ENDORFY

# Endorfy Supremo FM6 1000W

Serial Number EY7A0112411000904

Lab ID EY10002788

Certification ID 252788

Test Result Report ID: 25PS2788A

Certificate Issue Date: Apr 17, 2025

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 | Endorfy |
| Model | Supremo FM6 1000W |
| OEM/ODM | SAMA |
| Serial Number | EY7A0112411000904 |
| Product Specifications | |
| Manufacturer-Provided Information | |
| Rated Voltage (Vrms) | 100-240 |
| Rated Current (Arms) | 6.5-13 |

| | |
|---|---|
| Rated Frequency (Hz) | 50-60 |
| Rated Power (W) | 1000 |
| 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 (Fluctus 10-1037) |
| Semi-Passive Operation | |
| Cybenetics Testing Information | |
| Lab ID | EY10002788 |
| Date of receipt | Apr 4, 2025 |
| Testing Date | Apr 16, 2025 |
| Report Issued Date | Apr 17, 2025 |
| DUT Notes | The OPP and OCP +12V triggering points are set too high. |
| 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 24 pin (600mm) | 1 | 1 | 18-20AWG | No |
| 4+4 pin EPS12V (710mm) | 2 | 2 | 18AWG | No |
| 6+2 pin PCIe (560mm) | 3 | 3 | 18AWG | No |
| 12+4 pin PCIe (605mm) (600W) | 1 | 1 | 16-22AWG | No |
| SATA (560mm+155mm+155mm) | 2 | 6 | 18AWG | No |

| | | | | |
|---|---|---|---|---|
| SATA (560mm+160mm) / 4-pin Molex (+160mm) | 1 | 2 / 1 | 18AWG | No |
| AC Power Cord (1380mm) - C13 coupler | 1 | 1 | 18AWG | - |

## 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 | 83 | 3 | 0.3 |
| | Watts | 100 | | 996 | 15 | 3.6 |
| Total Max. Power (W) | | 1000 | | | | |

## Parts Description

| | |
|---|---|
| **General Data** | |
| Manufacturer (OEM) | Sama |
| PCB Type | Double-Sided |
| **Primary Side** | |
| Transient Filter | 6x Y caps, 3x X caps, 2x CM chokes, 1x MOV |
| Inrush Protection | 1x NTC Thermistor 5D-20 (5Ohm @ 25°C) & Relay |
| Bridge Rectifier(s) | 2x GBU1508 (800V, 15A @ 100°C) |
| APFC MODFETs | 2x Infineon IPP50R140CP (550V, 15A @ 100°C, Rds(on): 0.14Ohm) |
| APFC Boost Diode | 1x CRMicro CRXF10D065G2 (650V, 9A @ 135°C) |

| | |
|---|---|
| Bulk Cap(s) | 1x Nichicon (400V, 1,000uF , 2,000h @ 105°C, GG(M) ) |
| Main Switchers | 4x WG B60R190 (600V, 20A @ 100°C, Rds(on): 0.19Ohm) |
| APFC Controller | 1x Champion CM6500UNX |
| Resonant Controller | 1x Champion CM6901T6X |
| Topology | Primary side: APFC, Full-Bridge & LLC Resonant converter<br>Secondary side: Synchronous Rectification & DC-DC converters |
| **Secondary Side** | |
| +12V MOSFETs | 4x CRMicro HGQ014N04A-G (40V, 100A @ 100°C) |
| 5V & 3.3V | DC-DC Converters: 4x WG N08V30<br>PWM Controller(s): 1x ANPEC APW7159C |
| Filtering Capacitors | Electrolytic:<br>4x Nippon Chemi-con (@ 105°C, W ),<br>1x Nichicon (4-10,000 @ 105°C, HE )<br>1x Nippon Chemi-con (4-10,000 @ 105°C, KY ),<br>2x Rubycon (4-10,000 @ 105°C, YXJ ),<br>2x Rubycon (6-10,000 @ 105°C, ZLH ),<br>1x Rubycon (2-10,000 @ 105°C, YXF )<br>Polymer:<br>22x Nichicon FPCAP |
| Supervisor IC | Esthome EST.7610F (OVP, UVP, FPOB, PGO) |
| Fan Power Transistor | STMicroelectronics 2SD882 |
| Fan Model | Endofy Fluctus 10-1037 (120mm, 12V, 0.15A, Fluid Dynamic Bearing Fan) |
| **5VSB Circuit** | |
| Rectifier | 1x SB1060L SBR (60V, 10A @ 25°C) |
| Standby PWM Controller | Chipown PN8141 |

# 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 | ✓ |
| Conducted Emissions EN 55032 & CISPR 32 | Passed |

## Performance Summary

### 115V

| | |
|---|---|
| Accredited | |
| Average Efficiency (>1450 load combinations) | 90.011% |
| Average Noise Output (>1450 Load Combinations) | 21.91dBA |
| Average PF (>1450 Load Combinations) | 0.981 |
| Efficiency With 10W (≤500W) or 2% (>500W) Load | 67.203% |
| Standby Power Consumption | 0.0437W |
| Non-Accredited | |
| 12V Ripple (Full Load) | 39.12mV |
| 5V Ripple (Full Load) | 21.57mV |
| 3.3V Ripple (Full Load) | 21.34mV |
| 5VSB Ripple (Full Load) | 12.19mV |
| 12V Load Regulation | 0.67% |
| 5V Load Regulation | 0.18% |
| 3.3V Load Regulation | 0.63% |
| 5VSB Load Regulation | 2.49% |
| Inrush Current | 33.220A |

### 230V

| | |
|---|---|
| Accredited | |
| Average Efficiency (>1450 load combinations) | 92.182% |
| Average Noise Output (>1450 Load Combinations) | 20.50dBA |
| Average PF (>1450 Load Combinations) | 0.941 |
| Efficiency With 10W (≤500W) or 2% (>500W) Load | 67.504% |
| Standby Power Consumption | 0.1243W |
| Non-Accredited | |

| | | |
|---|---|---|
| 12V Ripple (Full Load) | | 42.03mV |
| 5V Ripple (Full Load) | | 23.08mV |
| 3.3V Ripple (Full Load) | | 21.06mV |
| 5VSB Ripple (Full Load) | | 12.45mV |
| 12V Load Regulation | | 0.66% |
| 5V Load Regulation | | 0.16% |
| 3.3V Load Regulation | | 0.60% |
| 5VSB Load Regulation | | 2.49% |
| Inrush Current | | 65.340A |
| 12V Transient Response (200%) | | 11.36V |
| 5V Transient Response (200%) | | 4.929V |
| 3.3V Transient Response (200%) | | 3.252V |
| 5VSB Transient Response (200%) | | 4.957V |
| Hold-Up Time & PWR_OK Signal | | 22.40ms |
| AC Loss to PWR_OK Hold Up Time | | 18.10ms |
| PWR_OK Inactive to DC Loss Delay | | 4.30ms |
| PSU Timings: T1 (20% / 100%) | 95.0ms | 96.0ms |
| PSU Timings: T3 (20% / 100%) | 108.0ms | 107.0ms |
| 12V OCP (30.1°C / 44.6°C) | >124.60A (150.12%), 12.003V | 124.00A (149.40%), 12.003V |
| 5V OCP (30.1°C / 44.6°C) | 26.8A (134.00%), 4.981V | 26.8A (134.00%), 4.973V |
| 3.3V OCP (30.1°C / 44.6°C) | 24.7A (123.50%), 3.325V | 24.3A (121.50%), 3.329V |
| 5VSB OCP (30.1°C / 44.6°C) | 4.3A (143.33%), 5.009V | 4.2A (140.00%), 5.005V |
| OPP (30.54°C / 42.28°C) | 150.31% | 140.11% |

## Hold-Up Time & PWR_OK Signal

| | |
|---|---|
| Hold-Up Time (ms) | 22.4 |
| AC Loss to PWR_OK Hold Up Time (ms) | 18.1 |
| PWR_OK Inactive to DC Loss Delay (ms) | 4.3 |

# Vampire Power

## Tables

### 115V

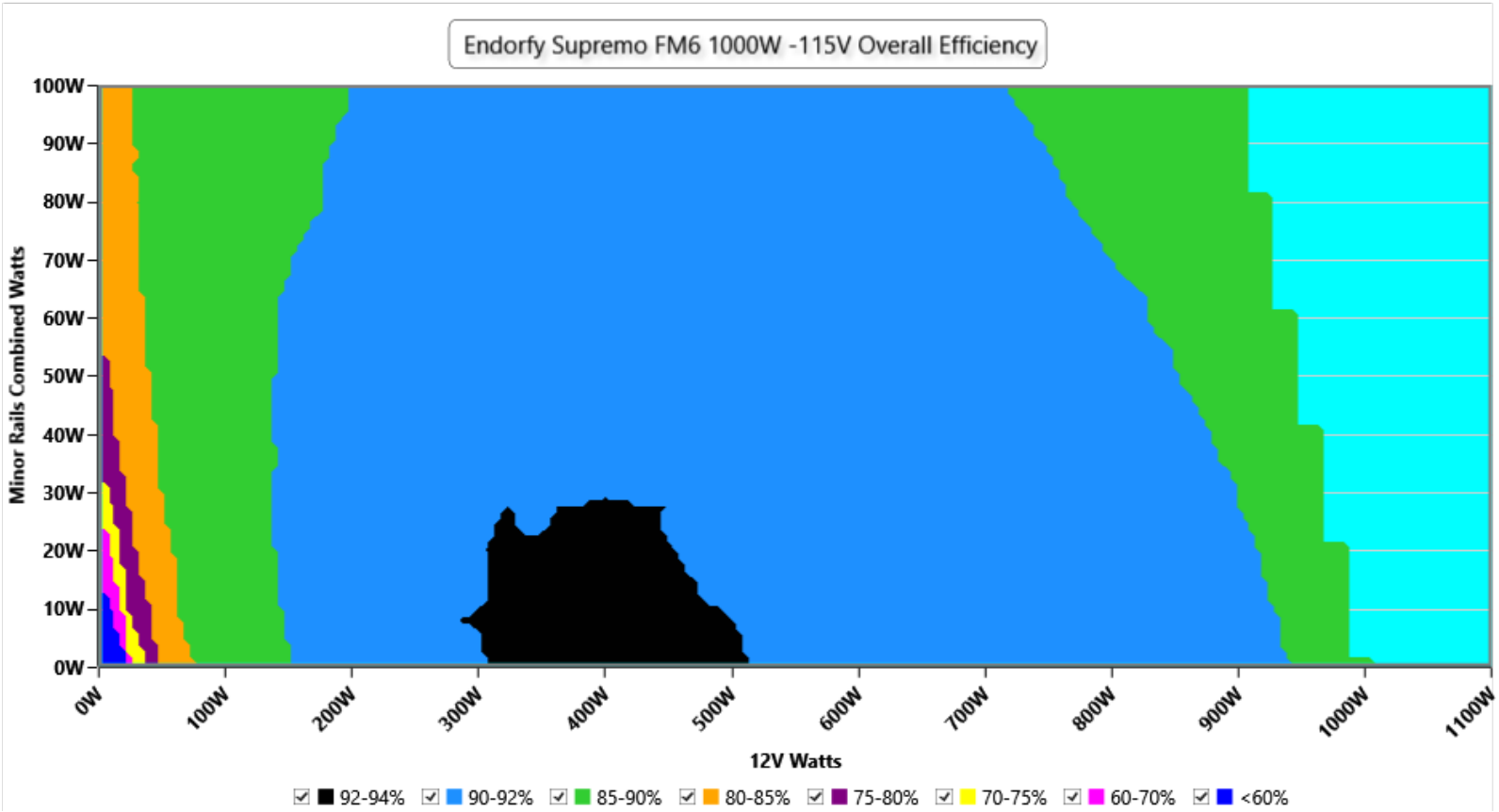
| Detailed Results | | | | | | |
|---|---|---|---|---|---|---|
| | Average | Min | Limit Min | Max | Limit Max | Result |
| Mains Voltage RMS: | 115.10 V | 115.07 V | 113.85 V | 115.12 V | 116.15 V | PASS |
| Mains Frequency: | 60.00 Hz | 60.00 Hz | 59.40 Hz | 60.00 Hz | 60.60 Hz | PASS |
| Mains Voltage CF: | 1.415 | 1.415 | 1.340 | 1.416 | 1.490 | PASS |
| Mains Voltage THD: | 0.13 % | 0.10 % | N/A | 0.15 % | 2.00 % | PASS |
| Real Power: | 0.044 W | 0.020 W | N/A | 0.060 W | N/A | N/A |
| Apparent Power: | 9.311 W | 9.289 W | N/A | 9.365 W | N/A | N/A |
| Power Factor: | 0.006 | N/A | N/A | N/A | N/A | N/A |

### 230V

| Detailed Results | | | | | | |
|---|---|---|---|---|---|---|
| | Average | Min | Limit Min | Max | Limit Max | Result |
| Mains Voltage RMS: | 230.25 V | 230.24 V | 227.70 V | 230.28 V | 232.30 V | PASS |
| Mains Frequency: | 50.00 Hz | 50.00 Hz | 49.50 Hz | 50.00 Hz | 50.50 Hz | PASS |
| Mains Voltage CF: | 1.415 | 1.415 | 1.340 | 1.416 | 1.490 | PASS |
| Mains Voltage THD: | 0.14 % | 0.13 % | N/A | 0.15 % | 2.00 % | PASS |
| Real Power: | 0.124 W | 0.107 W | N/A | 0.145 W | N/A | N/A |
| Apparent Power: | 30.659 W | 30.633 W | N/A | 30.676 W | N/A | N/A |
| Power Factor: | 0.004 | N/A | N/A | N/A | N/A | N/A |

## Efficiency Graph

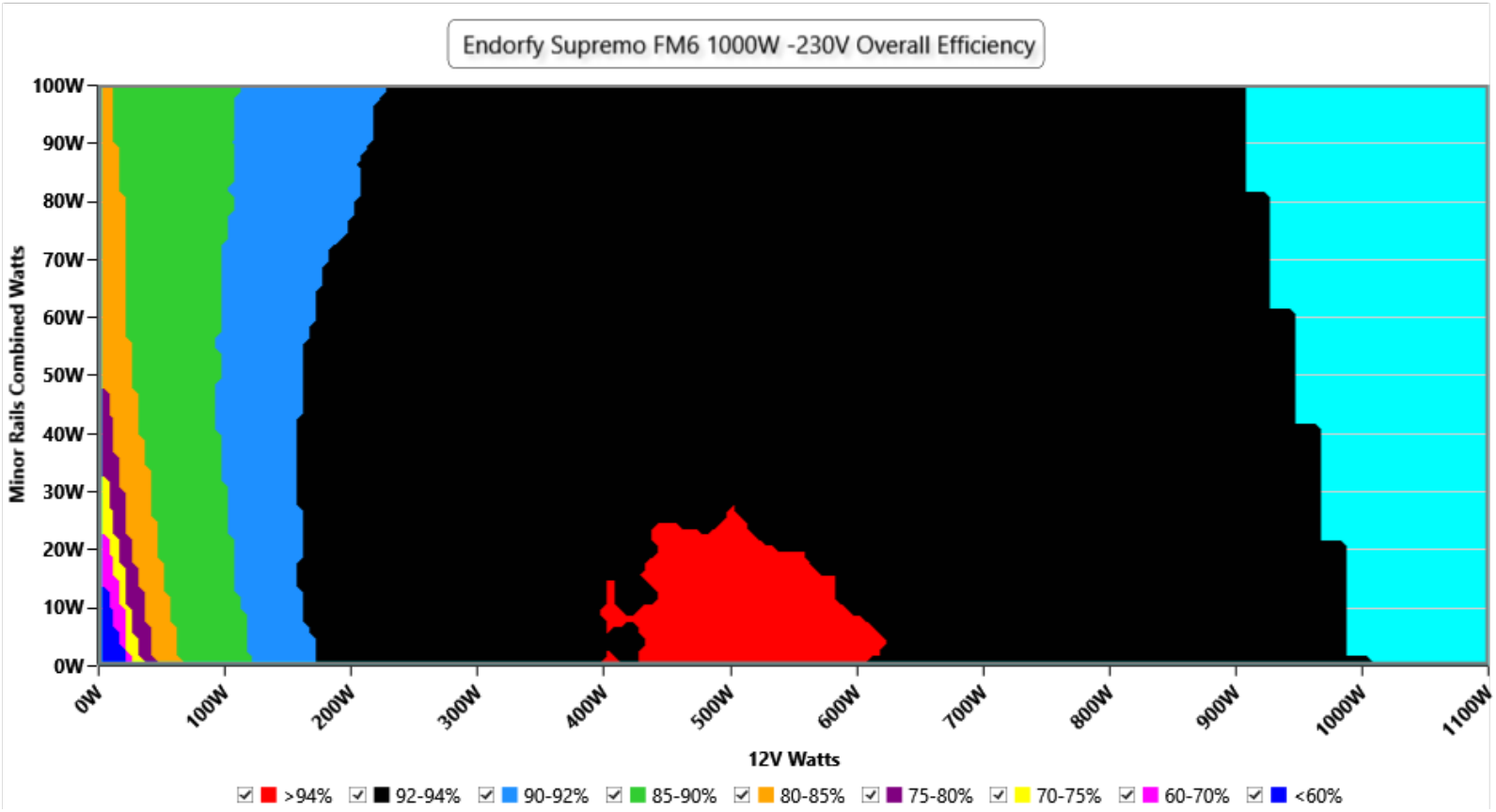
**115V**




**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

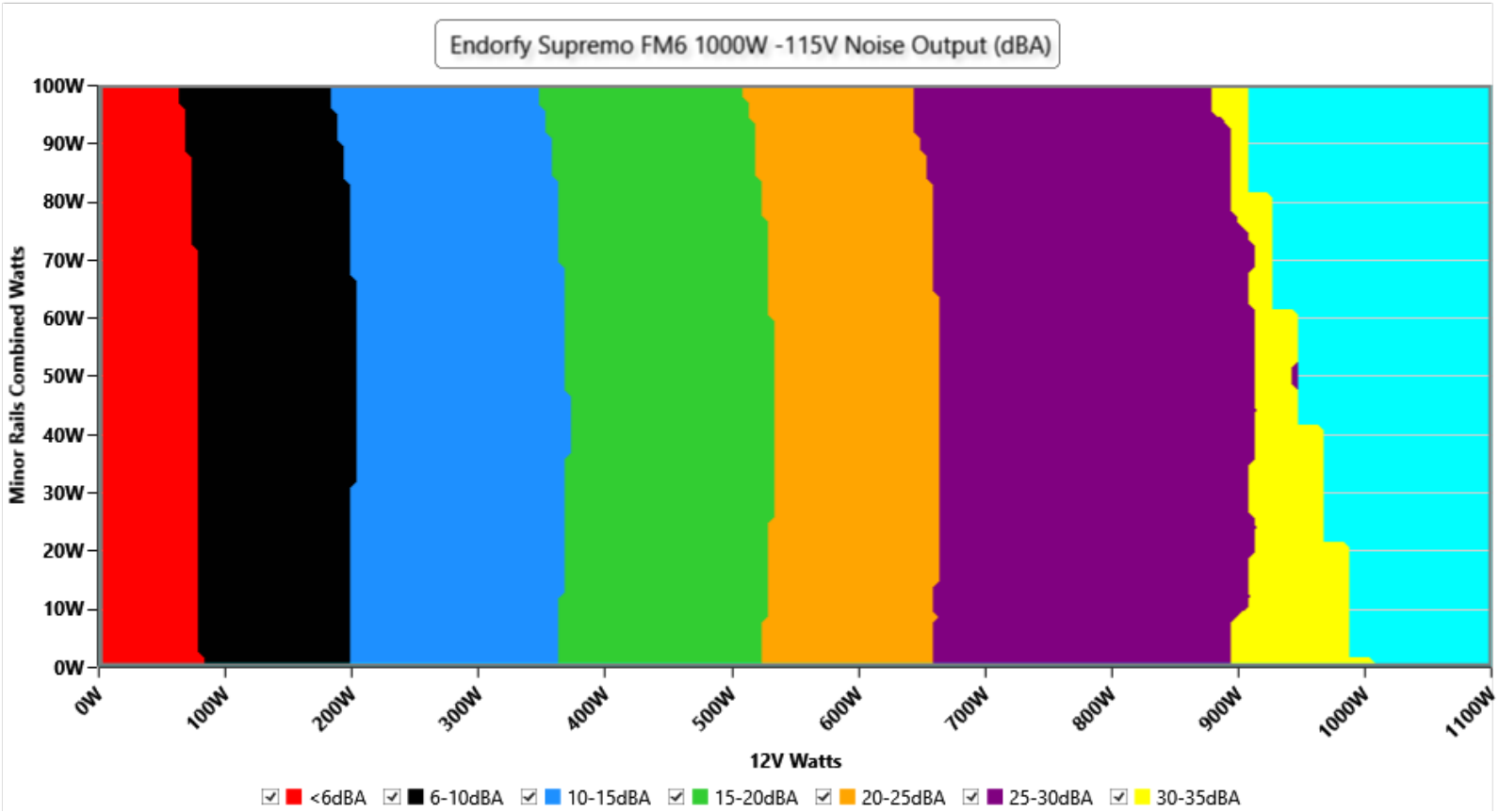



### INFO

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

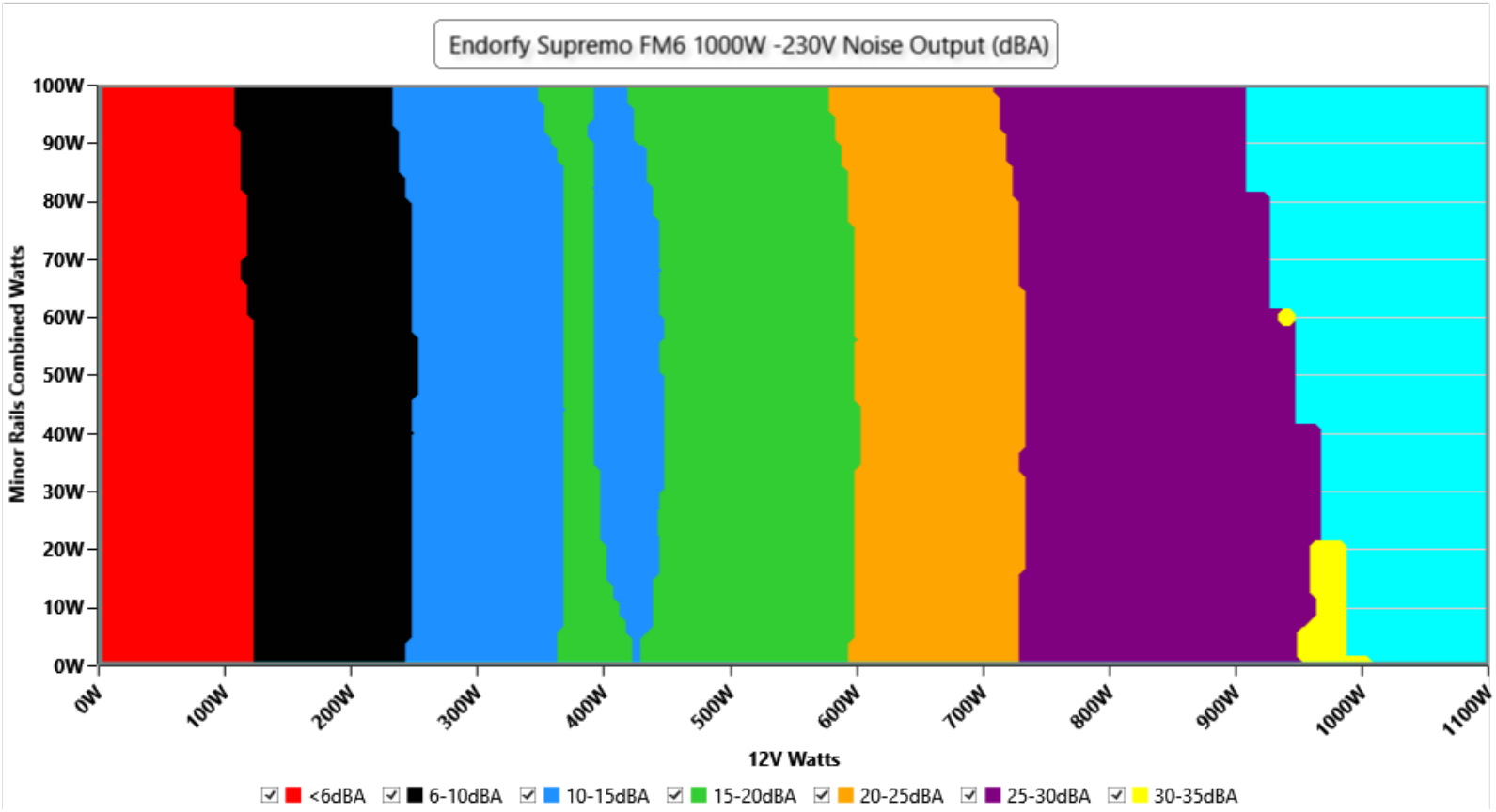
**115V**




**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% | 654 RPM · <6.0 dB(A) · 30.2 °C | 930 RPM · 15.6 dB(A) · 40.3 °C | <6.0 → 15.6 dB(A) |
| 20% | 719 RPM · 6.5 dB(A) · 30.4 °C | 1000 RPM · 18.3 dB(A) · 40.8 °C | **+11.8 dB(A)** |
| 50% | 877 RPM · 13.7 dB(A) · 30.4 °C | 1273 RPM · 25.9 dB(A) · 42.3 °C | **+12.2 dB(A)** |
| 100% | 1318 RPM · 27.0 dB(A) · 31.0 °C | 1514 RPM · 31.1 dB(A) · 45.6 °C | **+4.1 dB(A)** |

### 230V

| Load | Normal ambient<br>fan · noise · intake | High ambient<br>fan · noise · intake | Noise change |
|---|---|---|---|
| 10% | 744 RPM · 8.0 dB(A) · 30.2 °C | 972 RPM · 17.1 dB(A) · 40.4 °C | **+9.1 dB(A)** |
| 20% | 782 RPM · 9.4 dB(A) · 30.1 °C | 1029 RPM · 18.8 dB(A) · 40.7 °C | **+9.4 dB(A)** |
| 50% | 937 RPM · 16.0 dB(A) · 30.5 °C | 1257 RPM · 25.6 dB(A) · 42.3 °C | **+9.6 dB(A)** |
| 100% | 1400 RPM · 28.9 dB(A) · 30.2 °C | 1515 RPM · 31.1 dB(A) · 45.1 °C | **+2.2 dB(A)** |

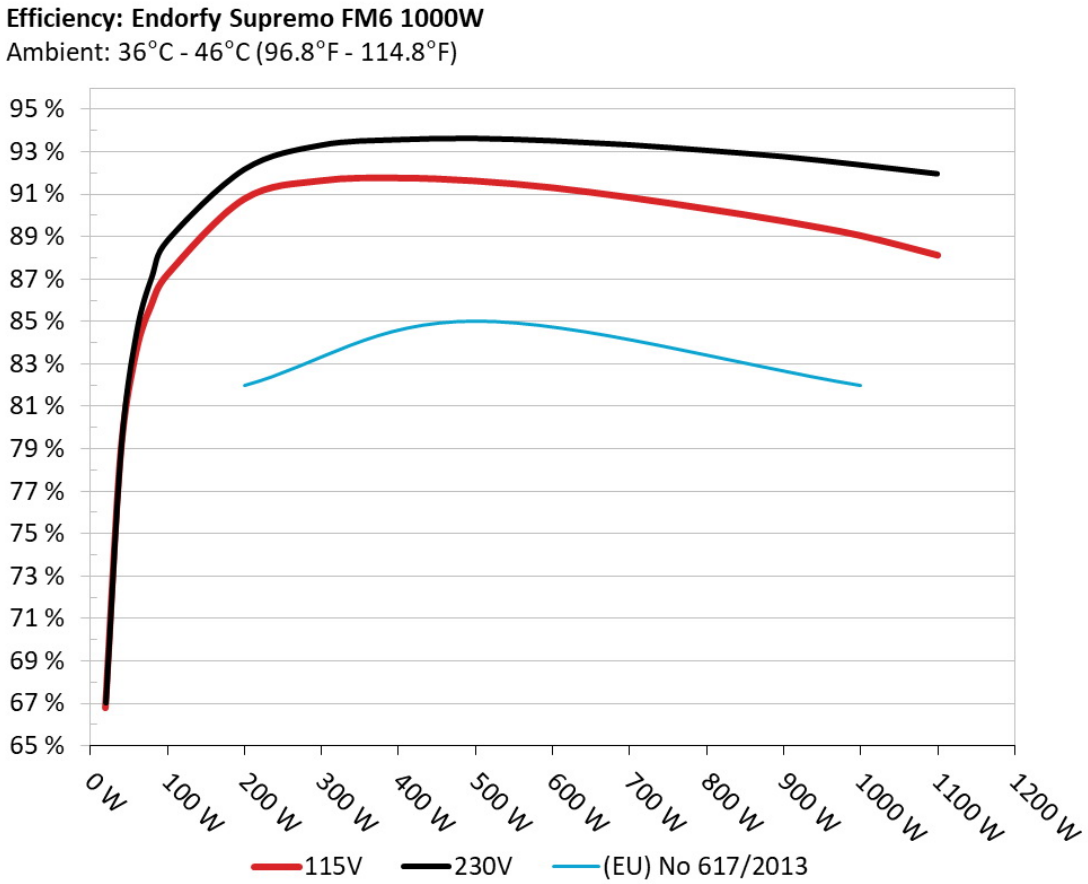
### INFO

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

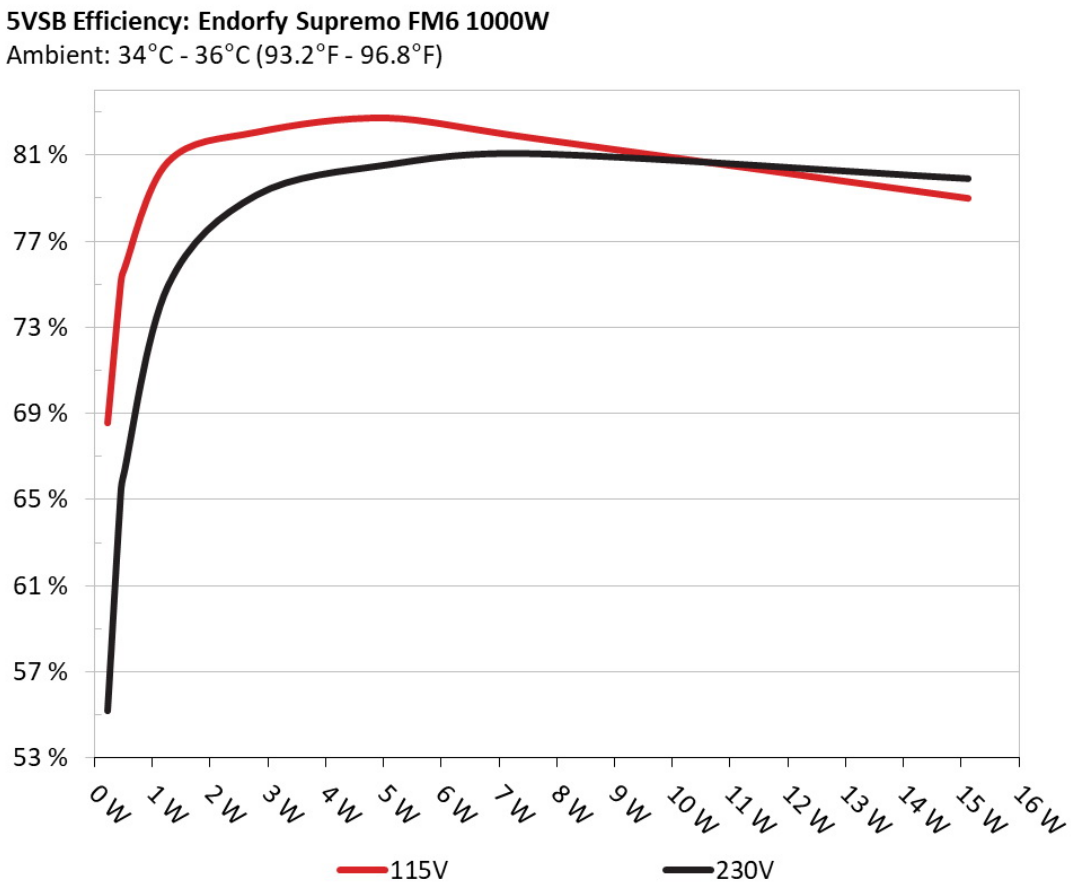
### Efficiency under high ambient temperature




**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** | 0.23W | 68.543% | 0.036 |
| | 5.102V | 0.336W | | 115.07V |
| **2** | **0.09A** | 0.459W | 75.078% | 0.064 |
| | 5.102V | 0.612W | | 115.07V |
| **3** | **0.55A** | 2.801W | 82.064% | 0.275 |
| | 5.092V | 3.413W | | 115.07V |
| **4** | **1A** | 5.083W | 82.729% | 0.372 |
| | 5.082V | 6.144W | | 115.07V |
| **5** | **1.5A** | 7.609W | 81.78% | 0.422 |
| | 5.072V | 9.305W | | 115.07V |
| **6** | **3.001A** | 15.118W | 78.994% | 0.49 |
| | 5.039V | 19.139W | | 115.06V |

### 230V

| Test # | 5VSB | DC/AC (Watts) | Efficiency | PF/AC Volts |
|---|---|---|---|---|
| **1** | **0.045A** | 0.23W | 55.166% | 0.014 |
| | 5.102V | 0.417W | | 230.25V |
| **2** | **0.09A** | 0.459W | 65.351% | 0.023 |
| | 5.101V | 0.703W | | 230.25V |
| **3** | **0.55A** | 2.8W | 79.148% | 0.109 |
| | 5.092V | 3.538W | | 230.24V |
| **4** | **1A** | 5.083W | 80.569% | 0.18 |
| | 5.083V | 6.308W | | 230.24V |
| **5** | **1.5A** | 7.609W | 81.08% | 0.24 |
| | 5.073V | 9.386W | | 230.24V |
| **6** | **3A** | 15.12W | 79.921% | 0.346 |
| | 5.04V | 18.919W | | 230.24V |

## Protection Features

| | |
|---|---|
| OCP (Normal @ 30.1°C) | 12V: >124.60A (150.12%), 12.003V<br>5V: 26.8A (134.00%), 4.981V<br>3.3V: 24.7A (123.50%), 3.325V<br>5VSB: 4.3A (143.33%), 5.009V |
| OCP (Hot @ 44.6°C) | 12V: 124.00A (149.40%), 12.003V<br>5V: 26.8A (134.00%), 4.973V<br>3.3V: 24.3A (121.50%), 3.329V<br>5VSB: 4.2A (140.00%), 5.005V |
| OPP (Normal @ 30.5°C) | 1503.07W (150.31%) |
| OPP (Hot @ 42.3°C) | 1401.10W (140.11%) |
| OTP | ✓ (135°C @ Secondary Side) |
| 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 |
| UVP (Full Load @ 90V) | ✓ |
| UVP (Damage @ 80V) | ✓ |
| Conducted Emissions EN55032 & CISPR 32A | ✓ |
| 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%** | **6.492A** | **1.999A** | **1.974A** | **0.985A** | 100.003 | 87.18% | 930 | 15.6 | 40.29°C | 0.966 |
| | 12.077V | 5.004V | 3.344V | 5.077V | 114.707 | | | | 42.5°C | 115.03V |
| **20%** | **14.007A** | **2.999A** | **2.963A** | **1.184A** | 199.956 | 90.761% | 1000 | 18.3 | 40.79°C | 0.979 |
| | 12.069V | 5.003V | 3.342V | 5.066V | 220.311 | | | | 44.24°C | 115V |
| **30%** | **21.885A** | **3.499A** | **3.459A** | **1.385A** | 300.008 | 91.624% | 1071 | 20.3 | 41.08°C | 0.981 |
| | 12.061V | 5.002V | 3.34V | 5.056V | 327.433 | | | | 44.96°C | 114.97V |
| **40%** | **29.734A** | **4A** | **3.955A** | **1.586A** | 399.588 | 91.752% | 1180 | 23.6 | 41.91°C | 0.981 |
| | 12.053V | 5.002V | 3.338V | 5.046V | 435.509 | | | | 46.67°C | 114.93V |
| **50%** | **37.259A** | **5.001A** | **4.948A** | **1.788A** | 499.302 | 91.614% | 1273 | 25.9 | 42.3°C | 0.982 |
| | 12.045V | 5.001V | 3.335V | 5.034V | 545.004 | | | | 48.27°C | 114.89V |
| **60%** | **44.862A** | **6.002A** | **5.942A** | **1.991A** | 599.819 | 91.294% | 1369 | 28.2 | 42.59°C | 0.984 |
| | 12.037V | 4.999V | 3.333V | 5.023V | 657.019 | | | | 49.03°C | 114.85V |
| **70%** | **52.410A** | **7.004A** | **6.937A** | **2.195A** | 699.543 | 90.836% | 1485 | 30.7 | 43.37°C | 0.986 |
| | 12.029V | 4.999V | 3.33V | 5.012V | 770.118 | | | | 50.68°C | 114.81V |
| **80%** | **60.034A** | **8.003A** | **7.932A** | **2.299A** | 799.54 | 90.3% | 1509 | 31.1 | 43.97°C | 0.988 |
| | 12.021V | 4.998V | 3.328V | 5.003V | 885.425 | | | | 52.26°C | 114.76V |
| **90%** | **67.999A** | **8.504A** | **8.417A** | **2.403A** | 899.313 | 89.721% | 1511 | 31.1 | 44.6°C | 0.989 |
| | 12.013V | 4.997V | 3.326V | 4.994V | 1002.336 | | | | 55.08°C | 114.72V |
| **100%** | **75.783A** | **9.006A** | **8.934A** | **3.016A** | 999.335 | 89.039% | 1514 | 31.1 | 45.55°C | 0.991 |
| | 12.004V | 4.996V | 3.324V | 4.974V | 1122.355 | | | | 57.52°C | 114.68V |
| **110%** | **83.504A** | **10.009A** | **10.022A** | **3.021A** | 1099.943 | 88.112% | 1511 | 31.1 | 46.44°C | 0.992 |
| | 11.995V | 4.995V | 3.322V | 4.966V | 1248.35 | | | | 58.41°C | 114.63V |
| **CL1** | **0.116A** | **12.03A** | **11.881A** | **0A** | 101.3 | 83.208% | 1433 | 29.5 | 41.63°C | 0.97 |
| | 12.072V | 5.004V | 3.341V | 5.089V | 121.748 | | | | 46.46°C | 115.04V |

| Test | 12V | 5V | 3.3V | 5VSB | DC/AC (Watts) | Efficiency | Fan Speed (RPM) | PSU Noise (dB[A]) | Temps (In/Out) | PF/AC Volts |
|---|---|---|---|---|---|---|---|---|---|---|
| **CL2** | **0.116A** | **19.978A** | **0A** | **0A** | 101.378 | 81.617% | 1263 | 25.7 | 42.01°C | 0.971 |
| | 12.077V | 5.005V | 3.351V | 5.094V | 124.214 | | | | 45.62°C | 115.04V |
| **CL3** | **0.115A** | **0A** | **19.783A** | **0A** | 67.384 | 74.223% | 1139 | 22 | 41.47°C | 0.96 |
| | 12.074V | 5.004V | 3.336V | 5.09V | 90.786 | | | | 44.46°C | 115.05V |
| **CL4** | **83.222A** | **0A** | **0A** | **0A** | 999.897 | 89.767% | 1493 | 30.9 | 46.34°C | 0.99 |
| | 12.014V | 4.998V | 3.331V | 5.049V | 1113.886 | | | | 56.36°C | 114.69V |

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%** | **6.491A** | **1.999A** | **1.974A** | **0.985A** | 99.997 | 88.419% | 972 | 17.1 | 40.39°C | 0.833 |
| | 12.077V | 5.003V | 3.344V | 5.077V | 113.093 | | | | 42.12°C | 230.23V |
| **20%** | **14.006A** | **2.999A** | **2.963A** | **1.184A** | 199.948 | 92.191% | 1029 | 18.8 | 40.72°C | 0.913 |
| | 12.069V | 5.003V | 3.342V | 5.066V | 216.892 | | | | 43.37°C | 230.22V |
| **30%** | **21.883A** | **3.499A** | **3.458A** | **1.385A** | 300 | 93.334% | 1097 | 21.4 | 41.5°C | 0.941 |
| | 12.062V | 5.002V | 3.34V | 5.056V | 321.434 | | | | 44.25°C | 230.21V |
| **40%** | **29.731A** | **4A** | **3.955A** | **1.586A** | 399.578 | 93.59% | 1166 | 23.4 | 41.59°C | 0.954 |
| | 12.054V | 5.001V | 3.338V | 5.046V | 426.945 | | | | 44.72°C | 230.19V |
| **50%** | **37.256A** | **5.001A** | **4.947A** | **1.788A** | 499.295 | 93.651% | 1257 | 25.6 | 42.26°C | 0.961 |
| | 12.046V | 5V | 3.335V | 5.035V | 533.146 | | | | 45.76°C | 230.17V |
| **60%** | **44.860A** | **6.002A** | **5.941A** | **1.991A** | 599.818 | 93.537% | 1369 | 28.2 | 42.83°C | 0.966 |
| | 12.037V | 4.999V | 3.333V | 5.023V | 641.265 | | | | 47.1°C | 230.15V |
| **70%** | **52.406A** | **7.004A** | **6.936A** | **2.195A** | 699.544 | 93.351% | 1479 | 30.5 | 43.3°C | 0.97 |
| | 12.030V | 4.998V | 3.331V | 5.012V | 749.372 | | | | 47.49°C | 230.13V |
| **80%** | **60.030A** | **8.003A** | **7.931A** | **2.299A** | 799.546 | 93.089% | 1511 | 31.1 | 43.74°C | 0.972 |
| | 12.021V | 4.998V | 3.329V | 5.003V | 858.903 | | | | 48.85°C | 230.11V |
| **90%** | **67.995A** | **8.505A** | **8.416A** | **2.403A** | 899.324 | 92.794% | 1512 | 31.1 | 44.95°C | 0.975 |
| | 12.013V | 4.997V | 3.327V | 4.994V | 969.152 | | | | 50.55°C | 230.1V |

| Test | 12V | 5V | 3.3V | 5VSB | DC/AC (Watts) | Efficiency | Fan Speed (RPM) | PSU Noise (dB[A]) | Temps (In/Out) | PF/AC Volts |
|---|---|---|---|---|---|---|---|---|---|---|
| **100%** | **75.779A** | **9.007A** | **8.932A** | **3.016A** | 999.343 | 92.407% | 1515 | 31.1 | 45.13°C | 0.977 |
| | 12.004V | 4.996V | 3.325V | 4.974V | 1081.464 | | | | 51.54°C | 230.08V |
| **110%** | **83.499A** | **10.009A** | **10.02A** | **3.021A** | 1099.946 | 91.981% | 1514 | 31.1 | 46.44°C | 0.979 |
| | 11.996V | 4.995V | 3.323V | 4.967V | 1195.832 | | | | 54.19°C | 230.06V |
| **CL1** | **0.116A** | **12.031A** | **11.88A** | **0A** | 101.301 | 84.106% | 1384 | 28.6 | 40.35°C | 0.844 |
| | 12.073V | 5.004V | 3.341V | 5.089V | 120.441 | | | | 43.83°C | 230.23V |
| **CL2** | **0.116A** | **19.979A** | **0A** | **0A** | 101.378 | 82.489% | 1220 | 24.6 | 40.44°C | 0.847 |
| | 12.077V | 5.004V | 3.351V | 5.094V | 122.899 | | | | 43.87°C | 230.23V |
| **CL3** | **0.115A** | **0A** | **19.78A** | **0A** | 67.384 | 75.293% | 1116 | 21.8 | 41.55°C | 0.791 |
| | 12.074V | 5.004V | 3.336V | 5.089V | 89.5 | | | | 43.91°C | 230.24V |
| **CL4** | **83.218A** | **0A** | **0A** | **0A** | 999.913 | 93.095% | 1499 | 31 | 45.94°C | 0.977 |
| | 12.015V | 4.998V | 3.332V | 5.049V | 1074.082 | | | | 51.21°C | 230.07V |

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** | **1.230A** | **0.5A** | **0.493A** | **0.196A** | 20.002 | 66.78% | 656 | <6.0 | 36.11°C | 0.863 |
| | 12.084V | 5.004V | 3.345V | 5.098V | 29.938 | | | | 37.03°C | 115.05V |
| **40W** | **2.706A** | **0.699A** | **0.691A** | **0.294A** | 40.003 | 78.844% | 773 | 9.2 | 37.5°C | 0.931 |
| | 12.082V | 5.005V | 3.345V | 5.095V | 50.74 | | | | 38.44°C | 115.06V |
| **60W** | **4.182A** | **0.899A** | **0.888A** | **0.393A** | 60.003 | 83.581% | 837 | 11.8 | 38.45°C | 0.946 |
| | 12.081V | 5.004V | 3.345V | 5.092V | 71.791 | | | | 39.92°C | 115.05V |
| **80W** | **5.656A** | **1.099A** | **1.085A** | **0.491A** | 79.952 | 85.806% | 885 | 14 | 39.35°C | 0.961 |
| | 12.079V | 5.004V | 3.344V | 5.089V | 93.176 | | | | 41.16°C | 115.04V |

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** | **1.229A** | **0.5A** | **0.493A** | **0.196A** | 20.001 | 67.01% | 742 | 7.8 | 36.12°C | 0.518 |
| | 12.084V | 5.004V | 3.345V | 5.098V | 29.846 | | | | 37.22°C | 230.24V |
| **40W** | **2.706A** | **0.699A** | **0.691A** | **0.294A** | 40.001 | 79.08% | 832 | 11.6 | 37.11°C | 0.662 |
| | 12.083V | 5.004V | 3.345V | 5.095V | 50.584 | | | | 38.29°C | 230.24V |
| **60W** | **4.182A** | **0.899A** | **0.888A** | **0.393A** | 60 | 84.502% | 876 | 13.7 | 38.85°C | 0.746 |
| | 12.081V | 5.004V | 3.345V | 5.092V | 71.007 | | | | 40.45°C | 230.24V |
| **80W** | **5.656A** | **1.099A** | **1.085A** | **0.491A** | 79.945 | 87.135% | 915 | 15.1 | 39.12°C | 0.796 |
| | 12.080V | 5.003V | 3.344V | 5.089V | 91.749 | | | | 40.72°C | 230.24V |

The results above are not used in the certification process

## Ripple Measurements

### 115V

| Test | 12V | 5V | 3.3V | 5VSB | Pass/Fail |
|---|---|---|---|---|---|
| 10% Load | 19.07mV | 13.91mV | 14.22mV | 8.51mV | Pass |
| 20% Load | 25.32mV | 15.76mV | 15.31mV | 9.34mV | Pass |
| 30% Load | 29.08mV | 15.61mV | 15.98mV | 9.50mV | Pass |
| 40% Load | 33.20mV | 16.59mV | 15.62mV | 9.96mV | Pass |
| 50% Load | 36.81mV | 17.77mV | 17.33mV | 10.17mV | Pass |
| 60% Load | 37.79mV | 17.77mV | 17.58mV | 11.46mV | Pass |
| 70% Load | 38.25mV | 19.53mV | 18.46mV | 11.30mV | Pass |
| 80% Load | 38.00mV | 20.87mV | 19.50mV | 12.13mV | Pass |
| 90% Load | 39.13mV | 21.89mV | 20.32mV | 12.54mV | Pass |
| 100% Load | 39.12mV | 21.57mV | 21.34mV | 12.19mV | Pass |
| 110% Load | 41.58mV | 22.92mV | 21.19mV | 13.12mV | Pass |
| Crossload1 | 21.82mV | 18.99mV | 17.34mV | 9.03mV | Pass |
| Crossload2 | 27.48mV | 26.79mV | 15.67mV | 9.86mV | Pass |

| Test | 12V | 5V | 3.3V | 5VSB | Pass/Fail |
|---|---|---|---|---|---|
| Crossload3 | 22.68mV | 14.94mV | 22.75mV | 8.26mV | Pass |
| Crossload4 | 37.39mV | 19.18mV | 18.60mV | 13.12mV | Pass |

The results above are not used in the certification process

**230V**

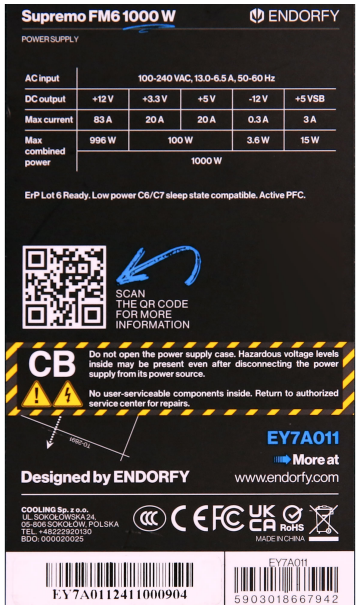
| Test | 12V | 5V | 3.3V | 5VSB | Pass/Fail |
|---|---|---|---|---|---|
| 10% Load | 19.23mV | 13.19mV | 14.69mV | 8.41mV | Pass |
| 20% Load | 25.52mV | 14.63mV | 15.00mV | 8.93mV | Pass |
| 30% Load | 29.03mV | 15.97mV | 16.19mV | 9.76mV | Pass |
| 40% Load | 33.00mV | 16.95mV | 16.70mV | 10.37mV | Pass |
| 50% Load | 36.76mV | 17.72mV | 16.70mV | 10.43mV | Pass |
| 60% Load | 37.48mV | 18.60mV | 17.79mV | 11.30mV | Pass |
| 70% Load | 38.21mV | 20.14mV | 19.08mV | 11.41mV | Pass |
| 80% Load | 39.13mV | 22.20mV | 20.43mV | 12.03mV | Pass |
| 90% Load | 40.89mV | 22.20mV | 21.67mV | 12.75mV | Pass |
| 100% Load | 42.03mV | 23.08mV | 21.06mV | 12.45mV | Pass |
| 110% Load | 45.63mV | 24.71mV | 22.08mV | 12.46mV | Pass |
| Crossload1 | 22.88mV | 18.87mV | 16.36mV | 9.10mV | Pass |
| Crossload2 | 27.99mV | 25.66mV | 15.05mV | 9.45mV | Pass |
| Crossload3 | 22.48mV | 14.37mV | 23.22mV | 8.15mV | Pass |
| Crossload4 | 38.99mV | 19.22mV | 18.67mV | 11.35mV | Pass |

The results above are not used in the certification process

## Endorfy Supremo FM6 1000W



Top side




Power specifications label

All data and graphs included in this test report can be used by any individual on the following conditions:

› It should be mentioned that the test results are provided by Cybenetics

› The link to the original test results document should be provided in any case

Cybenetics runs voluntary certification programs for power supplies - ETA for efficiency, LAMBDA for noise and SAFE for safety and correct operation - and for cooling products, with DELTA for chassis soundproofing and PHI for fan airflow and static pressure. THETA rates cooler performance on AMD AM5 and Intel LGA1851 outside ISO 17065 and accreditation scope

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