



**Make It Yours.**

# 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

115V

230V

Scheme: LAMBDA PSU

Outside Validation Scope

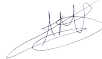
## General Information

### 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 ( $\leq$ 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 ( $\leq$ 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  |

## Stromverbrauch im Ruhezustand

### Tables

#### 115V

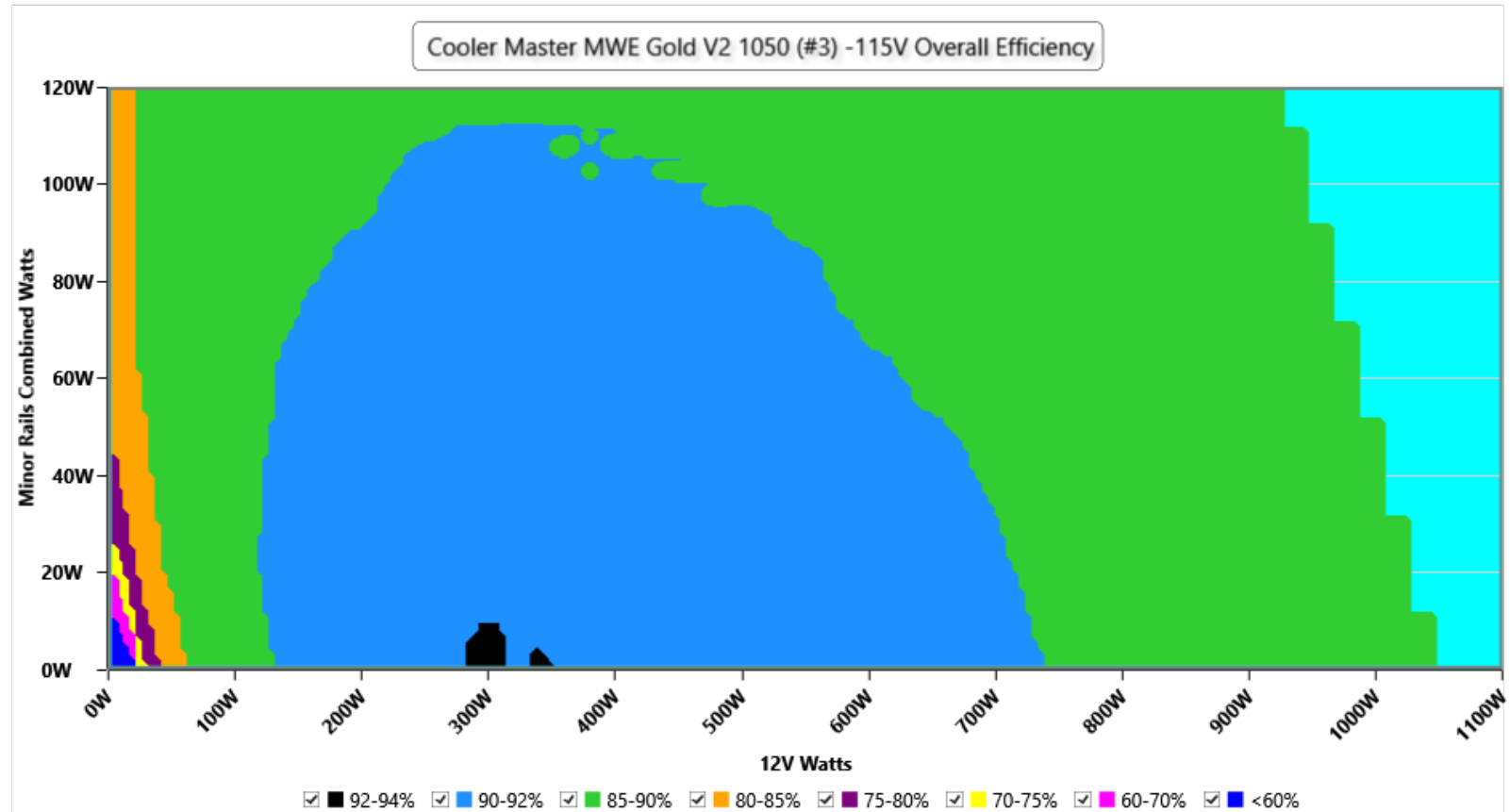
| Detailed Results   |          |          |           |          |           |        |
|--------------------|----------|----------|-----------|----------|-----------|--------|
|                    | Average  | Min      | Limit Min | Max      | Limit Max | Result |
| Mains Voltage RMS: | 115.07 V | 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    |

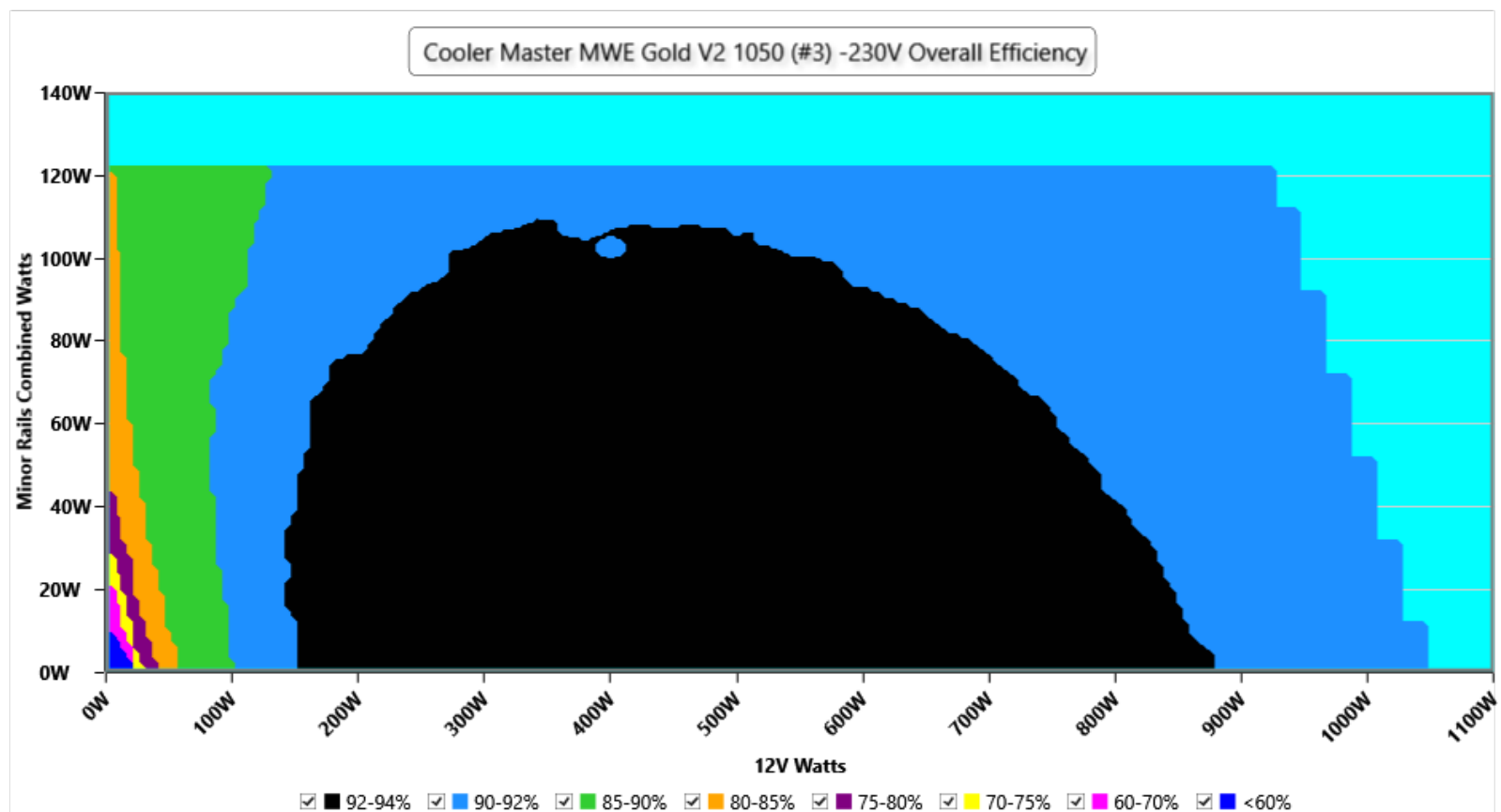
## Efficiency Graph

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

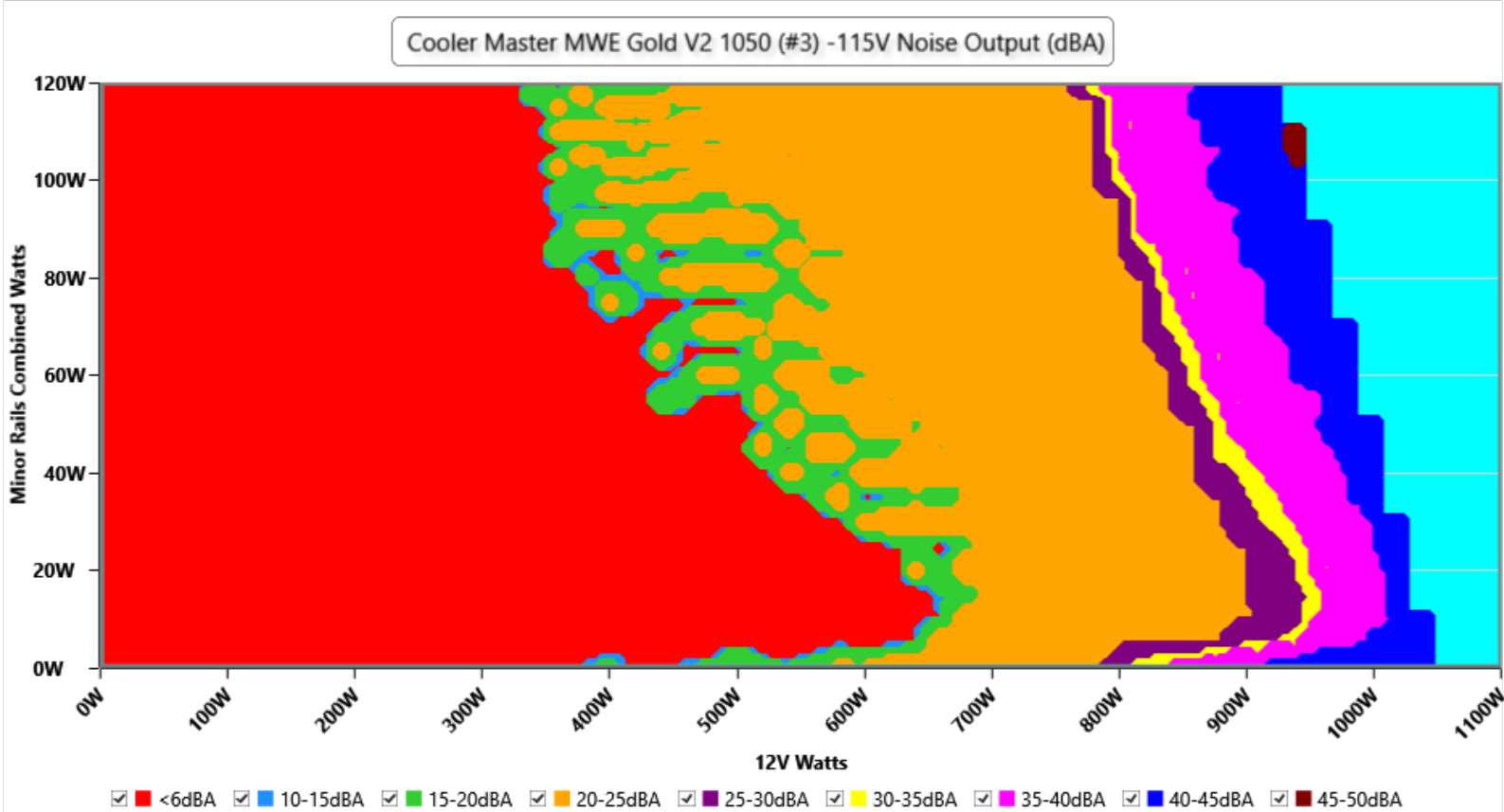


### INFO

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

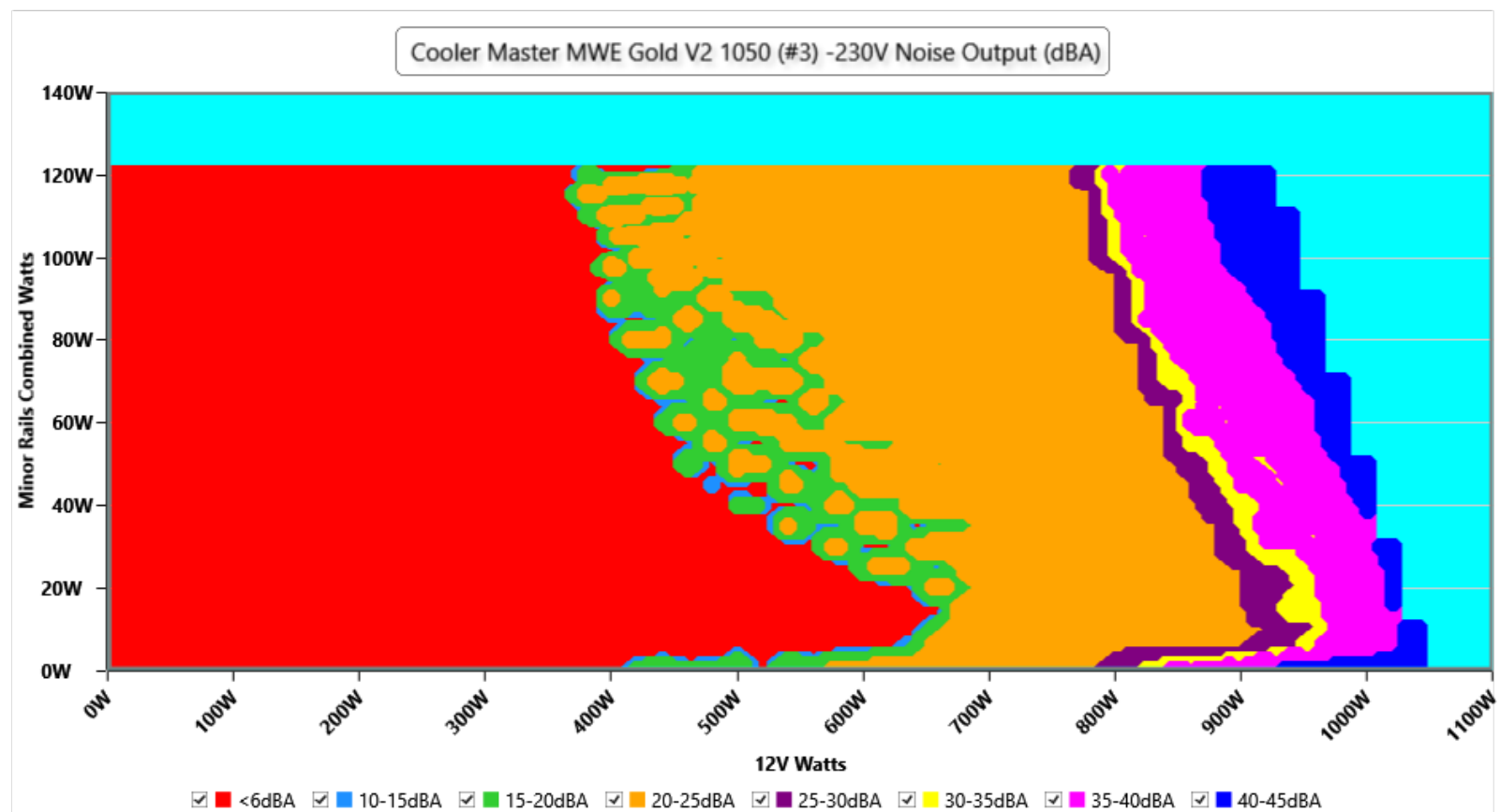
# Noise Graph

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



### INFO

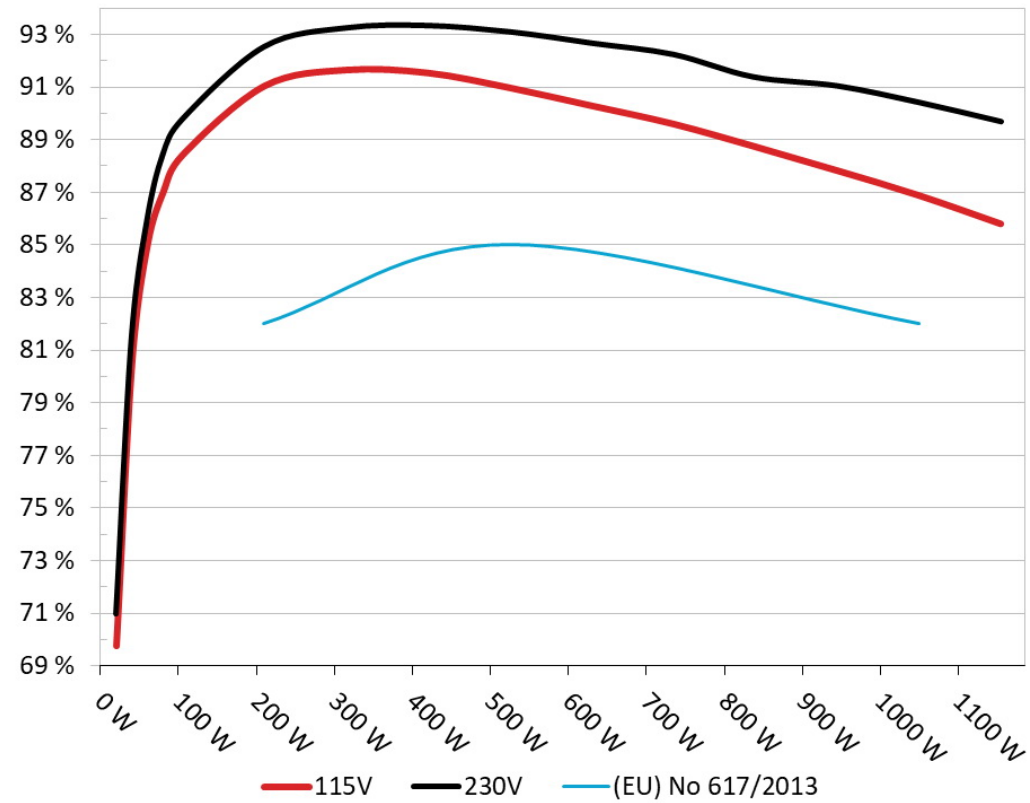
The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

## Indicative Performance

### Efficiency under high ambient temperature

Efficiency: Cooler Master MWE Gold V2 1050W

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



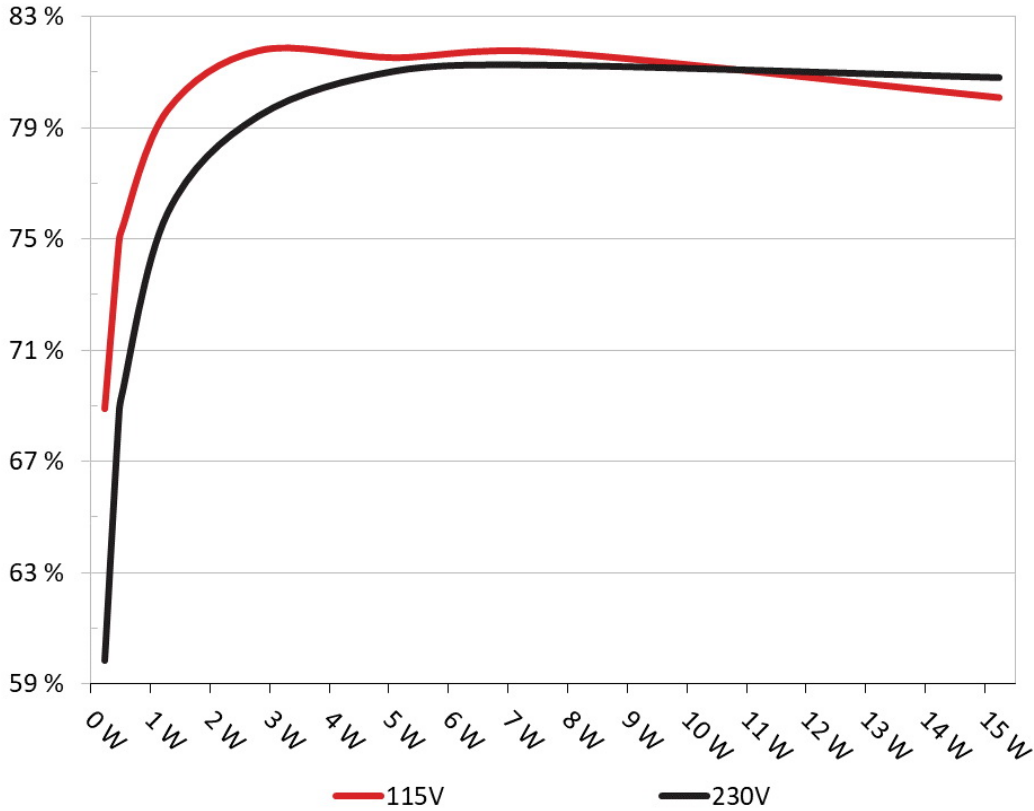
### INFO

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: Cooler Master MWE Gold V2 1050W

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

### 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

| 1050W       |  | MODEL / 型號 / 型号 : MPE-A501-AFCAG          |  | Switching Power Supply                                                                                                                                |  |
|-------------|--|-------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| AC INPUT    |  | 100-240V~, 13-6A, 50-60Hz                 |  | CAUTION / 警告 / ATTENTION                                                                                                                              |  |
| 交流輸入        |  | 200-240V~, 6A, 50-60Hz For Korea Use Only |  | DANGER: VOLTAGE HAZARD / 內有危險電壓 / 內有危險電壓 / Tension dangereuse à l'intérieur                                                                           |  |
| 交流輸入        |  | 200-240V~, 6A, 50-60Hz 適用於韓國地區            |  | DO NOT OPEN POWER SUPPLY UNIT / 請勿打開機殼 / 請勿打開機殼 / Ne pas ouvrir l'alimentation                                                                        |  |
| DC OUTPUT   |  | +5V +3.3V +12V -12V +5VSB                 |  | SELECT THE RIGHT INPUT VOLTAGE / 選擇正確的輸入電壓 / 選擇正確的輸入電壓 / Sélectionnez la bonne tension d'entrée                                                       |  |
| 直流輸出/直流輸出   |  | 20A 20A 87.5A 0.3A 3A                     |  | WARRANTY VOID IF SECURITY SEAL IS DAMAGED, REMOVED, OR LOST / 如果安全封條受損、被移除或丟失，則保固失效 / 如果安全封條受損、被移除或丟失，則保固失效 / Attention: ne pas ouvrir l'alimentation |  |
| TOTAL POWER |  | 120W 1050W 3.6W 15W                       |  | MADE IN CHINA / 中國製造 / 中國製造 / Cooler Master Technology Inc.                                                                                           |  |
| 總功率/總功率     |  | 1050W                                     |  | R-41174793                                                                                                                                            |  |
|             |  |                                           |  | www.coolermaster.com                                                                                                                                  |  |

Power specifications label

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