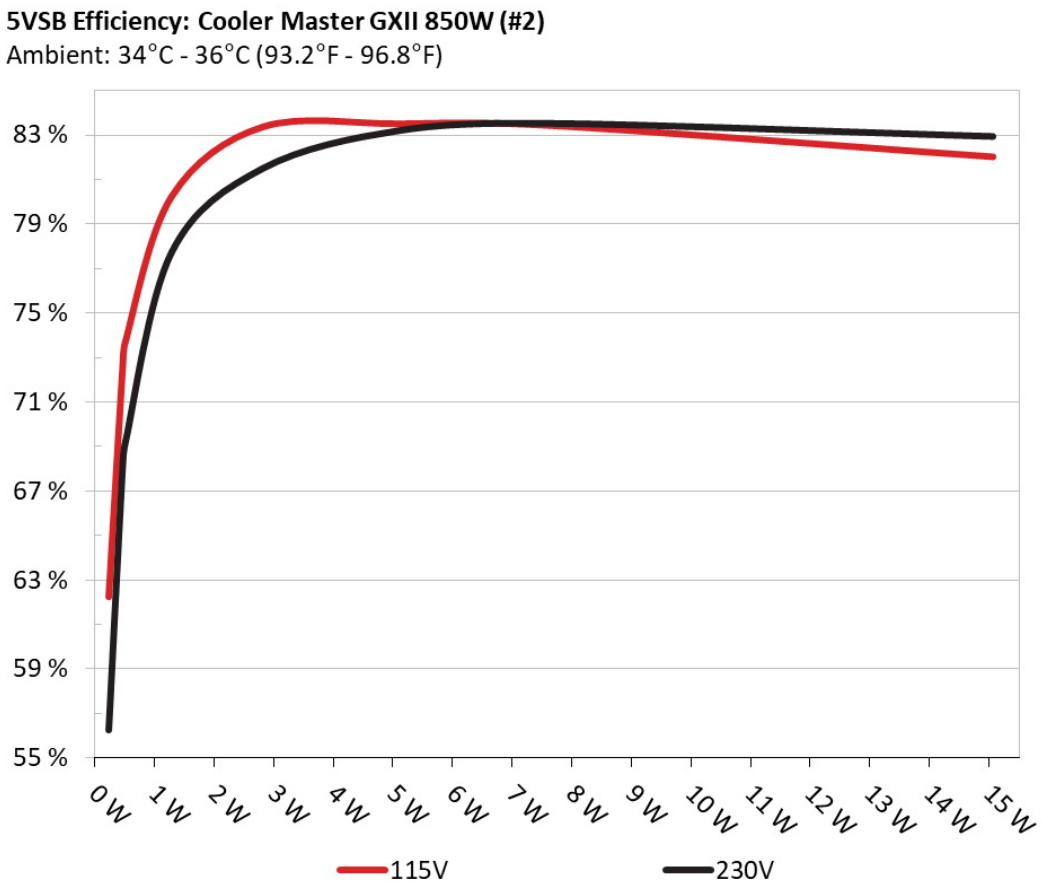
### Efficiency under high ambient temperature




**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




### INFO

This graph depicts the efficiency levels of the 5VSB rail with 115V and 230V input

## 5VSB Efficiency (ERP LOT 3/6 & CEC)

### 115V

| Test # | 5VSB | DC/AC (Watts) | Efficiency | PF/AC Volts |
|---|---|---|---|---|
| **1** | **0.045A** | 0.231W | 62.265% | 0.05 |
| | 5.14V | 0.371W | | 114.94V |
| **2** | **0.09A** | 0.463W | 72.567% | 0.083 |
| | 5.138V | 0.639W | | 114.94V |
| **3** | **0.55A** | 2.816W | 83.392% | 0.265 |
| | 5.12V | 3.377W | | 114.92V |
| **4** | **1A** | 5.101W | 83.532% | 0.319 |
| | 5.101V | 6.106W | | 114.92V |
| **5** | **1.5A** | 7.622W | 83.456% | 0.347 |
| | 5.081V | 9.135W | | 114.92V |
| **6** | **3A** | 15.059W | 82.045% | 0.387 |
| | 5.02V | 18.354W | | 114.91V |

### 230V

| Test # | 5VSB | DC/AC (Watts) | Efficiency | PF/AC Volts |
|---|---|---|---|---|
| **1** | **0.045A** | 0.232W | 56.245% | 0.017 |
| | 5.144V | 0.418W | | 229.9V |
| **2** | **0.09A** | 0.463W | 67.99% | 0.027 |
| | 5.141V | 0.684W | | 229.88V |
| **3** | **0.55A** | 2.816W | 81.485% | 0.126 |
| | 5.121V | 3.459W | | 229.89V |
| **4** | **1A** | 5.102W | 83.186% | 0.193 |
| | 5.102V | 6.135W | | 229.88V |
| **5** | **1.5A** | 7.623W | 83.508% | 0.243 |
| | 5.081V | 9.131W | | 229.88V |
| **6** | **3A** | 15.059W | 82.919% | 0.316 |
| | 5.02V | 18.163W | | 229.88V |

## Protection Features

| Protection Features | |
|---|---|
| OCP (Cold @ 26.3°C) | 12V: - 5V: - 3.3V: - 5VSB: 5.8A (193.33%), 4.9V |
| OCP (Hot @ - C) | 12V: - 5V: - 3.3V: - 5VSB: - |
| OPP (Cold @ 27.11°C) | 1078.68W (126.9%) |
| OPP (Hot @ - C) | - |
| OTP | ✗ (Didn't shut down) |
| SCP | 12V to Earth: ✓ 5V to Earth: ✓ 3.3V to Earth: ✓ 5VSB to Earth: ✓ -12V to Earth: ✓ |
| PWR_OK | Proper Operation |
| NLO | ✓ |
| Fan Failure Protection | ✗ |
| SIP | Surge: MOV Inrush: NTC & Bypass Relay |

## Supplementary Tests (For Reference)

### Typical Load Tests

**115V**

| Test | 12V | 5V | 3.3V | 5VSB | DC/AC (Watts) | Efficiency | Fan Speed (RPM) | PSU Noise (dB[A]) | Temps (In/Out) | PF/AC Volts |
|---|---|---|---|---|---|---|---|---|---|---|
| **10%** | **5.264A** | **1.975A** | **1.957A** | **0.98A** | 85 | 91.283% | 0 | <6.0 | 51.96°C | 0.973 |
| | 12.042V | 5.063V | 3.372V | 5.1V | 93.149 | | | | 40.09°C | 114.89V |
| **20%** | **11.555A** | **2.969A** | **2.946A** | **1.18A** | 169.936 | 92.666% | 0 | <6.0 | 54.04°C | 0.985 |
| | 12.033V | 5.051V | 3.361V | 5.083V | 183.448 | | | | 40.85°C | 114.87V |
| **30%** | **18.204A** | **3.471A** | **3.447A** | **1.382A** | 254.939 | 92.835% | 0 | <6.0 | 56.68°C | 0.991 |
| | 12.024V | 5.042V | 3.351V | 5.066V | 274.558 | | | | 41.03°C | 114.84V |
| **40%** | **24.871A** | **3.976A** | **3.952A** | **1.584A** | 340.027 | 92.018% | 1260 | 25.5 | 41.91°C | 0.994 |
| | 12.015V | 5.031V | 3.341V | 5.05V | 369.508 | | | | 47.88°C | 114.81V |
| **50%** | **31.183A** | **4.982A** | **4.957A** | **1.789A** | 424.819 | 91.363% | 1258 | 25.5 | 42.2°C | 0.995 |
| | 12.004V | 5.018V | 3.328V | 5.031V | 464.942 | | | | 48.39°C | 114.79V |

| Test | 12V | 5V | 3.3V | 5VSB | DC/AC (Watts) | Efficiency | Fan Speed (RPM) | PSU Noise (dB[A]) | Temps (In/Out) | PF/AC Volts |
|---|---|---|---|---|---|---|---|---|---|---|
| **60%** | **37.479A** | **5.994A** | **5.971A** | **1.995A** | 509.347 | 90.54% | 1258 | 25.5 | 42.95°C | 0.996 |
| | 11.994V | 5.006V | 3.317V | 5.014V | 562.53 | | | | 50.22°C | 114.74V |
| **70%** | **43.852A** | **7.011A** | **6.992A** | **2.202A** | 594.668 | 89.59% | 1310 | 26.9 | 43.15°C | 0.997 |
| | 11.985V | 4.993V | 3.304V | 4.996V | 663.766 | | | | 52.37°C | 114.72V |
| **80%** | **50.235A** | **8.031A** | **8.019A** | **2.308A** | 679.484 | 88.432% | 2541 | 45.4 | 43.84°C | 0.997 |
| | 11.975V | 4.98V | 3.292V | 4.982V | 768.396 | | | | 52.02°C | 114.68V |
| **90%** | **57.032A** | **8.551A** | **8.532A** | **2.415A** | 764.896 | 87.259% | 2556 | 45.6 | 44.15°C | 0.997 |
| | 11.965V | 4.969V | 3.282V | 4.969V | 876.595 | | | | 51.74°C | 114.64V |
| **100%** | **63.573A** | **9.074A** | **9.08A** | **3.041A** | 849.724 | 85.98% | 2868 | 49.1 | 45.51°C | 0.997 |
| | 11.955V | 4.958V | 3.271V | 4.933V | 988.268 | | | | 53.59°C | 114.61V |
| **110%** | **69.993A** | **10.111A** | **10.222A** | **3.047A** | 934.317 | 84.563% | 2865 | 49 | 46.77°C | 0.997 |
| | 11.945V | 4.944V | 3.258V | 4.923V | 1104.9 | | | | 56.39°C | 114.57V |
| **CL1** | **0.116A** | **14.425A** | **14.357A** | **0A** | 121.29 | 84.775% | 0 | <6.0 | 56.13°C | 0.981 |
| | 12.032V | 5.004V | 3.323V | 5.131V | 143.088 | | | | 40.34°C | 114.87V |
| **CL2** | **0.115A** | **19.97A** | **0A** | **0A** | 101.339 | 83.131% | 0 | <6.0 | 55.79°C | 0.978 |
| | 12.040V | 5.005V | 3.357V | 5.139V | 121.921 | | | | 40.91°C | 114.87V |
| **CL3** | **0.115A** | **0A** | **19.834A** | **0A** | 67.395 | 78.832% | 0 | <6.0 | 54.76°C | 0.972 |
| | 12.040V | 5.041V | 3.328V | 5.139V | 85.518 | | | | 40.83°C | 114.89V |
| **CL4** | **70.997A** | **0A** | **0A** | **0A** | 849.481 | 86.705% | 2859 | 48.9 | 45.17°C | 0.997 |
| | 11.966V | 5.002V | 3.31V | 5.075V | 979.761 | | | | 53.15°C | 114.61V |

The results above are not used in the certification process

## 230V

| Test | 12V | 5V | 3.3V | 5VSB | DC/AC (Watts) | Efficiency | Fan Speed (RPM) | PSU Noise (dB[A]) | Temps (In/Out) | PF/AC Volts |
|---|---|---|---|---|---|---|---|---|---|---|
| **10%** | **5.266A** | **1.975A** | **1.958A** | **0.981A** | 85.002 | 92.475% | 0 | <6.0 | 48.65°C | 0.949 |
| | 12.041V | 5.062V | 3.371V | 5.099V | 91.966 | | | | 40.42°C | 229.88V |
| **20%** | **11.556A** | **2.97A** | **2.947A** | **1.181A** | 169.941 | 94.09% | 0 | <6.0 | 48.97°C | 0.973 |
| | 12.032V | 5.05V | 3.36V | 5.083V | 180.662 | | | | 40.53°C | 229.86V |

| Test | 12V | 5V | 3.3V | 5VSB | DC/AC (Watts) | Efficiency | Fan Speed (RPM) | PSU Noise (dB[A]) | Temps (In/Out) | PF/AC Volts |
|---|---|---|---|---|---|---|---|---|---|---|
| **30%** | **18.203A** | **3.472A** | **3.447A** | **1.382A** | 254.937 | 94.283% | 0 | <6.0 | 52.07°C | 0.981 |
| | 12.024V | 5.041V | 3.351V | 5.066V | 270.402 | | | | 41.05°C | 229.85V |
| **40%** | **24.870A** | **3.976A** | **3.952A** | **1.584A** | 340.02 | 93.897% | 1254 | 25.5 | 41.96°C | 0.986 |
| | 12.015V | 5.03V | 3.34V | 5.05V | 362.206 | | | | 44.9°C | 229.83V |
| **50%** | **31.180A** | **4.983A** | **4.957A** | **1.789A** | 424.802 | 93.446% | 1254 | 25.5 | 42.13°C | 0.989 |
| | 12.005V | 5.018V | 3.328V | 5.032V | 454.691 | | | | 45.21°C | 229.82V |
| **60%** | **37.475A** | **5.994A** | **5.97A** | **1.995A** | 509.338 | 92.942% | 1256 | 25.5 | 42.67°C | 0.991 |
| | 11.996V | 5.005V | 3.317V | 5.014V | 548.035 | | | | 47.01°C | 229.8V |
| **70%** | **43.848A** | **7.011A** | **6.991A** | **2.202A** | 594.671 | 92.296% | 1257 | 25.5 | 43.08°C | 0.992 |
| | 11.986V | 4.993V | 3.305V | 4.996V | 644.357 | | | | 48.32°C | 229.79V |
| **80%** | **50.231A** | **8.031A** | **8.018A** | **2.308A** | 679.496 | 91.556% | 1473 | 30.3 | 43.78°C | 0.994 |
| | 11.976V | 4.98V | 3.293V | 4.983V | 742.118 | | | | 49.84°C | 229.77V |
| **90%** | **57.026A** | **8.552A** | **8.531A** | **2.415A** | 764.909 | 90.634% | 2443 | 44.4 | 44.14°C | 0.995 |
| | 11.967V | 4.969V | 3.282V | 4.969V | 843.908 | | | | 49.51°C | 229.76V |
| **100%** | **63.570A** | **9.076A** | **9.08A** | **3.041A** | 849.738 | 89.737% | 2863 | 49 | 45.28°C | 0.995 |
| | 11.956V | 4.957V | 3.271V | 4.933V | 946.923 | | | | 50.06°C | 229.74V |
| **110%** | **69.988A** | **10.112A** | **10.221A** | **3.047A** | 934.321 | 88.789% | 2866 | 49.1 | 46.81°C | 0.996 |
| | 11.946V | 4.943V | 3.258V | 4.923V | 1052.298 | | | | 53.05°C | 229.73V |
| **CL1** | **0.115A** | **14.426A** | **14.355A** | **0A** | 121.287 | 86.106% | 0 | <6.0 | 50.79°C | 0.967 |
| | 12.032V | 5.004V | 3.323V | 5.131V | 140.941 | | | | 40.92°C | 229.87V |
| **CL2** | **0.115A** | **19.967A** | **0A** | **0A** | 101.337 | 84.306% | 0 | <6.0 | 51.51°C | 0.962 |
| | 12.040V | 5.006V | 3.357V | 5.138V | 120.261 | | | | 40.58°C | 229.87V |
| **CL3** | **0.115A** | **0A** | **19.83A** | **0A** | 67.395 | 79.996% | 0 | <6.0 | 51.17°C | 0.943 |
| | 12.040V | 5.042V | 3.329V | 5.138V | 84.304 | | | | 40°C | 229.88V |
| **CL4** | **70.995A** | **0A** | **0A** | **0A** | 849.485 | 90.474% | 2862 | 49 | 45.96°C | 0.995 |
| | 11.966V | 5.002V | 3.31V | 5.075V | 938.946 | | | | 50.95°C | 229.75V |

The results above are not used in the certification process

## Light Load Tests

### 115V

| Test | 12V | 5V | 3.3V | 5VSB | DC/AC (Watts) | Efficiency | Fan Speed (RPM) | PSU Noise (dB[A]) | Temps (In/Out) | PF/AC Volts |
|---|---|---|---|---|---|---|---|---|---|---|
| **20W** | **1.232A** | **0.492A** | **0.487A** | **0.194A** | 19.998 | 83.062% | 0 | <6.0 | 48.65°C | 0.916 |
| | 12.052V | 5.078V | 3.385V | 5.143V | 24.093 | | | | 36.75°C | 114.91V |
| **40W** | **2.713A** | **0.69A** | **0.683A** | **0.292A** | 39.997 | 87.574% | 0 | <6.0 | 48.93°C | 0.955 |
| | 12.048V | 5.075V | 3.382V | 5.137V | 45.704 | | | | 37.1°C | 114.9V |
| **60W** | **4.194A** | **0.887A** | **0.879A** | **0.39A** | 59.996 | 89.615% | 0 | <6.0 | 49.19°C | 0.966 |
| | 12.046V | 5.072V | 3.379V | 5.13V | 66.949 | | | | 38.63°C | 114.9V |
| **80W** | **5.672A** | **1.085A** | **1.075A** | **0.488A** | 79.942 | 91.496% | 0 | <6.0 | 51.07°C | 0.972 |
| | 12.044V | 5.068V | 3.376V | 5.123V | 87.411 | | | | 39.07°C | 114.89V |

The results above are not used in the certification process

### 230V

| Test | 12V | 5V | 3.3V | 5VSB | DC/AC (Watts) | Efficiency | Fan Speed (RPM) | PSU Noise (dB[A]) | Temps (In/Out) | PF/AC Volts |
|---|---|---|---|---|---|---|---|---|---|---|
| **20W** | **1.232A** | **0.492A** | **0.488A** | **0.195A** | 19.998 | 81.674% | 0 | <6.0 | 42.5°C | 0.575 |
| | 12.046V | 5.076V | 3.383V | 5.138V | 24.167 | | | | 36.15°C | 229.89V |
| **40W** | **2.714A** | **0.69A** | **0.683A** | **0.292A** | 39.997 | 88.674% | 0 | <6.0 | 44.31°C | 0.842 |
| | 12.044V | 5.074V | 3.381V | 5.134V | 45.297 | | | | 37.03°C | 229.88V |
| **60W** | **4.196A** | **0.887A** | **0.879A** | **0.39A** | 59.996 | 90.733% | 0 | <6.0 | 45.57°C | 0.918 |
| | 12.043V | 5.07V | 3.378V | 5.127V | 66.123 | | | | 38.3°C | 229.88V |
| **80W** | **5.674A** | **1.085A** | **1.076A** | **0.488A** | 79.942 | 92.778% | 0 | <6.0 | 46.74°C | 0.945 |
| | 12.041V | 5.067V | 3.375V | 5.121V | 86.239 | | | | 38.92°C | 229.88V |

The results above are not used in the certification process

## Ripple Measurements

### 115V

| Test | 12V | 5V | 3.3V | 5VSB | Pass/Fail |
|---|---|---|---|---|---|
| **10% Load** | 24.8 mV | 12.1 mV | 12.5 mV | 10.3 mV | Pass |
| **20% Load** | 26.8 mV | 11.8 mV | 11.9 mV | 10.4 mV | Pass |
| **30% Load** | 28.6 mV | 13.4 mV | 19.0 mV | 10.7 mV | Pass |
| **40% Load** | 27.5 mV | 12.2 mV | 17.9 mV | 11.2 mV | Pass |
| **50% Load** | 30.4 mV | 12.3 mV | 13.4 mV | 10.9 mV | Pass |
| **60% Load** | 34.7 mV | 13.0 mV | 13.0 mV | 10.7 mV | Pass |
| **70% Load** | 36.1 mV | 12.6 mV | 13.2 mV | 11.9 mV | Pass |
| **80% Load** | 49.1 mV | 14.7 mV | 15.0 mV | 12.3 mV | Pass |
| **90% Load** | 45.1 mV | 15.0 mV | 15.9 mV | 12.6 mV | Pass |
| **100% Load** | 58.5 mV | 17.3 mV | 18.6 mV | 16.2 mV | Pass |
| **110% Load** | 66.5 mV | 22.6 mV | 31.0 mV | 14.7 mV | Pass |
| **Crossload 1** | 34.1 mV | 16.1 mV | 14.8 mV | 18.6 mV | Pass |
| **Crossload 2** | 31.4 mV | 19.8 mV | 13.0 mV | 19.3 mV | Pass |
| **Crossload 3** | 34.0 mV | 13.4 mV | 16.9 mV | 19.1 mV | Pass |
| **Crossload 4** | 49.8 mV | 14.5 mV | 18.0 mV | 18.2 mV | Pass |

The results above are not used in the certification process

### 230V

| Test | 12V | 5V | 3.3V | 5VSB | Pass/Fail |
|---|---|---|---|---|---|
| **10% Load** | 24.5 mV | 12.6 mV | 12.7 mV | 11.7 mV | Pass |
| **20% Load** | 26.8 mV | 12.4 mV | 13.9 mV | 11.4 mV | Pass |
| **30% Load** | 31.7 mV | 13.5 mV | 18.2 mV | 11.1 mV | Pass |
| **40% Load** | 31.5 mV | 13.5 mV | 19.4 mV | 10.9 mV | Pass |
| **50% Load** | 31.0 mV | 12.9 mV | 12.8 mV | 10.8 mV | Pass |
| **60% Load** | 32.1 mV | 12.2 mV | 13.7 mV | 11.4 mV | Pass |

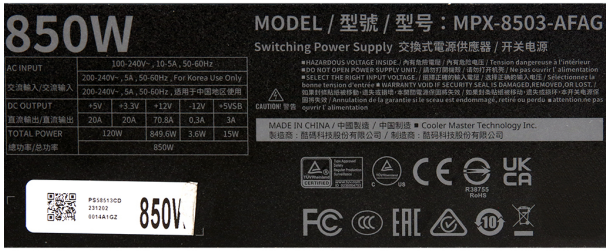
| Test | 12V | 5V | 3.3V | 5VSB | Pass/Fail |
|---|---|---|---|---|---|
| **70% Load** | 35.7 mV | 12.9 mV | 13.5 mV | 10.8 mV | Pass |
| **80% Load** | 43.1 mV | 15.2 mV | 15.6 mV | 12.0 mV | Pass |
| **90% Load** | 48.2 mV | 15.0 mV | 16.4 mV | 12.4 mV | Pass |
| **100% Load** | 56.1 mV | 17.5 mV | 19.5 mV | 16.1 mV | Pass |
| **110% Load** | 65.1 mV | 26.3 mV | 23.3 mV | 15.6 mV | Pass |
| **Crossload 1** | 32.1 mV | 15.4 mV | 15.1 mV | 18.5 mV | Pass |
| **Crossload 2** | 30.0 mV | 20.4 mV | 12.8 mV | 18.8 mV | Pass |
| **Crossload 3** | 32.7 mV | 13.7 mV | 15.6 mV | 18.9 mV | Pass |
| **Crossload 4** | 51.6 mV | 15.3 mV | 17.6 mV | 18.1 mV | Pass |

The results above are not used in the certification process

## Cooler Master GX II 850 GOLD (MWE Gold 850 V3)




Top side




Power specifications label

Cybenetics □□□□□□□□□□□□□□□□□□□□ ETA□□□□□ LAMBDA□□□□□ SAFE□□□□□□□□□□□□□□□□□□ DELTA□□□□□□□ PHI□□□□□□□□□

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