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# Cooler Master MWE Gold 1050 V2 ATX v3.1 (GX Gold 1050)

Serial Number MPEA501AFCAG3U22241400001

Lab ID CM10502476

Certification ID 252476

Test Result Report ID: 24PS2476A

Certificate Issue Date: Jun 17, 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 | MWE Gold 1050 V2 ATX v3.1 (GX Gold 1050) |
| OEM/ODM | |
| Serial Number | MPEA501AFCAG3U22241400001 |
| Product Specifications | |
| Manufacturer-Provided Information | |
| Rated Voltage (Vrms) | 100-240 |
| Rated Current (Arms) | 13-6 |

| | |
|---|---|
| Rated Frequency (Hz) | 50-60 |
| Rated Power (W) | 1050 |
| Operating Temperature (Continuous Full Load) (°C) | |
| Type | ATX12V |
| Cable Design | Fully Modular |
| Warranty | - |
| Cybenetics Measurements | |
| Dimensions (W x H x D) | |
| Weight | |
| Cooling | 140mm Fluid Dynamic Bearing Fan<br>(HA1425H12F-Z) |
| Semi-Passive Operation | ✓ |
| Cybenetics Testing Information | |
| Lab ID | CM10502476 |
| Date of receipt | May 29, 2024 |
| Testing Date | Jun 13, 2024 |
| Report Issued Date | Jun 17, 2024 |
| DUT Notes | Unit broke during OCP hot test on 5V rail |
| 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 (655mm) | 1 | 1 | 18AWG | No |
| 4+4 pin EPS12V (650mm) | 1 | 1 | 18AWG | No |
| 8 pin EPS12V (650mm) | 1 | 1 | 18AWG | No |
| 6+2 pin PCIe (550mm) | 3 | 3 | 16AWG | No |
| 12+4 pin PCIe (650mm) (600W) | 1 | 1 | 16-28AWG | No |
| SATA (500mm+120mm+120mm+120mm) | 3 | 12 | 18AWG | No |

| | | | | |
|---|---|---|---|---|
| 4 pin Molex (500mm+120mm+120mm+120mm) | 1 | 4 | 18AWG | No |
| AC Power Cord (1395mm) - C13 coupler | 1 | 1 | 14AWG | - |

### Protection Features(Manufacturer)

| | |
|---|---|
| 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 | 87.5 | 3 | 0.3 |
| | Watts | 120 | | 1050 | 15 | 3.6 |
| Total Max. Power (W) | | 1050 | | | | |

## 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) | 89.244% |
| Average Noise Output (>1450 Load Combinations) | 24.89dBA |
| Average PF (>1450 Load Combinations) | 0.986 |
| Efficiency With 10W (≤500W) or 2% (>500W) Load | 70.445% |
| Standby Power Consumption | 0.0379W |
| Non-Accredited | |
| 12V Ripple (Full Load) | 28.59mV |
| 5V Ripple (Full Load) | 14.91mV |
| 3.3V Ripple (Full Load) | 15.46mV |
| 5VSB Ripple (Full Load) | 13.11mV |
| 12V Load Regulation | 0.16% |
| 5V Load Regulation | 0.34% |
| 3.3V Load Regulation | 0.92% |
| 5VSB Load Regulation | 2.16% |
| Inrush Current | 48.580A |

### 230V

| | |
|---|---|
| Accredited | |
| Average Efficiency (>1450 load combinations) | 91.436% |
| Average Noise Output (>1450 Load Combinations) | 24.80dBA |
| Average PF (>1450 Load Combinations) | 0.964 |
| Efficiency With 10W (≤500W) or 2% (>500W) Load | 72.157% |
| Standby Power Consumption | 0.0916W |
| Non-Accredited | |
| 12V Ripple (Full Load) | 30.02mV |
| 5V Ripple (Full Load) | 14.35mV |
| 3.3V Ripple (Full Load) | 15.31mV |

| | | |
|---|---|---|
| 5VSB Ripple (Full Load) | | 13.58mV |
| 12V Load Regulation | | 0.16% |
| 5V Load Regulation | | 0.34% |
| 3.3V Load Regulation | | 0.95% |
| 5VSB Load Regulation | | 2.16% |
| Inrush Current | | 79.970A |
| 12V Transient Response (200%) | | 11.36V |
| 5V Transient Response (200%) | | 4.922V |
| 3.3V Transient Response (200%) | | 3.190V |
| 5VSB Transient Response (200%) | | 4.894V |
| Hold-Up Time & PWR_OK Signal | | 30.30ms |
| AC Loss to PWR_OK Hold Up Time | | 27.20ms |
| PWR_OK Inactive to DC Loss Delay | | 3.10ms |
| PSU Timings: T1 (20% / 100%) | 86.0ms | 80.0ms |
| PSU Timings: T3 (20% / 100%) | 131.0ms | 132.0ms |
| 12V OCP (27.5°C / 38.8°C) | 100.60A (114.97%), 12.151V | - |
| 5V OCP (27.5°C / 38.8°C) | 25.2A (126.00%), 5.013V | 24.6A (123.00%), 5.016V |
| 3.3V OCP (27.5°C / 38.8°C) | 25.0A (125.00%), 3.273V | 24.6A (123.00%), 3.277V |
| 5VSB OCP (27.5°C / 38.8°C) | 6.8A (226.67%), 5.018V | 6.8A (226.67%), 5.016V |
| OPP (27.42°C / 42.58°C) | 126.57% | 126.28% |

## Hold-Up Time & PWR_OK Signal

| | |
|---|---|
| Hold-Up Time (ms) | 30.3 |
| AC Loss to PWR_OK Hold Up Time (ms) | 27.2 |
| PWR_OK Inactive to DC Loss Delay (ms) | 3.1 |

## Tables

### 115V

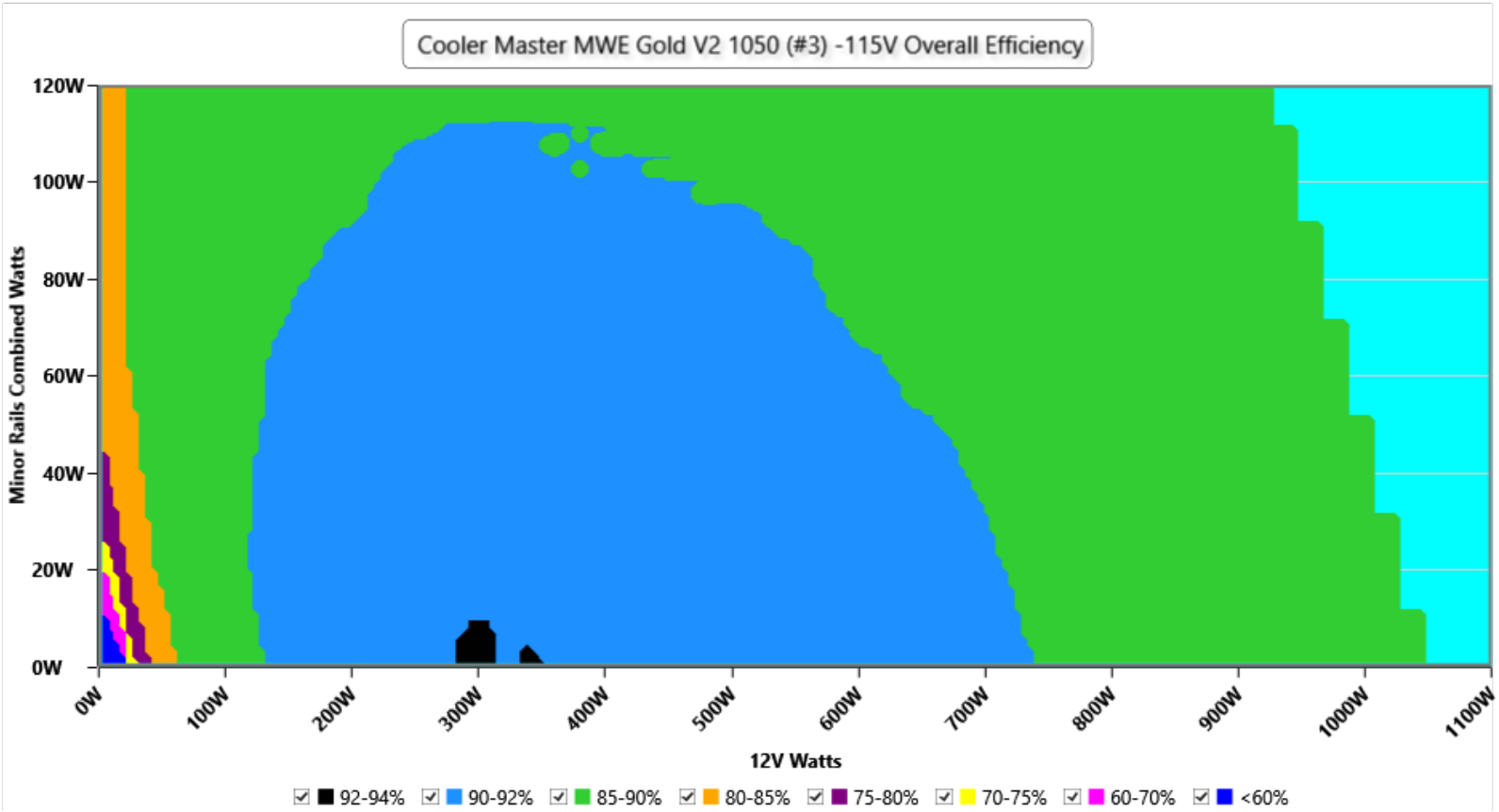
| Detailed Results | | | | | | |
|---|---|---|---|---|---|---|
| | Average | Min | Limit Min | Max | Limit Max | Result |
| Mains Voltage RMS: | 115.07 V | 115.03 V | 113.85 V | 115.11 V | 116.15 V | PASS |
| Mains Frequency: | 60.00 Hz | 59.99 Hz | 59.40 Hz | 60.01 Hz | 60.60 Hz | PASS |
| Mains Voltage CF: | 1.416 | 1.415 | 1.340 | 1.418 | 1.490 | PASS |
| Mains Voltage THD: | 0.13 % | 0.09 % | N/A | 0.19 % | 2.00 % | PASS |
| Real Power: | 0.038 W | -0.009 W | N/A | 0.079 W | N/A | N/A |
| Apparent Power: | 7.004 W | 6.529 W | N/A | 7.484 W | N/A | N/A |
| Power Factor: | 0.008 | N/A | N/A | N/A | N/A | N/A |

### 230V

| Detailed Results | | | | | | |
|---|---|---|---|---|---|---|
| | Average | Min | Limit Min | Max | Limit Max | Result |
| Mains Voltage RMS: | 231.01 V | 230.91 V | 227.70 V | 231.07 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: | 0.092 W | 0.051 W | N/A | 0.146 W | N/A | N/A |
| Apparent Power: | 21.866 W | 21.330 W | N/A | 22.477 W | N/A | N/A |
| Power Factor: | 0.003 | N/A | N/A | N/A | N/A | N/A |

## Efficiency Graph

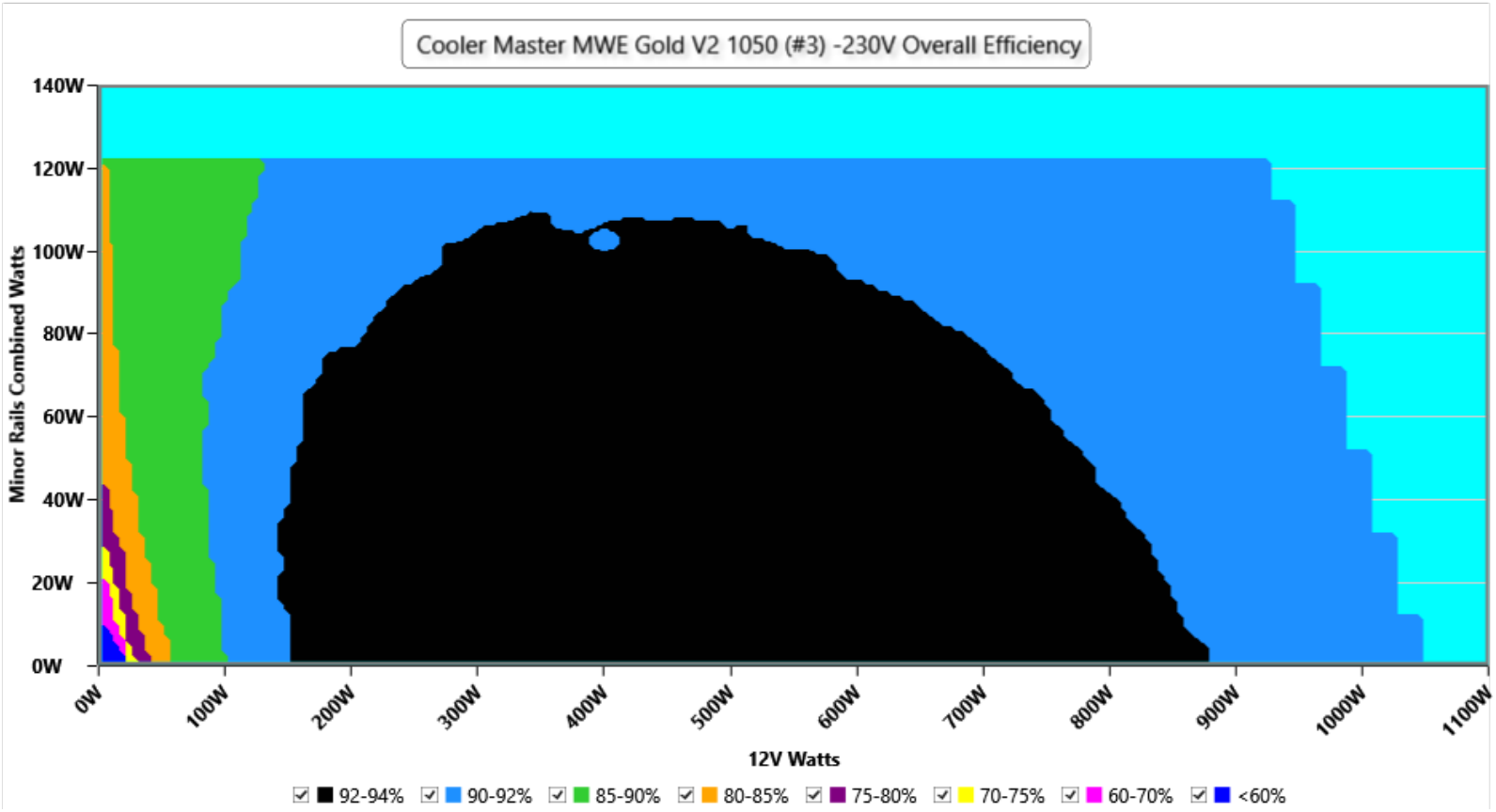
**115V**




**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

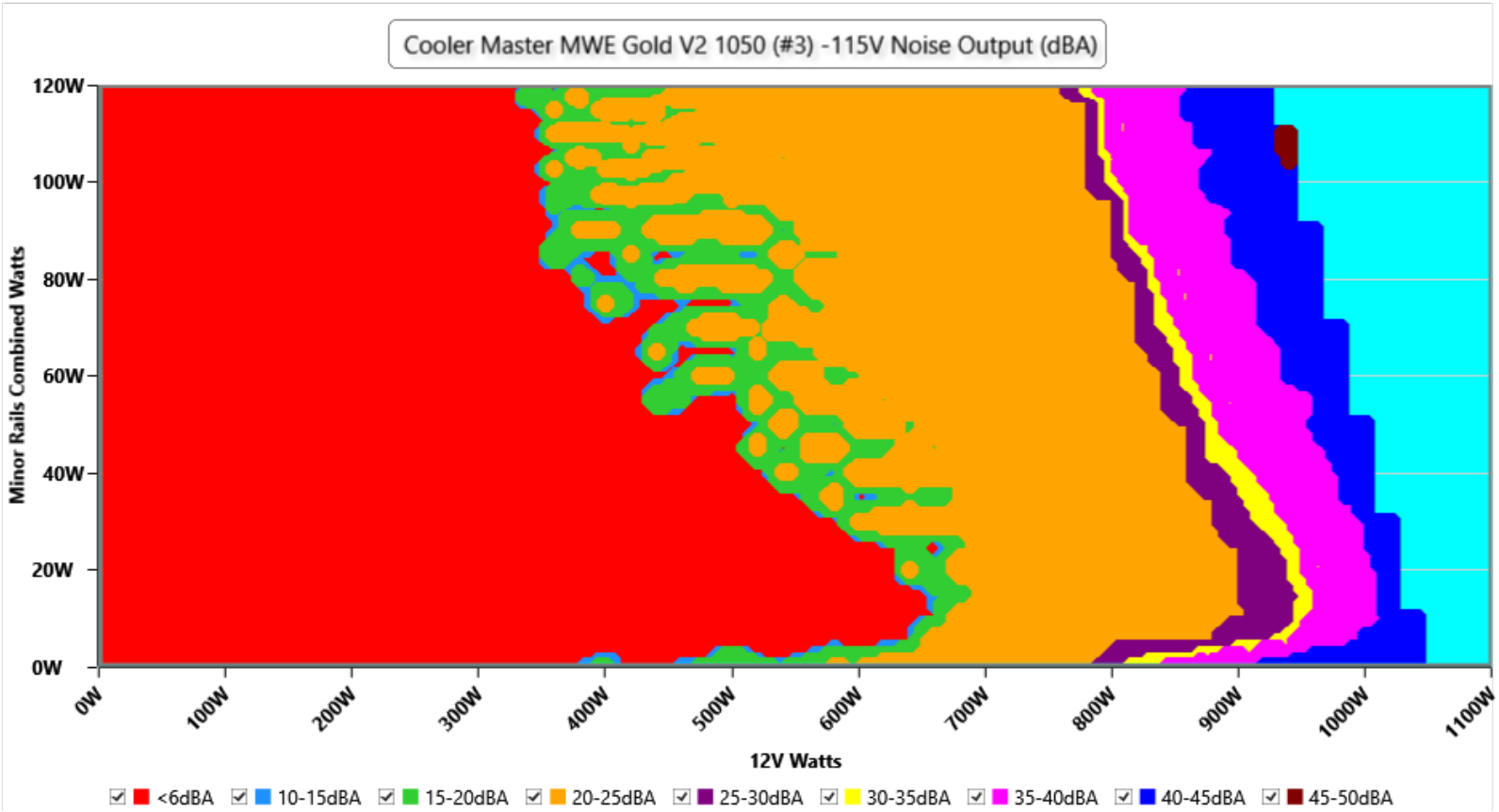



### INFO

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

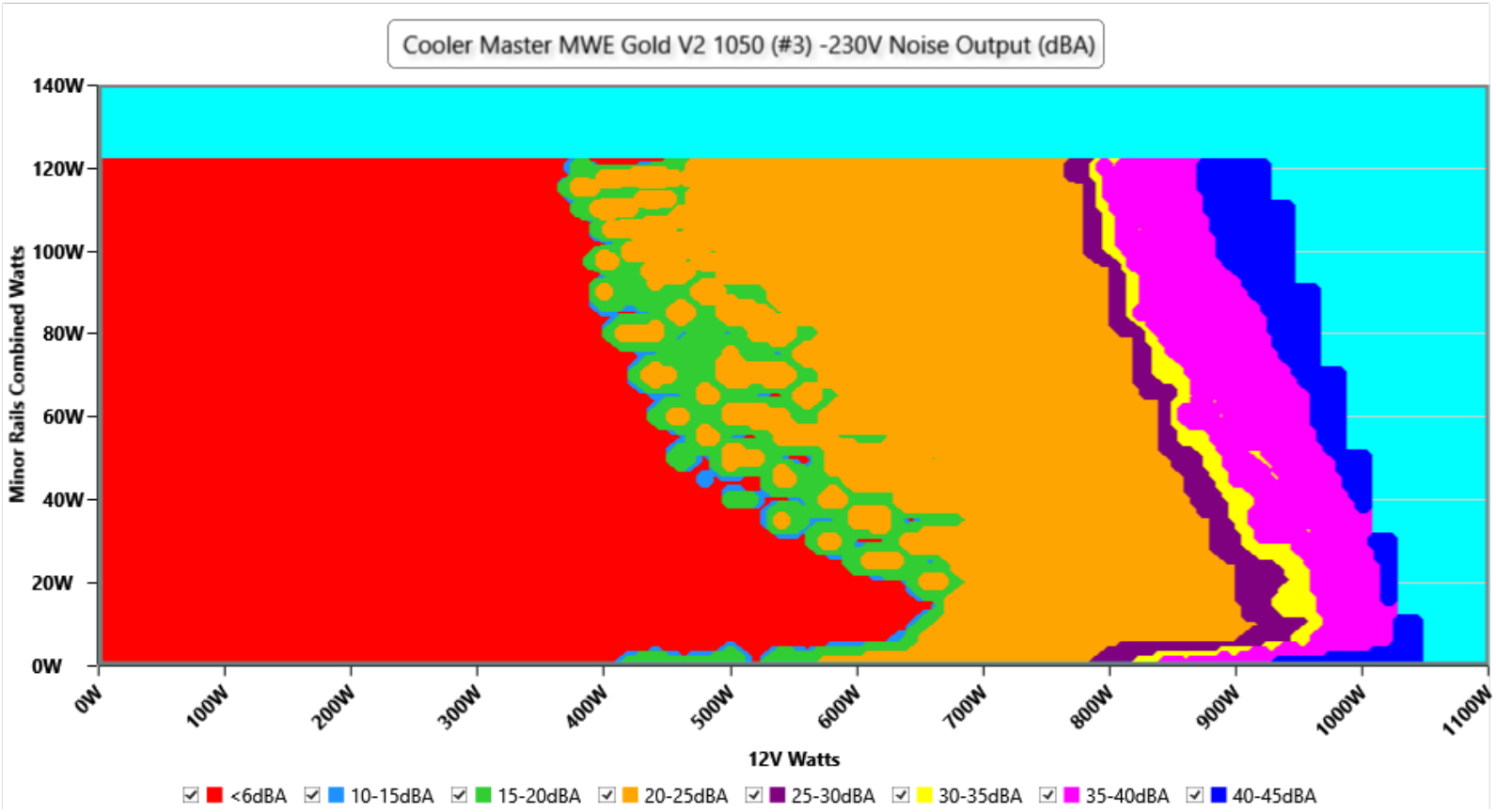
**115V**




**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

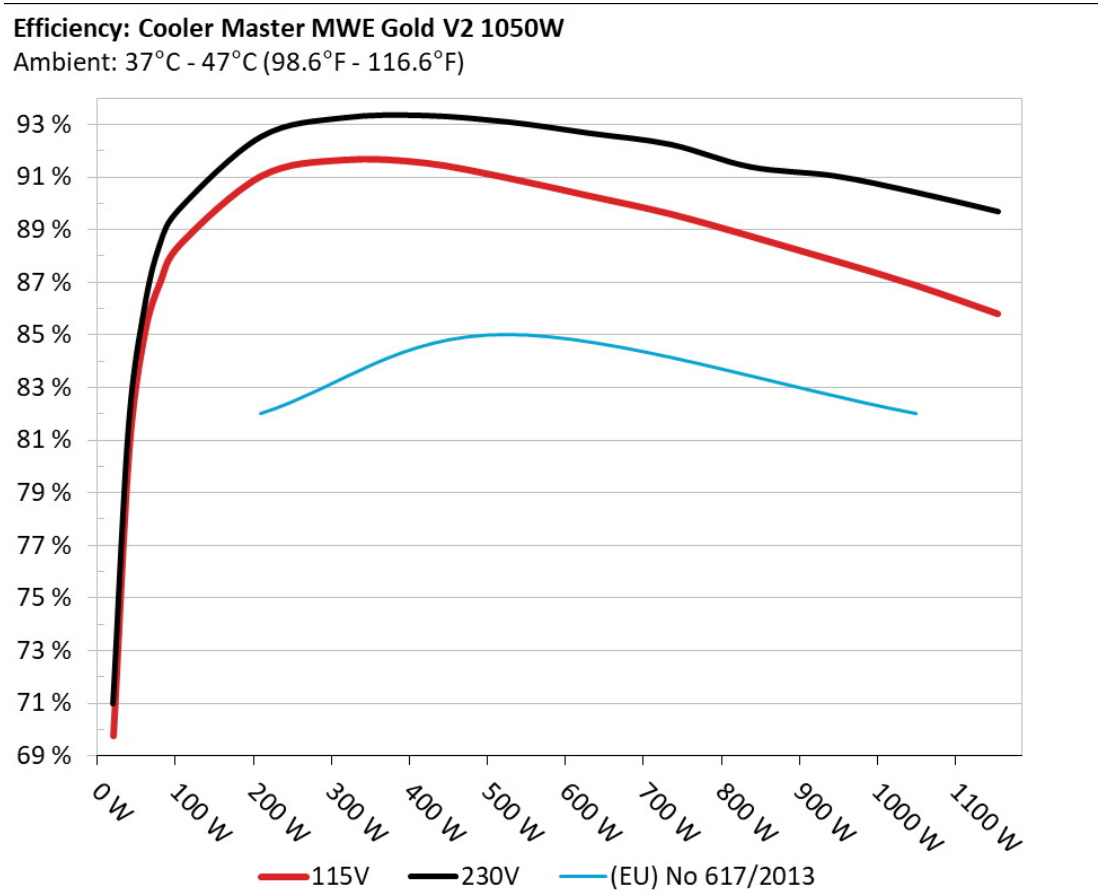



### INFO

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

## Indicative Performance

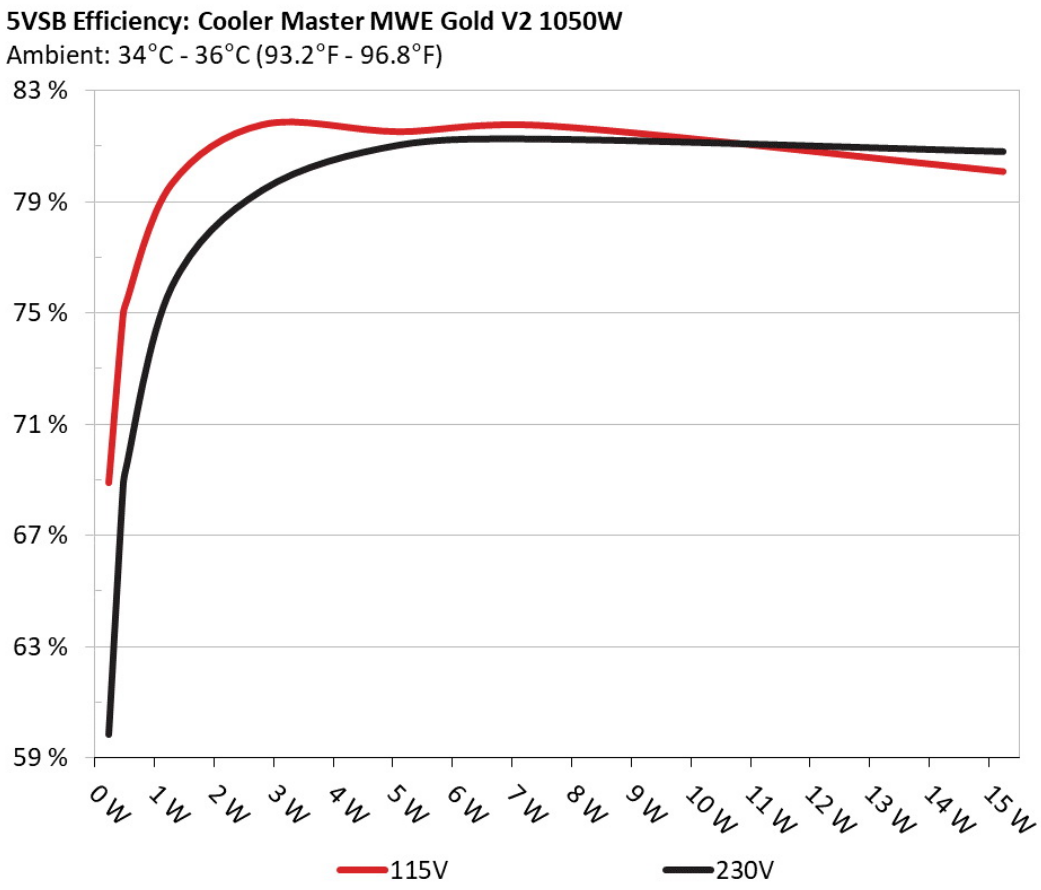
### Efficiency under high ambient temperature




**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** | 0.23W | 68.898% | 0.053 |
| | 5.122V | 0.334W | | 115.15V |
| **2** | **0.09A** | 0.461W | 74.738% | 0.095 |
| | 5.121V | 0.617W | | 115.15V |
| **3** | **0.55A** | 2.813W | 81.775% | 0.328 |
| | 5.114V | 3.44W | | 115.14V |
| **4** | **1A** | 5.109W | 81.519% | 0.405 |
| | 5.108V | 6.268W | | 115.14V |
| **5** | **1.5A** | 7.652W | 81.724% | 0.438 |
| | 5.1V | 9.363W | | 115.14V |
| **6** | **3A** | 15.233W | 80.086% | 0.49 |
| | 5.077V | 19.022W | | 115.13V |

### 230V

| Test # | 5VSB | DC/AC (Watts) | Efficiency | PF/AC Volts |
|---|---|---|---|---|
| **1** | **0.045A** | 0.23W | 59.849% | 0.018 |
| | 5.122V | 0.385W | | 230.36V |
| **2** | **0.09A** | 0.461W | 68.458% | 0.032 |
| | 5.121V | 0.674W | | 230.36V |
| **3** | **0.55A** | 2.813W | 79.441% | 0.152 |
| | 5.114V | 3.542W | | 230.35V |
| **4** | **1A** | 5.109W | 81.058% | 0.232 |
| | 5.108V | 6.302W | | 230.35V |
| **5** | **1.5A** | 7.652W | 81.265% | 0.291 |
| | 5.1V | 9.417W | | 230.35V |
| **6** | **3A** | 15.236W | 80.82% | 0.373 |
| | 5.078V | 18.852W | | 230.35V |

## Protection Features

| | |
|---|---|
| OCP (Cold @ 27.5°C) | 12V: 100.60A (114.97%), 12.151V<br>5V: 25.2A (126.00%), 5.013V<br>3.3V: 25.0A (125.00%), 3.273V<br>5VSB: 6.8A (226.67%), 5.018V |
| OCP (Hot) @ 38.8°C) | 12V: -<br>5V: 24.6A (123.00%), 5.016V<br>3.3V: 24.6A (123.00%), 3.277V<br>5VSB: 6.8A (226.67%), 5.016V |
| OCP (Cold @ 27.4°C) | 1328.959W (126.57%) |
| OCP (Hot @ 42.6°C) | 1325.979W (126.28%) |
| OTP | ✓ (155°C @ Heat Sink) |
| SCP | 12V to Earth: ✓<br>5V to Earth: ✓<br>3.3V to Earth: ✓<br>5VSB to Earth: ✓<br>-12V to Earth: ✓ |
| PWR_OK | Proper Operation |
| NLO | ✓ |
| Fan Failure Protection | ✗ |
| SIP | Surge: MOV<br>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%** | **6.866A** | **1.986A** | **2.001A** | **0.98A** | 104.963 | 88.409% | 0 | <6.0 | 47.79°C | 0.973 |
| | 12.141V | 5.035V | 3.298V | 5.102V | 118.726 | | | | 40.16°C | 115.11V |

| Test | 12V | 5V | 3.3V | 5VSB | DC/AC (Watts) | Efficiency | Fan Speed (RPM) | PSU Noise (dB[A]) | Temps (In/Out) | PF/AC Volts |
|---|---|---|---|---|---|---|---|---|---|---|
| **20%** | **14.750A** | **2.981A** | **3.005A** | **1.178A** | 209.961 | 91.025% | 0 | <6.0 | 48.58°C | 0.979 |
| | 12.139V | 5.034V | 3.294V | 5.092V | 230.665 | | | | 40.62°C | 115.08V |
| **30%** | **22.979A** | **3.478A** | **3.509A** | **1.377A** | 314.976 | 91.633% | 0 | <6.0 | 51.83°C | 0.98 |
| | 12.138V | 5.033V | 3.291V | 5.083V | 343.741 | | | | 41.4°C | 115.05V |
| **40%** | **31.183A** | **3.976A** | **4.014A** | **1.577A** | 419.658 | 91.52% | 0 | <6.0 | 54.23°C | 0.984 |
| | 12.136V | 5.031V | 3.289V | 5.074V | 458.545 | | | | 41.77°C | 115.01V |
| **50%** | **39.102A** | **4.972A** | **5.023A** | **1.778A** | 525.003 | 90.953% | 0 | <6.0 | 57.91°C | 0.988 |
| | 12.135V | 5.03V | 3.285V | 5.064V | 577.23 | | | | 42.18°C | 114.97V |
| **60%** | **46.959A** | **5.97A** | **6.034A** | **1.979A** | 629.547 | 90.275% | 837 | 23.7 | 42.9°C | 0.99 |
| | 12.132V | 5.027V | 3.282V | 5.054V | 697.367 | | | | 59.03°C | 114.92V |
| **70%** | **54.885A** | **6.969A** | **7.047A** | **2.181A** | 734.887 | 89.582% | 857 | 24 | 43.22°C | 0.991 |
| | 12.130V | 5.024V | 3.278V | 5.044V | 820.344 | | | | 60.04°C | 114.89V |
| **80%** | **62.815A** | **7.966A** | **8.06A** | **2.284A** | 839.719 | 88.717% | 1668 | 42.7 | 43.77°C | 0.992 |
| | 12.128V | 5.022V | 3.275V | 5.036V | 946.515 | | | | 56.38°C | 114.86V |
| **90%** | **71.142A** | **8.467A** | **8.557A** | **2.387A** | 945.107 | 87.811% | 1990 | 45.8 | 44.26°C | 0.992 |
| | 12.125V | 5.02V | 3.272V | 5.027V | 1076.306 | | | | 56.77°C | 114.81V |
| **100%** | **79.206A** | **8.967A** | **9.085A** | **2.994A** | 1049.926 | 86.867% | 2012 | 46.9 | 45.89°C | 0.993 |
| | 12.123V | 5.019V | 3.269V | 5.011V | 1208.658 | | | | 59.84°C | 114.78V |
| **110%** | **87.135A** | **9.967A** | **10.197A** | **2.998A** | 1154.548 | 85.793% | 2031 | 47.2 | 46.49°C | 0.993 |
| | 12.122V | 5.017V | 3.265V | 5.004V | 1345.739 | | | | 62.94°C | 114.75V |
| **CL1** | **0.116A** | **14.37A** | **14.524A** | **0A** | 121.302 | 83.89% | 0 | <6.0 | 41.34°C | 0.975 |
| | 12.140V | 5.024V | 3.284V | 5.106V | 144.603 | | | | 40.23°C | 115.11V |
| **CL2** | **0.115A** | **19.927A** | **0A** | **0A** | 101.397 | 81.9% | 0 | <6.0 | 46.69°C | 0.975 |
| | 12.145V | 5.018V | 3.29V | 5.114V | 123.809 | | | | 41.6°C | 115.11V |
| **CL3** | **0.115A** | **0A** | **20.14A** | **0A** | 67.388 | 76.84% | 0 | <6.0 | 47.77°C | 0.967 |
| | 12.143V | 5.035V | 3.277V | 5.108V | 87.7 | | | | 40.86°C | 115.12V |
| **CL4** | **86.539A** | **0A** | **0A** | **0A** | 1049.617 | 87.352% | 2011 | 46.9 | 45.86°C | 0.993 |
| | 12.129V | 5.024V | 3.272V | 5.064V | 1201.588 | | | | 59.82°C | 114.79V |

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%** | **6.867A** | **1.987A** | **2.002A** | **0.98A** | 104.977 | 89.786% | 0 | <6.0 | 48.5°C | 0.892 |
| | 12.142V | 5.035V | 3.297V | 5.101V | 116.914 | | | | 40.16°C | 230.38V |
| **20%** | **14.750A** | **2.981A** | **3.006A** | **1.179A** | 209.975 | 92.546% | 0 | <6.0 | 49.75°C | 0.946 |
| | 12.140V | 5.033V | 3.294V | 5.092V | 226.883 | | | | 40.55°C | 230.36V |
| **30%** | **22.980A** | **3.479A** | **3.51A** | **1.377A** | 314.989 | 93.258% | 0 | <6.0 | 52.15°C | 0.962 |
| | 12.138V | 5.032V | 3.291V | 5.083V | 337.758 | | | | 41.27°C | 230.35V |
| **40%** | **31.186A** | **3.976A** | **4.015A** | **1.577A** | 419.699 | 93.346% | 0 | <6.0 | 53.3°C | 0.971 |
| | 12.137V | 5.031V | 3.288V | 5.074V | 449.622 | | | | 41.78°C | 230.33V |
| **50%** | **39.104A** | **4.972A** | **5.024A** | **1.778A** | 525.028 | 93.109% | 0 | <6.0 | 55.48°C | 0.976 |
| | 12.135V | 5.029V | 3.285V | 5.064V | 563.903 | | | | 42.41°C | 230.31V |
| **60%** | **46.962A** | **5.971A** | **6.034A** | **1.979A** | 629.581 | 92.679% | 837 | 23.7 | 42.57°C | 0.98 |
| | 12.132V | 5.025V | 3.282V | 5.054V | 679.287 | | | | 54.14°C | 230.3V |
| **70%** | **54.888A** | **6.97A** | **7.048A** | **2.181A** | 734.902 | 92.247% | 852 | 23.9 | 43.29°C | 0.981 |
| | 12.130V | 5.023V | 3.278V | 5.045V | 796.667 | | | | 55.3°C | 230.28V |
| **80%** | **62.820A** | **7.967A** | **7.498A** | **1.921A** | 836.119 | 91.398% | 844 | 23.2 | 43.77°C | 0.983 |
| | 12.128V | 5.021V | 3.274V | 5.041V | 914.72 | | | | 53.21°C | 230.26V |
| **90%** | **71.148A** | **8.469A** | **8.558A** | **2.387A** | 945.173 | 91.049% | 1992 | 45.9 | 44.04°C | 0.985 |
| | 12.125V | 5.019V | 3.271V | 5.027V | 1038.097 | | | | 53.97°C | 230.25V |
| **100%** | **79.214A** | **8.969A** | **9.087A** | **2.994A** | 1050.017 | 90.42% | 2015 | 46.8 | 45.74°C | 0.986 |
| | 12.123V | 5.018V | 3.268V | 5.011V | 1161.256 | | | | 55.9°C | 230.24V |
| **110%** | **87.141A** | **9.969A** | **10.199A** | **2.998A** | 1154.612 | 89.696% | 2030 | 47.1 | 47.13°C | 0.987 |
| | 12.122V | 5.016V | 3.265V | 5.004V | 1287.247 | | | | 58.94°C | 230.21V |
| **CL1** | **0.116A** | **14.372A** | **14.525A** | **0A** | 121.305 | 85.022% | 0 | <6.0 | 43.46°C | 0.916 |
| | 12.140V | 5.024V | 3.284V | 5.106V | 142.682 | | | | 40.46°C | 230.37V |
| **CL2** | **0.115A** | **19.931A** | **0A** | **0A** | 101.397 | 83.13% | 0 | <6.0 | 46.14°C | 0.898 |
| | 12.146V | 5.017V | 3.289V | 5.113V | 121.989 | | | | 41.94°C | 230.37V |
| **CL3** | **0.115A** | **0A** | **20.141A** | **0A** | 67.391 | 78.197% | 0 | <6.0 | 47°C | 0.851 |
| | 12.143V | 5.035V | 3.277V | 5.108V | 86.179 | | | | 40.98°C | 230.38V |

| Test | 12V | 5V | 3.3V | 5VSB | DC/AC (Watts) | Efficiency | Fan Speed (RPM) | PSU Noise (dB[A]) | Temps (In/Out) | PF/AC Volts |
|---|---|---|---|---|---|---|---|---|---|---|
| **CL4** | **86.543A** | **0A** | **0A** | **0A** | 1049.649 | 90.876% | 2020 | 46.9 | 45.96°C | 0.986 |
| | 12.128V | 5.024V | 3.272V | 5.064V | 1155.036 | | | | 57.76°C | 230.23V |

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** | **1.224A** | **0.497A** | **0.501A** | **0.195A** | 20.001 | 69.764% | 0 | <6.0 | 42.54°C | 0.906 |
| | 12.142V | 5.033V | 3.293V | 5.119V | 28.67 | | | | 36.61°C | 115.14V |
| **40W** | **2.692A** | **0.695A** | **0.701A** | **0.293A** | 39.999 | 80.546% | 0 | <6.0 | 43.13°C | 0.945 |
| | 12.142V | 5.034V | 3.294V | 5.116V | 49.657 | | | | 37.2°C | 115.13V |
| **60W** | **4.162A** | **0.894A** | **0.9A** | **0.391A** | 59.998 | 85.03% | 0 | <6.0 | 44.38°C | 0.965 |
| | 12.142V | 5.036V | 3.299V | 5.114V | 70.559 | | | | 38.27°C | 115.13V |
| **80W** | **5.627A** | **1.092A** | **1.1A** | **0.489A** | 79.954 | 86.987% | 0 | <6.0 | 45.72°C | 0.965 |
| | 12.141V | 5.036V | 3.299V | 5.111V | 91.913 | | | | 39.16°C | 115.12V |

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** | **1.223A** | **0.497A** | **0.501A** | **0.195A** | 20.001 | 70.982% | 0 | <6.0 | 42.33°C | 0.619 |
| | 12.143V | 5.033V | 3.293V | 5.119V | 28.178 | | | | 36.9°C | 230.37V |
| **40W** | **2.692A** | **0.695A** | **0.701A** | **0.293A** | 39.999 | 81.543% | 0 | <6.0 | 43.84°C | 0.758 |
| | 12.142V | 5.033V | 3.294V | 5.116V | 49.047 | | | | 37.78°C | 230.37V |
| **60W** | **4.162A** | **0.894A** | **0.9A** | **0.391A** | 59.999 | 85.982% | 0 | <6.0 | 44.92°C | 0.824 |
| | 12.142V | 5.035V | 3.299V | 5.114V | 69.782 | | | | 38.08°C | 230.37V |
| **80W** | **5.628A** | **1.093A** | **1.1A** | **0.489A** | 79.962 | 88.442% | 0 | <6.0 | 46.66°C | 0.859 |
| | 12.142V | 5.035V | 3.299V | 5.111V | 90.417 | | | | 39.37°C | 230.37V |

The results above are not used in the certification process

## Ripple Measurements

### 115V

| Test | 12V | 5V | 3.3V | 5VSB | Pass/Fail |
|---|---|---|---|---|---|
| **10% Load** | 16.0 mV | 6.7 mV | 3.8 mV | 7.5 mV | Pass |
| **20% Load** | 21.5 mV | 7.4 mV | 4.5 mV | 8.1 mV | Pass |
| **30% Load** | 20.1 mV | 9.5 mV | 5.3 mV | 8.9 mV | Pass |
| **40% Load** | 18.4 mV | 9.1 mV | 5.3 mV | 9.6 mV | Pass |
| **50% Load** | 14.6 mV | 10.4 mV | 6.0 mV | 10.3 mV | Pass |
| **60% Load** | 14.7 mV | 11.0 mV | 7.0 mV | 10.8 mV | Pass |
| **70% Load** | 16.5 mV | 10.8 mV | 6.9 mV | 12.2 mV | Pass |
| **80% Load** | 17.1 mV | 11.7 mV | 12.9 mV | 12.2 mV | Pass |
| **90% Load** | 18.3 mV | 12.3 mV | 14.0 mV | 12.1 mV | Pass |
| **100% Load** | 28.6 mV | 14.9 mV | 15.5 mV | 13.1 mV | Pass |
| **110% Load** | 32.5 mV | 15.6 mV | 15.9 mV | 13.9 mV | Pass |
| **Crossload 1** | 23.2 mV | 8.3 mV | 13.3 mV | 10.8 mV | Pass |
| **Crossload 2** | 16.4 mV | 7.8 mV | 4.2 mV | 10.4 mV | Pass |
| **Crossload 3** | 13.5 mV | 7.1 mV | 14.6 mV | 9.8 mV | Pass |
| **Crossload 4** | 28.5 mV | 13.7 mV | 8.4 mV | 15.3 mV | Pass |

The results above are not used in the certification process

### 230V

| Test | 12V | 5V | 3.3V | 5VSB | Pass/Fail |
|---|---|---|---|---|---|
| **10% Load** | 18.8 mV | 6.7 mV | 3.8 mV | 7.5 mV | Pass |
| **20% Load** | 22.7 mV | 7.2 mV | 4.2 mV | 7.9 mV | Pass |
| **30% Load** | 21.7 mV | 8.8 mV | 5.3 mV | 9.6 mV | Pass |
| **40% Load** | 18.8 mV | 9.5 mV | 5.4 mV | 10.1 mV | Pass |
| **50% Load** | 15.7 mV | 10.3 mV | 5.7 mV | 10.3 mV | Pass |
| **60% Load** | 15.4 mV | 10.3 mV | 6.2 mV | 11.4 mV | Pass |

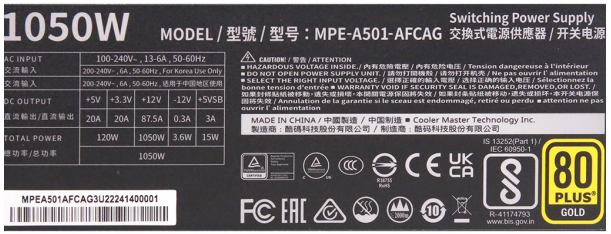
| Test | 12V | 5V | 3.3V | 5VSB | Pass/Fail |
|---|---|---|---|---|---|
| **70% Load** | 16.7 mV | 11.3 mV | 6.9 mV | 11.8 mV | Pass |
| **80% Load** | 15.0 mV | 10.6 mV | 9.5 mV | 10.7 mV | Pass |
| **90% Load** | 18.5 mV | 12.6 mV | 13.5 mV | 12.3 mV | Pass |
| **100% Load** | 30.0 mV | 14.4 mV | 15.3 mV | 13.6 mV | Pass |
| **110% Load** | 33.4 mV | 16.0 mV | 15.7 mV | 13.1 mV | Pass |
| **Crossload 1** | 24.0 mV | 8.2 mV | 12.8 mV | 10.8 mV | Pass |
| **Crossload 2** | 17.8 mV | 6.6 mV | 3.8 mV | 10.3 mV | Pass |
| **Crossload 3** | 15.7 mV | 7.2 mV | 14.2 mV | 9.9 mV | Pass |
| **Crossload 4** | 29.1 mV | 13.6 mV | 8.2 mV | 15.2 mV | Pass |

The results above are not used in the certification process

## Cooler Master MWE Gold 1050 V2 ATX v3.1 (GX Gold 1050)




Top side




Power specifications label