# Thermaltake Toughpower PT 1000W

PSTPP100FNFAPU1BLCW00008

Lab ID TT10002995

Certification ID 252995

Test Result Report ID: 25PS2995A

Certificate Issue Date: Oct 22, 2025

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 | Thermaltake |
| Model | Toughpower PT 1000W |
| OEM/ODM | CWT |
| Serial Number | PSTPP100FNFAPU1BLCW00008 |
| Product Specifications | |
| Manufacturer-Provided Information | |
| □□□□ (Vrms) | 100-240 |

| | |
|---|---|
| □□□□ (Arms) | 15 |
| □□□□ (Hz) | 47-63 |
| □□□□ (W) | 1000 |
| Operating Temperature (Continuous Full Load) (°C) | |
| □□ | ATX12V |
| □□□□ | Fully Modular |
| Warranty | - |
| Cybenetics Measurements | |
| Dimensions (W x H x D) | |
| Weight | |
| □□ | 135mm Fluid Dynamic Bearing Fan (CWT13525H12F-9) |
| □□□□□ | ✗ |
| Cybenetics Testing Information | |
| Lab ID | TT10002995 |
| Date of receipt | Sep 23, 2025 |
| Testing Date | Oct 9, 2025 |
| Report Issued Date | Oct 22, 2025 |
| Engineer Name | Okeke Ugochukwu Onyedikachukwu |
| Authorized By the Laboratory Technical Manager | Aristeidis Bitziopoulos |
| Signature |  |

## □□□□□
## (Non-accredited measurements)

| □□□□□ | | | | |
|---|---|---|---|---|
| □□ | □□□□ | □□□□□□ | **Gauge** | Cable Type |
| ATX □□ 24 pin (540mm) | 1 | 1 | 16-20AWG | Tinned Copper |
| 4+4 pin ATX12V (700mm) | 2 | 2 | 16AWG | Tinned Copper |
| 6+2pin PCIe□□ (600mm+150mm) | 2 | 4 | 16-18AWG | Tinned Copper |
| 6+2pin PCIe□□ (600mm) | 1 | 1 | 16AWG | Tinned Copper |
| 12+4 pin PCIe (600mm) (600W) | 1 | 1 | 16-24AWG | Tinned Copper |

| | | | | |
|---|---|---|---|---|
| SATA□□ (450mm+150mm+150mm) | 2 | 6 | 18AWG | Tinned Copper |
| 4-pin Molex (450mm+150mm+150mm+150mm) | 1 | 4 | 18AWG | Tinned Copper |
| AC Power Cord (1400mm) - C13 coupler | 1 | 1 | 16AWG | - |

## Protection Features

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

## □□□□

| □ | | 3.3V | 5V | 12V | 5VSB | -12V |
|---|---|---|---|---|---|---|
| □□□□ | □□ | 20 | 20 | 83.3 | 3 | 0.3 |
| | □ | 110 | | 999.6 | 15 | 3.6 |
| □□□□□ (W) | | 1000 | | | | |

## Parts Description

| | |
|---|---|
| **General Data** | |
| Manufacturer (OEM) | CWT |
| PCB Type | Double-Sided |
| **Primary Side** | |
| Transient Filter | 4x Y caps, 2x X caps, 2x CM chokes, 1x MOV, 1x Power IntegrationsCAP200DG (X Capacitor Discharge IC) |
| Inrush Protection | NTC Thermistor SCK-207R0 (7 Ohm @ 25°C) & Relay |
| Bridge Rectifier | 2x Yangzhou GBUL1506 (600V, 15A @ 100°C) |
| APFC MOSFETs | 3x PingWei PWE120N65SFMF (650V, 20A @ 100°C, Rds(on): 120mOhm) |
| APFC Boost Diode | CRMicro CRXI08D065G2 (650V, 8A @ 165°C) |
| Bulk Cap(s) | 2x Rubycon (400V, 390uF each or 780uF combined, 2000h @ 105°C,MXE) |

| | |
|---|---|
| Main Switchers | 4x Way-On WML26N65F2 (650V, 10.5A @ 100°C, Rds(on): 0.21Ohm) |
| APFC Controller | Champion CM6500UNX |
| Resonant Controller | Champion CM6901T6X |
| Topology | Primary side: APFC, Full-Bridge & LLC Resonant Converter<br>Secondary side: [12V] Synchronous Rectification & [Minor Rails] DC-DC converters |
| **Secondary Side** | |
| +12V MOSFETs | 8x PingWei PWC013N04ES (40V, 155A @ 100°C, Rds(on): 1.3mOhm) |
| 5V & 3.3V | DC-DC Converters:  4x UBIQ Semi QM3054M6 (30V, 61A @ 100°C, Rds(on): 4.8mOhm)<br>PWM Controller(s): ANPEC APW7159C |
| Filtering Capacitors | Electrolytic:<br>2x Nippon Chemi-Con (@ 105°C, W)<br>2x Rubycon (3-6,000 @ 105°C, YXS)<br>3x Rubycon (6-10,000 @ 105°C, ZLH)<br>2x Rubycon (4-10,000 @ 105°C, YXF)<br>Rubycon (4-10,000 @ 105°C, YXJ)<br>Nichicon (4-10,000 @ 105°C, HE(M))<br>Polymer:<br>10x Nippon Chemi-Con, 13x FPCAP, 2x no info |
| Fan Model | TT-13525 CWT13525H12F-9 (135mm, 12V, 0.4A, Fluid Dynamic Bearing Fan) |
| **5VSB Circuit** | |
| Rectifier (High Side) | Dongke DK5V45R10V (45V, 10mOhm) |
| Standby PWM Controller | KP22306AWG |

# Test Results

## Temperature & Compliance Info

| | |
|---|---|
| □□□□ (°C /°F) | 28-32 / 82.4-89.6 |
| □□ ErP Lot3/6□□ | ✓ |
| □□ (EU) No 617/2013□□ | ✓ |
| ALPM (Alternative Low Power Mode) compatible | ✓ |
| ATX v3.1 PSU Power Excursion | ✓ |

## Performance Summary

### 115V

| | |
|---|---|
| Accredited | |
| □□□□ (>1450 load combinations) | 90.350% |
| Average Noise Output (>1450 Load Combinations) | 16.02dBA |
| PF□□□ (>1450 Load Combinations) | 0.992 |
| Efficiency With 10W (≤500W) or 2% (>500W) Load | 71.099% |
| □□□□□□ | 0.0379W |
| Non-Accredited | |
| 12V Ripple (Full Load) | 28.42mV |
| 5V Ripple (Full Load) | 15.45mV |
| 3.3V Ripple (Full Load) | 14.16mV |
| 5VSB Ripple (Full Load) | 12.25mV |
| 12V Load Regulation | 0.74% |
| 5V Load Regulation | 0.28% |
| 3.3V Load Regulation | 0.48% |
| 5VSB Load Regulation | 4.56% |
| Inrush Current | 23.880A |

### 230V

| | |
|---|---|
| Accredited | |
| □□□□ (>1450 load combinations) | 92.068% |
| Average Noise Output (>1450 Load Combinations) | 16.02dBA |
| PF□□□ (>1450 Load Combinations) | 0.968 |
| Efficiency With 10W (≤500W) or 2% (>500W) Load | 71.390% |
| □□□□□□ | 0.0583W |
| Non-Accredited | |
| 12V Ripple (Full Load) | 29.30mV |
| 5V Ripple (Full Load) | 16.50mV |
| 3.3V Ripple (Full Load) | 16.68mV |

| | | |
|---|---|---|
| 5VSB Ripple (Full Load) | | 13.53mV |
| 12V Load Regulation | | 0.96% |
| 5V Load Regulation | | 0.24% |
| 3.3V Load Regulation | | 0.63% |
| 5VSB Load Regulation | | 4.62% |
| Inrush Current | | 48.490A |
| 12V Transient Response (200%) | | 11.36V |
| 5V Transient Response (200%) | | 4.931V |
| 3.3V Transient Response (200%) | | 3.249V |
| 5VSB Transient Response (200%) | | 4.938V |
| □□□□ & PG□□ | | 15.30ms |
| AC Loss to PWR_OK Hold Up Time | | 14.00ms |
| PWR_OK Inactive to DC Loss Delay | | 1.30ms |
| PSU Timings: T1 (20% / 100%) | 28.0ms | 28.0ms |
| PSU Timings: T3 (20% / 100%) | 119.0ms | 119.0ms |
| 12V OCP (29.8°C / 42.3°C) | 97.40A (116.93%), 12.017V | 91.00A (109.24%), 12.031V |
| 5V OCP (29.8°C / 42.3°C) | 22.9A (114.50%), 5.033V | 22.7A (113.50%), 5.041V |
| 3.3V OCP (29.8°C / 42.3°C) | 24.1A (120.50%), 3.365V | 24A (120.00%), 3.373V |
| 5VSB OCP (29.8°C / 42.3°C) | 4.6A (153.33%), 4.941V | 4.5A (150.00%), 4.934V |
| OPP (26.61°C / 43.43°C) | 117.31% | 113.61% |

## □□□□ & PG□□

| | |
|---|---|
| Hold-Up Time (ms) | 15.3 |
| AC Loss to PWR_OK Hold Up Time (ms) | 14 |
| PWR_OK Inactive to DC Loss Delay (ms) | 1.3 |

## Tables

### 115V

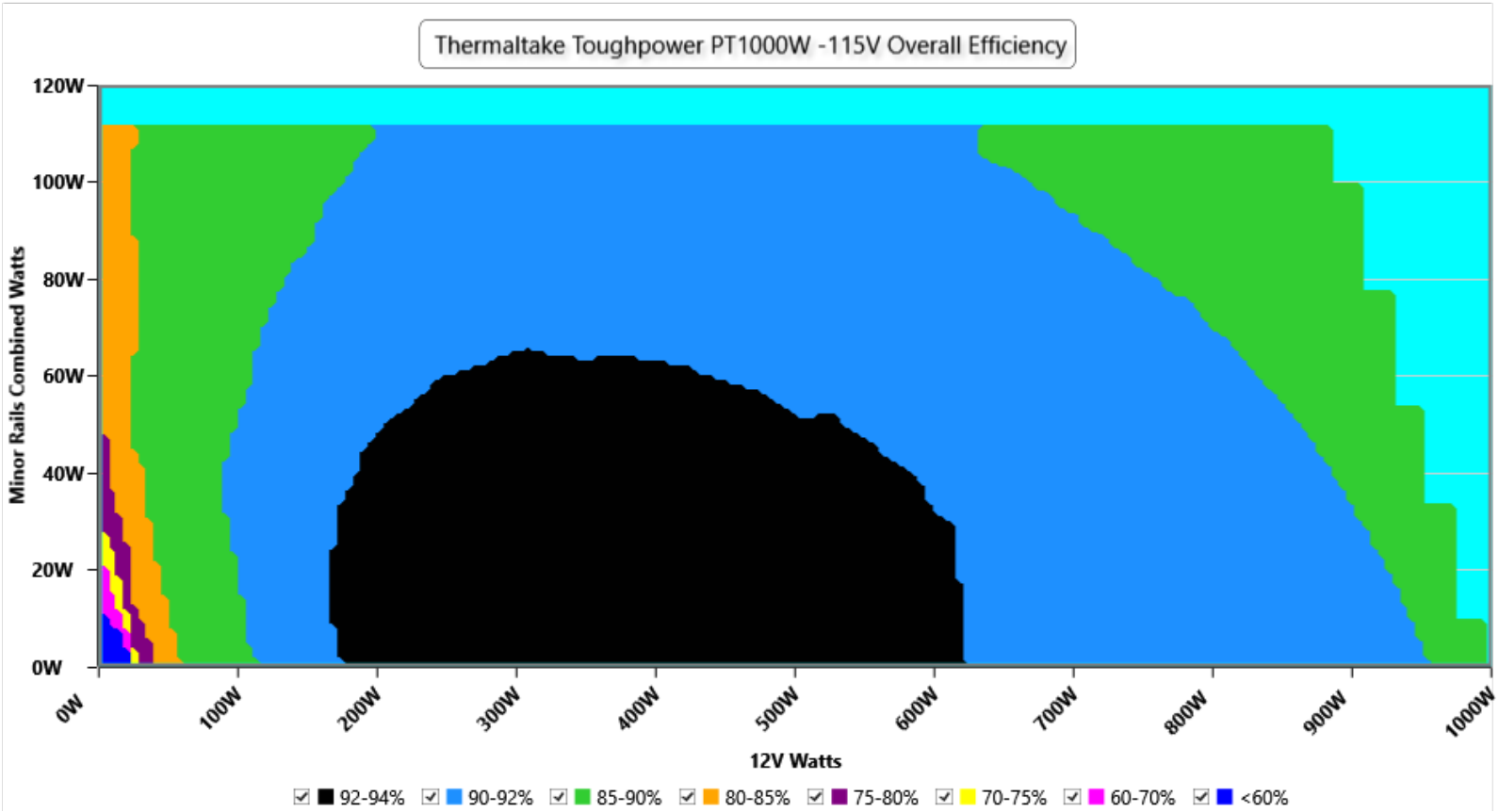
| Detailed Results | | | | | | |
|---|---|---|---|---|---|---|
| | Average | Min | Limit Min | Max | Limit Max | Result |
| Mains Voltage RMS: | 115.00 V | 114.96 V | 113.85 V | 115.02 V | 116.15 V | PASS |
| Mains Frequency: | 60.00 Hz | 59.99 Hz | 59.40 Hz | 60.01 Hz | 60.60 Hz | PASS |
| Mains Voltage CF: | 1.416 | 1.415 | 1.340 | 1.417 | 1.490 | PASS |
| Mains Voltage THD: | 0.13 % | 0.10 % | N/A | 0.16 % | 2.00 % | PASS |
| Real Power: | 0.038 W | 0.020 W | N/A | 0.056 W | N/A | N/A |
| Apparent Power: | 10.120 W | 10.100 W | N/A | 10.142 W | N/A | N/A |
| Power Factor: | 0.003 | N/A | N/A | N/A | N/A | N/A |

### 230V

| Detailed Results | | | | | | |
|---|---|---|---|---|---|---|
| | Average | Min | Limit Min | Max | Limit Max | Result |
| Mains Voltage RMS: | 230.00 V | 229.97 V | 227.70 V | 230.01 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 | 0.16 % | 2.00 % | PASS |
| Real Power: | 0.058 W | 0.023 W | N/A | 0.110 W | N/A | N/A |
| Apparent Power: | 33.157 W | 33.125 W | N/A | 33.189 W | N/A | N/A |
| Power Factor: | 0.002 | N/A | N/A | N/A | N/A | N/A |

## □□□□□□

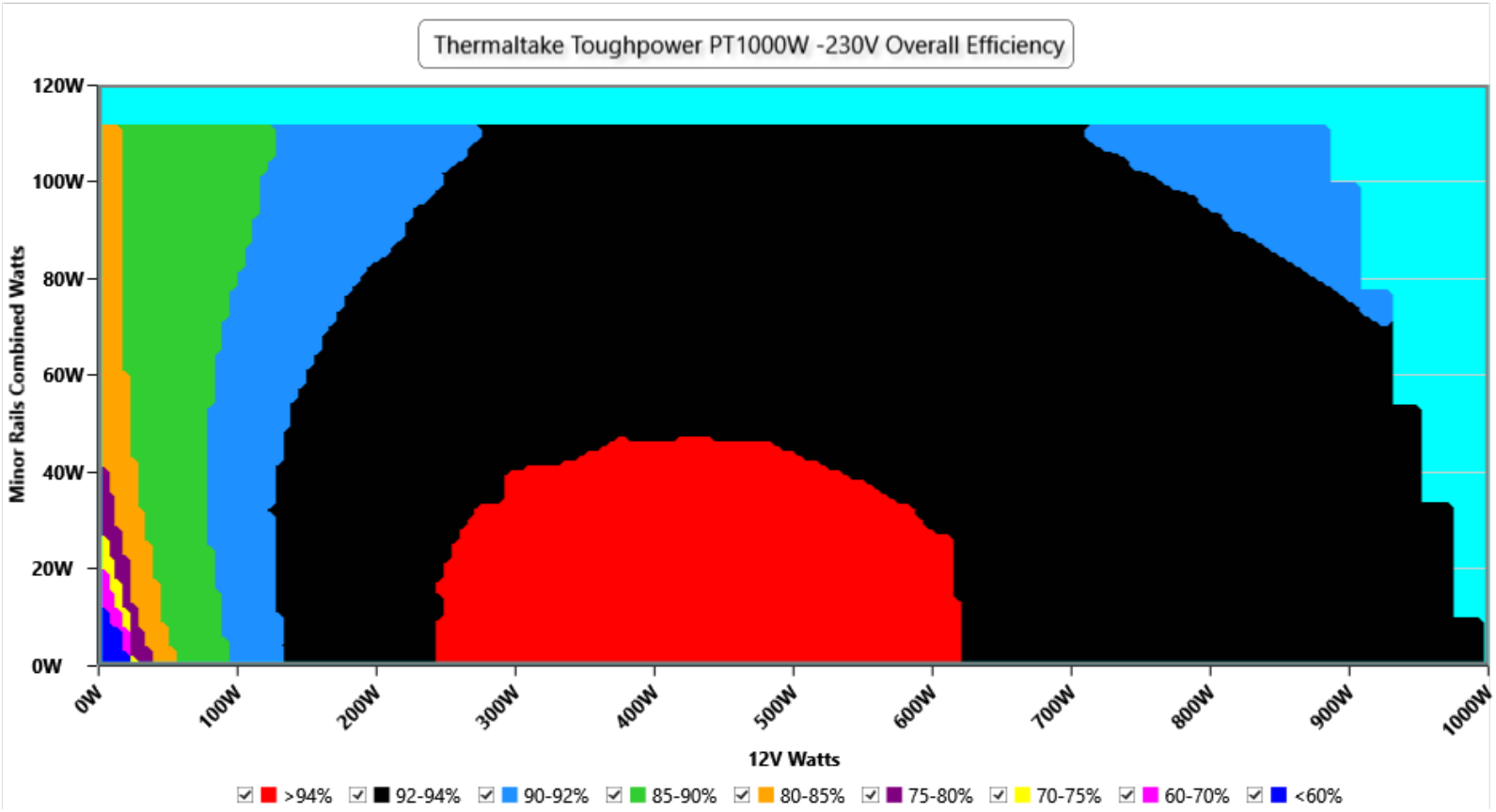
**115V**




□□

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

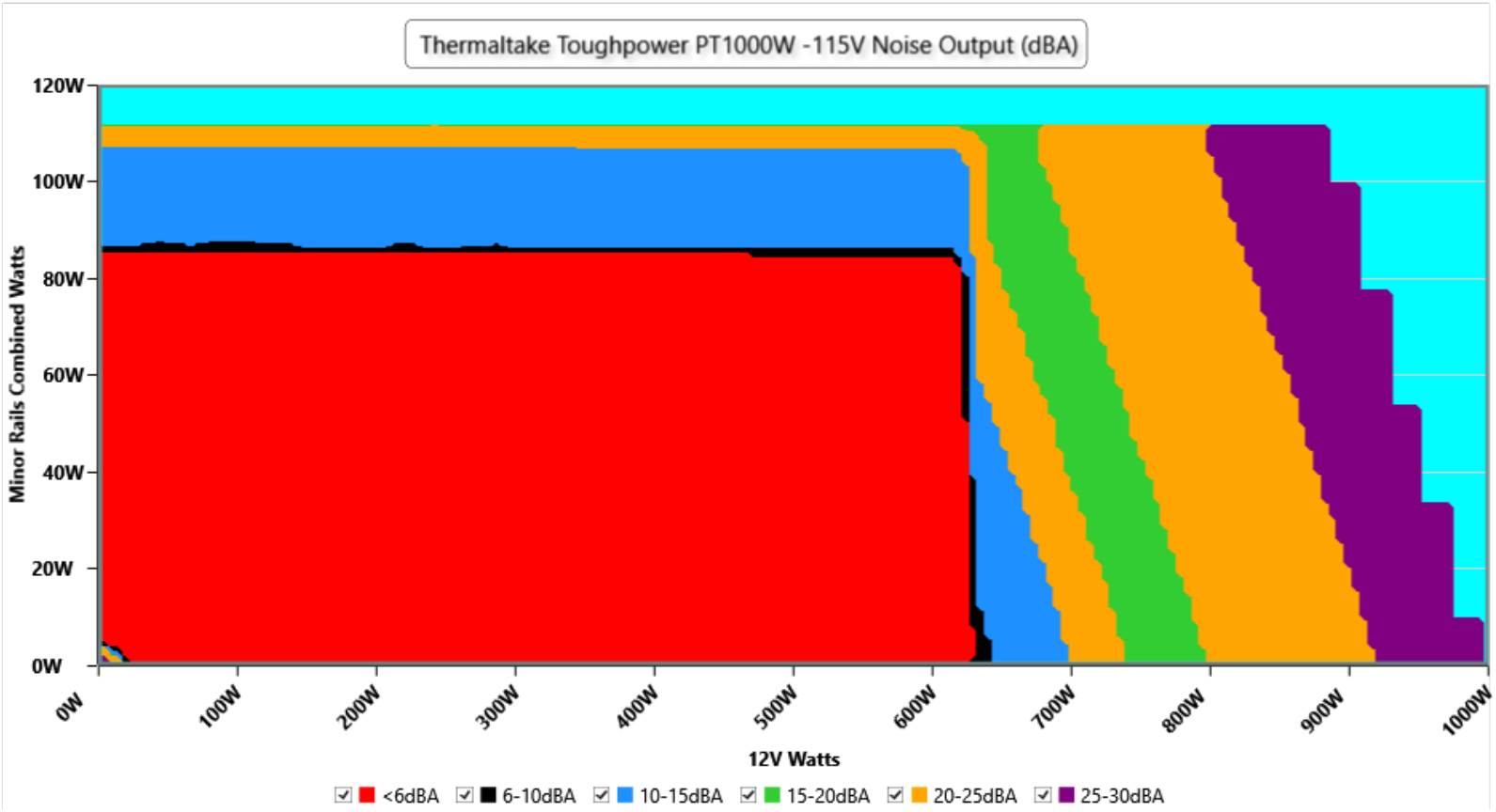
## 230V




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

## □□□□□

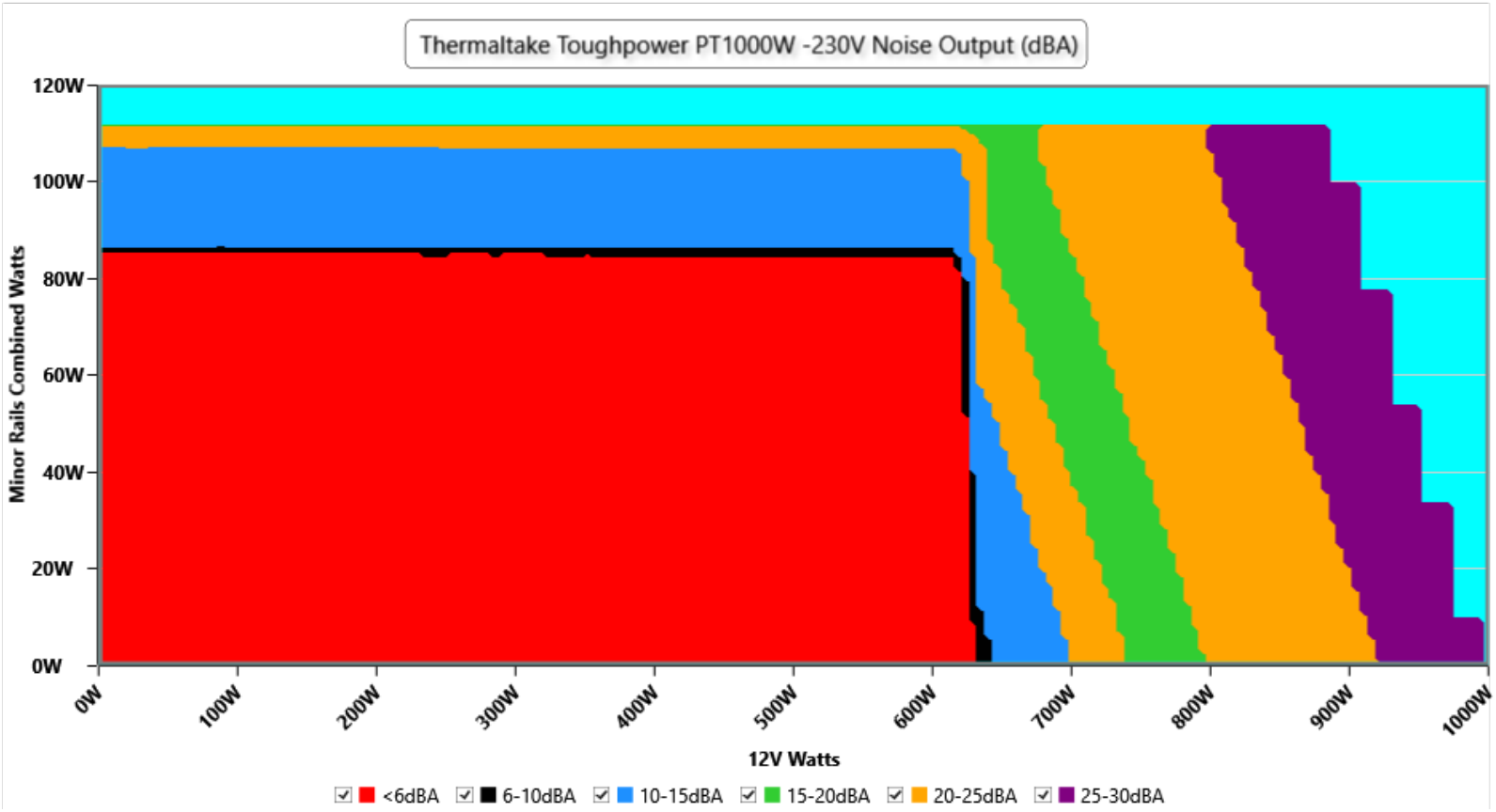
**115V**




□□

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




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% | 391 RPM · <6.0 dB(A) · 30.1 °C | 401 RPM · <6.0 dB(A) · 40.4 °C | <6.0 in both |
| 20% | 393 RPM · <6.0 dB(A) · 30.1 °C | 402 RPM · <6.0 dB(A) · 40.8 °C | <6.0 in both |
| 50% | 394 RPM · <6.0 dB(A) · 30.6 °C | 405 RPM · <6.0 dB(A) · 42.3 °C | <6.0 in both |
| 100% | 1038 RPM · 27.9 dB(A) · 30.6 °C | 1430 RPM · 36.3 dB(A) · 45.4 °C | **+8.4 dB(A)** |

### 230V

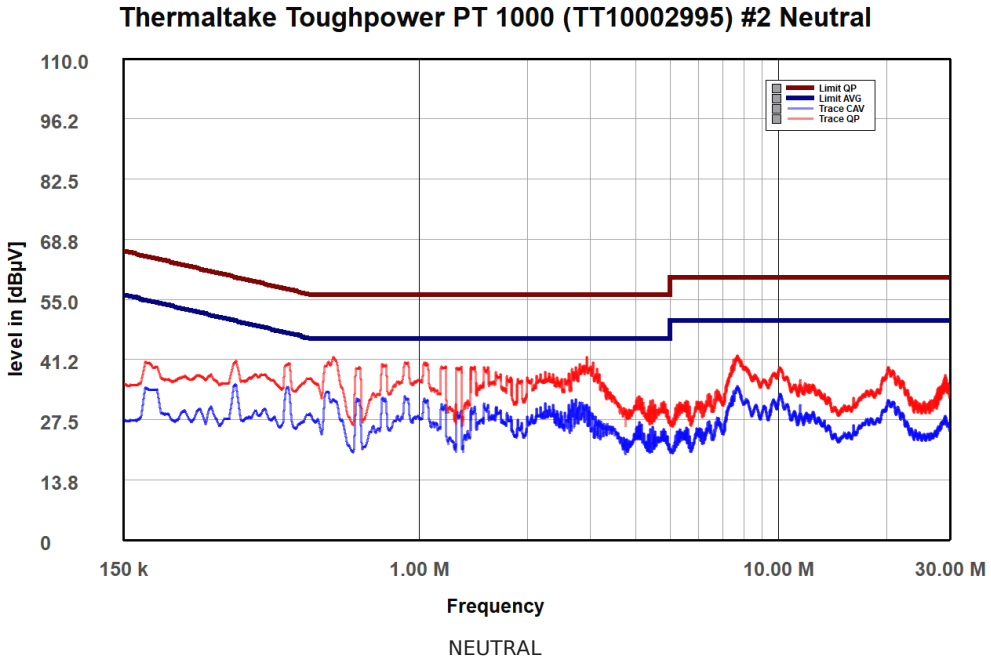
| Load | Normal ambient<br>fan · noise · intake | High ambient<br>fan · noise · intake | Noise change |
|---|---|---|---|
| 10% | 390 RPM · <6.0 dB(A) · 30.6 °C | 401 RPM · <6.0 dB(A) · 40.1 °C | <6.0 in both |
| 20% | 392 RPM · <6.0 dB(A) · 30.0 °C | 403 RPM · <6.0 dB(A) · 40.8 °C | <6.0 in both |
| 50% | 393 RPM · <6.0 dB(A) · 30.5 °C | 404 RPM · <6.0 dB(A) · 42.4 °C | <6.0 in both |
| 100% | 1037 RPM · 27.8 dB(A) · 30.4 °C | 1434 RPM · 36.4 dB(A) · 45.9 °C | **+8.6 dB(A)** |

### INFO

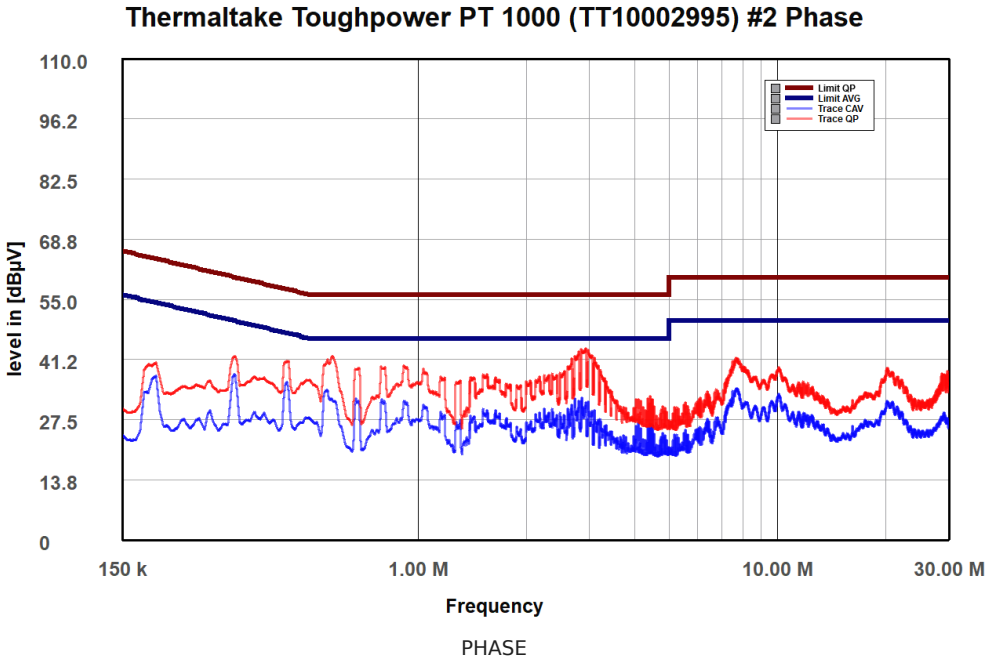
Fan speed, noise and the measured intake temperature at 10, 20, 50 and 100 % load, from the two load regulation tests: at normal ambient (about 30-32 °C) and at high ambient (about 40-47 °C). These are stabilized readings at fixed loads, not averages over the certification sweep, so they are indicative 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.*

## Conducted Emissions EN 55032 & CISPR 32

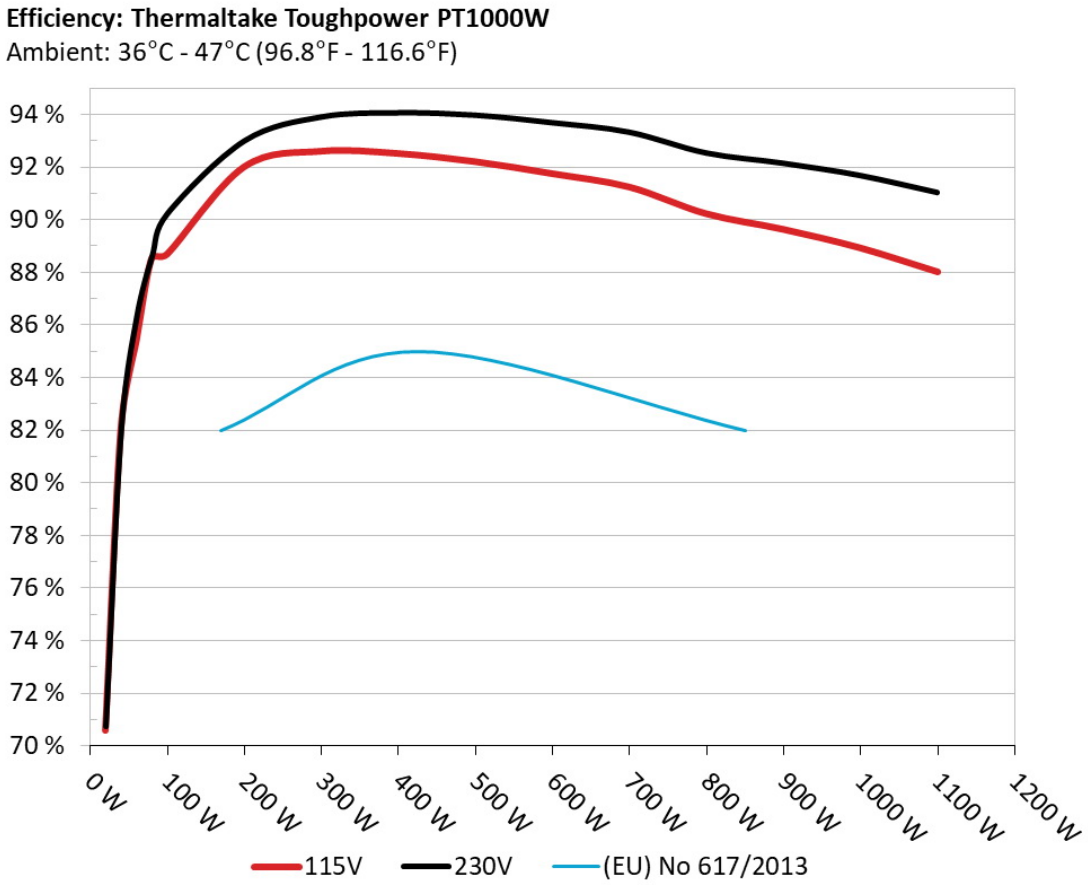



NEUTRAL



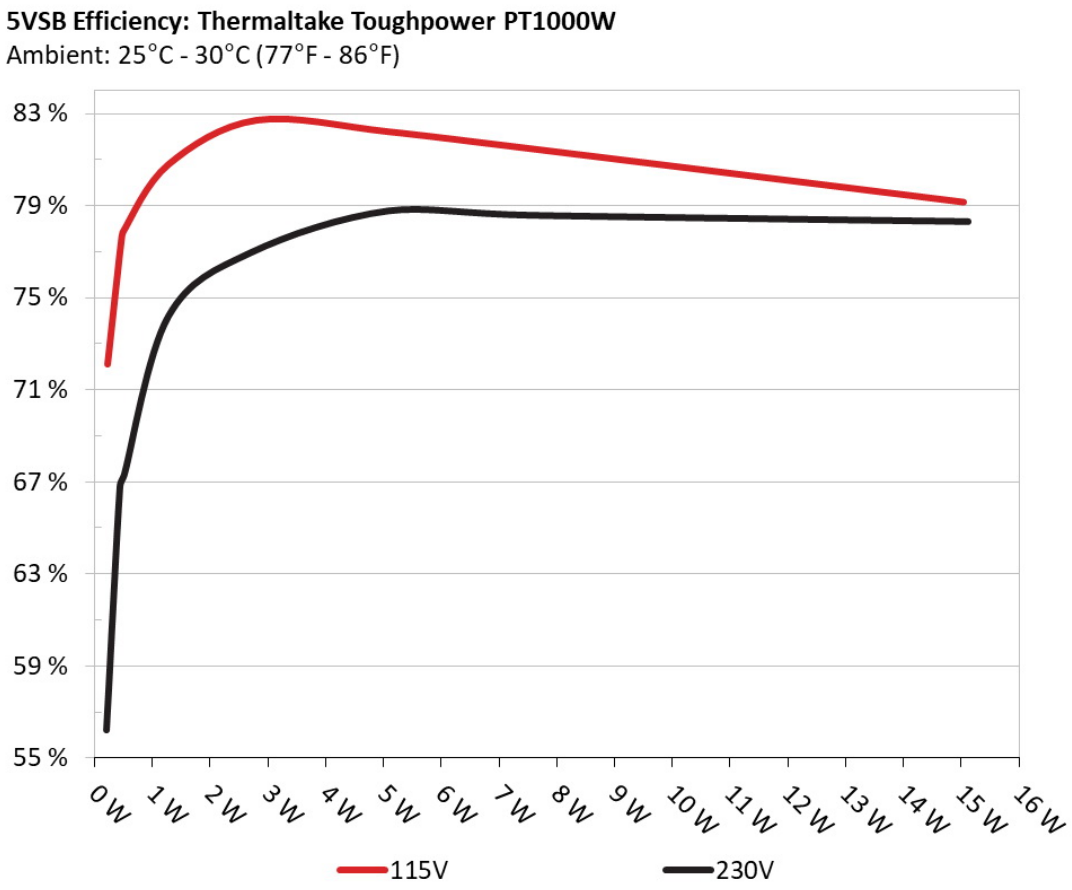

PHASE

## Indicative Performance




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□□□□




□□

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

## □□□□ □□ 5Vsb □□ (ErP Lot3/6 & CEC)

### 115V

| □□ # | 5VSB | DC/AC (□ ) | □□ | PF/AC □□ |
|---|---|---|---|---|
| **1** | **0.045A** | 0.231W | 72.125% | 0.032 |
| | 5.128V | 0.321W | | 115.08V |
| **2** | **0.09A** | 0.462W | 77.358% | 0.059 |
| | 5.127V | 0.597W | | 115.06V |
| **3** | **0.55A** | 2.811W | 82.694% | 0.267 |
| | 5.11V | 3.4W | | 115.07V |
| **4** | **1A** | 5.093W | 82.193% | 0.372 |
| | 5.092V | 6.196W | | 115.06V |
| **5** | **1.5A** | 7.609W | 81.441% | 0.428 |
| | 5.072V | 9.343W | | 115.06V |
| **6** | **3A** | 15.035W | 79.147% | 0.5 |
| | 5.011V | 18.996W | | 115.07V |

### 230V

| □□ # | 5VSB | DC/AC (□ ) | □□ | PF/AC □□ |
|---|---|---|---|---|
| **1** | **0.045A** | 0.231W | 65.662% | 0.011 |
| | 5.131V | 0.352W | | 230.29V |
| **2** | **0.09A** | 0.462W | 72.604% | 0.019 |
| | 5.129V | 0.637W | | 230.31V |
| **3** | **0.55A** | 2.811W | 80.866% | 0.101 |
| | 5.111V | 3.477W | | 230.21V |
| **4** | **1A** | 5.094W | 81.746% | 0.17 |
| | 5.093V | 6.231W | | 230.19V |
| **5** | **1.5A** | 7.611W | 81.633% | 0.232 |
| | 5.073V | 9.324W | | 230.18V |
| **6** | **3.001A** | 15.04W | 80.525% | 0.345 |
| | 5.012V | 18.68W | | 230.17V |

## Protection Features

| | |
|---|---|
| OCP (Normal @ 29.8°C) | 12V: 97.4A (116.93%), 12.017V<br>5V: 22.9A (114.5%), 5.033V<br>3.3V: 24.1A (120.5%), 3.365V<br>5VSB: 4.6A (153.33%), 4.941V |
| OCP (Hot @ 42.3°C) | 12V: 91A (109.24%), 12.031V<br>5V: 22.7A (113.5%), 5.041V<br>3.3V: 24A (120%), 3.373V<br>5VSB: 4.5A (150%), 4.934V |
| OPP (Normal @ 26.6°C) | 1173.13W (117.31%) |
| OPP (Hot @ 43.4°C) | 1136.07W (113.61%) |
| OTP | ✓ (140°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 |
| UVP (Full Load @ 90V) | ✓ |
| UVP (No Damage @ 80V) | ✓ |
| Conducted Emissions EN55032 & CISPR 32 | ✓ |
| NLO | ✓ |
| Fan Failure Protection | ✗ |
| SIP | Surge: MOV<br>Inrush: NTC & Bypass Relay |

## Supplementary Tests (For Reference)

### 10-110%□□□□

#### 115V

| □□ | 12V | 5V | 3.3V | 5VSB | DC/AC (□ ) | □□ | □□□□ (RPM) | □□□□□□□ (dB[A]) | □□ (□□ /□□ ) | PF/AC □□ |
|---|---|---|---|---|---|---|---|---|---|---|
| **10%** | **6.470A** | **1.981A** | **1.971A** | **0.985A** | 99.982 | 88.692% | 401 | <6.0 | 40.38°C | 0.977 |
| | 12.114V | 5.05V | 3.348V | 5.077V | 112.729 | | | | 45.54°C | 115.07V |
| **20%** | **13.963A** | **2.972A** | **2.958A** | **1.186A** | 199.924 | 92.013% | 402 | <6.0 | 40.75°C | 0.988 |
| | 12.105V | 5.048V | 3.347V | 5.059V | 217.278 | | | | 47.26°C | 115.03V |
| **30%** | **21.818A** | **3.468A** | **3.453A** | **1.388A** | 299.968 | 92.608% | 404 | <6.0 | 41.31°C | 0.991 |
| | 12.096V | 5.047V | 3.345V | 5.042V | 323.913 | | | | 50.02°C | 115V |
| **40%** | **29.639A** | **3.964A** | **3.948A** | **1.593A** | 399.462 | 92.521% | 405 | <6.0 | 41.74°C | 0.991 |
| | 12.087V | 5.046V | 3.343V | 5.024V | 431.753 | | | | 53.63°C | 114.96V |
| **50%** | **37.147A** | **4.956A** | **4.938A** | **1.799A** | 499.17 | 92.213% | 405 | <6.0 | 42.25°C | 0.994 |
| | 12.078V | 5.045V | 3.342V | 5.004V | 541.322 | | | | 57.27°C | 114.93V |
| **60%** | **44.733A** | **5.949A** | **5.928A** | **2A** | 599.661 | 91.754% | 405 | <6.0 | 42.95°C | 0.996 |
| | 12.069V | 5.044V | 3.34V | 4.984V | 653.55 | | | | 61.76°C | 114.9V |
| **70%** | **52.266A** | **6.941A** | **6.919A** | **2.216A** | 699.423 | 91.248% | 459 | <6.0 | 43.45°C | 0.997 |
| | 12.060V | 5.044V | 3.339V | 4.963V | 766.507 | | | | 66.41°C | 114.87V |
| **80%** | **59.875A** | **7.934A** | **7.911A** | **2.325A** | 799.438 | 90.232% | 848 | 22 | 43.7°C | 0.998 |
| | 12.051V | 5.041V | 3.337V | 4.946V | 885.979 | | | | 64.56°C | 114.84V |
| **90%** | **67.832A** | **8.434A** | **8.397A** | **2.433A** | 899.246 | 89.64% | 1058 | 27.1 | 44.1°C | 0.998 |
| | 12.041V | 5.039V | 3.334V | 4.932V | 1003.172 | | | | 64.09°C | 114.8V |
| **100%** | **75.599A** | **8.935A** | **8.913A** | **3.065A** | 999.259 | 88.933% | 1430 | 36.3 | 45.41°C | 0.998 |
| | 12.032V | 5.036V | 3.332V | 4.895V | 1123.616 | | | | 63.27°C | 114.76V |
| **110%** | **83.312A** | **9.933A** | **10A** | **3.071A** | 1099.863 | 88.021% | 2175 | 47.5 | 46.55°C | 0.998 |
| | 12.022V | 5.033V | 3.329V | 4.885V | 1249.495 | | | | 60.79°C | 114.72V |
| **CL1** | **0.115A** | **13.111A** | **13.006A** | **0A** | 111.288 | 83.085% | 757 | 18.2 | 41.61°C | 0.978 |
| | 12.111V | 5.049V | 3.36V | 5.097V | 133.945 | | | | 53.96°C | 115.06V |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **CL2** | **0.114A** | **19.808A** | **0A** | **0A** | 101.383 | 80.702% | 1754 | 41.3 | 40.79°C | 0.977 |
| | 12.114V | 5.048V | 3.348V | 5.108V | 125.626 | | | | 45.92°C | 115.06V |
| **CL3** | **0.114A** | **0A** | **19.599A** | **0A** | 67.379 | 75.567% | 1594 | 40.4 | 40.2°C | 0.976 |
| | 12.111V | 5.051V | 3.367V | 5.106V | 89.167 | | | | 43.21°C | 115.07V |
| **CL4** | **83.056A** | **0A** | **0A** | **0A** | 999.832 | 89.751% | 1070 | 27.1 | 45.53°C | 0.998 |
| | 12.038V | 5.041V | 3.325V | 5.044V | 1114.006 | | | | 60.93°C | 114.76V |

The results above are not used in the certification process

## 230V

| □□ | **12V** | **5V** | **3.3V** | **5VSB** | **DC/AC (□ )** | □□ | □□□□ **(RPM)** | □□□□□□□ **(dB[A])** | □□ **(□□ /□□ )** | **PF/AC □□** |
|---|---|---|---|---|---|---|---|---|---|---|
| **10%** | **6.471A** | **1.98A** | **1.971A** | **0.985A** | 99.978 | 89.823% | 401 | <6.0 | 40.06°C | 0.891 |
| | 12.112V | 5.05V | 3.348V | 5.077V | 111.303 | | | | 45.16°C | 230.33V |
| **20%** | **13.968A** | **2.971A** | **2.959A** | **1.186A** | 199.919 | 92.995% | 403 | <6.0 | 40.82°C | 0.952 |
| | 12.101V | 5.049V | 3.346V | 5.059V | 214.976 | | | | 46.75°C | 230.31V |
| **30%** | **21.831A** | **3.467A** | **3.454A** | **1.389A** | 299.96 | 93.903% | 403 | <6.0 | 41.23°C | 0.97 |
| | 12.089V | 5.049V | 3.344V | 5.041V | 319.437 | | | | 48.57°C | 230.3V |
| **40%** | **29.665A** | **3.963A** | **3.95A** | **1.593A** | 399.467 | 94.061% | 405 | <6.0 | 41.77°C | 0.978 |
| | 12.077V | 5.048V | 3.341V | 5.022V | 424.69 | | | | 51.33°C | 230.29V |
| **50%** | **37.188A** | **4.954A** | **4.941A** | **1.799A** | 499.184 | 93.973% | 404 | <6.0 | 42.35°C | 0.982 |
| | 12.065V | 5.047V | 3.34V | 5.003V | 531.205 | | | | 53.83°C | 230.27V |
| **60%** | **44.795A** | **5.946A** | **5.932A** | **2A** | 599.679 | 93.684% | 404 | <6.0 | 42.95°C | 0.985 |
| | 12.053V | 5.046V | 3.338V | 4.983V | 640.114 | | | | 56.9°C | 230.25V |
| **70%** | **52.354A** | **6.938A** | **6.925A** | **2.217A** | 699.481 | 93.327% | 450 | <6.0 | 43.47°C | 0.987 |
| | 12.040V | 5.046V | 3.336V | 4.962V | 749.492 | | | | 59.94°C | 230.2V |
| **80%** | **59.994A** | **7.931A** | **7.92A** | **2.326A** | 799.519 | 92.536% | 849 | 22 | 43.73°C | 0.989 |
| | 12.028V | 5.043V | 3.333V | 4.945V | 864.006 | | | | 59.08°C | 230.15V |
| **90%** | **67.979A** | **8.431A** | **8.407A** | **2.435A** | 899.31 | 92.147% | 1077 | 27.3 | 44.58°C | 0.991 |
| | 12.016V | 5.041V | 3.33V | 4.929V | 975.96 | | | | 59.41°C | 230.11V |
| **100%** | **75.777A** | **8.931A** | **8.926A** | **3.066A** | 999.314 | 91.684% | 1434 | 36.4 | 45.92°C | 0.991 |
| | 12.004V | 5.038V | 3.327V | 4.893V | 1089.949 | | | | 58.98°C | 230.11V |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **110%** | **83.520A** | **9.928A** | **10.013A** | **3.072A** | 1099.899 | 91.036% | 2159 | 47.3 | 46.36°C | 0.992 |
| | 11.992V | 5.036V | 3.325V | 4.883V | 1208.201 | | | | 57.42°C | 230.11V |
| **CL1** | **0.115A** | **13.097A** | **13.02A** | **0A** | 111.29 | 83.813% | 758 | 18.2 | 41.41°C | 0.915 |
| | 12.109V | 5.054V | 3.356V | 5.097V | 132.782 | | | | 52.37°C | 230.29V |
| **CL2** | **0.114A** | **19.776A** | **0A** | **0A** | 101.383 | 81.709% | 1755 | 41.3 | 40.87°C | 0.907 |
| | 12.113V | 5.057V | 3.347V | 5.108V | 124.08 | | | | 45.88°C | 230.29V |
| **CL3** | **0.114A** | **0A** | **19.628A** | **0A** | 67.378 | 75.408% | 1609 | 40.4 | 41.84°C | 0.855 |
| | 12.109V | 5.05V | 3.362V | 5.106V | 89.353 | | | | 45.08°C | 230.3V |
| **CL4** | **83.242A** | **0A** | **0A** | **0A** | 999.838 | 92.555% | 1074 | 27.3 | 46.1°C | 0.991 |
| | 12.011V | 5.041V | 3.325V | 5.042V | 1080.266 | | | | 57.78°C | 230.14V |

The results above are not used in the certification process

## 20-80□□□□□

### 115V

| □□ | 12V | 5V | 3.3V | 5VSB | DC/AC (□ ) | □□ | □□□□ (RPM) | □□□□□□□ (dB[A]) | □□ (□□ /□□ ) | PF/AC □□ |
|---|---|---|---|---|---|---|---|---|---|---|
| **20W** | **1.225A** | **0.495A** | **0.493A** | **0.195A** | 19.997 | 70.594% | 398 | <6.0 | 36.57°C | 0.897 |
| | 12.120V | 5.048V | 3.348V | 5.118V | 28.327 | | | | 43.02°C | 115.1V |
| **40W** | **2.697A** | **0.693A** | **0.69A** | **0.293A** | 39.996 | 82.011% | 402 | <6.0 | 37.31°C | 0.951 |
| | 12.119V | 5.05V | 3.348V | 5.112V | 48.769 | | | | 42.9°C | 115.09V |
| **60W** | **4.170A** | **0.891A** | **0.887A** | **0.392A** | 59.996 | 85.39% | 401 | <6.0 | 38.69°C | 0.962 |
| | 12.118V | 5.049V | 3.348V | 5.107V | 70.261 | | | | 43.78°C | 115.08V |
| **80W** | **5.637A** | **1.089A** | **1.084A** | **0.49A** | 79.931 | 88.536% | 401 | <6.0 | 39.28°C | 0.976 |
| | 12.116V | 5.05V | 3.348V | 5.101V | 90.281 | | | | 44.16°C | 115.08V |

The results above are not used in the certification process

## 230V

| □□ | 12V | 5V | 3.3V | 5VSB | DC/AC (□ ) | □□ | □□□□ (RPM) | □□□□□□□□ (dB[A]) | □□ (□□ /□□ ) | PF/AC □□ |
|---|---|---|---|---|---|---|---|---|---|---|
| **20W** | **1.225A** | **0.495A** | **0.493A** | **0.195A** | 19.993 | 70.754% | 398 | <6.0 | 36.2°C | 0.527 |
| | 12.120V | 5.05V | 3.348V | 5.119V | 28.254 | | | | 40.61°C | 230.33V |
| **40W** | **2.697A** | **0.693A** | **0.69A** | **0.293A** | 39.994 | 82.013% | 401 | <6.0 | 37.35°C | 0.7 |
| | 12.118V | 5.05V | 3.348V | 5.113V | 48.769 | | | | 41.49°C | 230.33V |
| **60W** | **4.170A** | **0.891A** | **0.887A** | **0.392A** | 59.994 | 86.276% | 402 | <6.0 | 38.27°C | 0.798 |
| | 12.116V | 5.05V | 3.348V | 5.107V | 69.535 | | | | 42.55°C | 230.33V |
| **80W** | **5.638A** | **1.089A** | **1.084A** | **0.49A** | 79.927 | 88.592% | 401 | <6.0 | 39.28°C | 0.856 |
| | 12.114V | 5.05V | 3.348V | 5.101V | 90.223 | | | | 43.72°C | 230.33V |

The results above are not used in the certification process

## □□□□

## 115V

| Test | 12V | 5V | 3.3V | 5VSB | Pass/Fail |
|---|---|---|---|---|---|
| 10% Load | 21.55mV | 13.81mV | 13.24mV | 10.74mV | Pass |
| 20% Load | 24.18mV | 14.06mV | 14.07mV | 11.56mV | Pass |
| 30% Load | 25.52mV | 13.75mV | 13.03mV | 11.36mV | Pass |
| 40% Load | 26.91mV | 13.91mV | 13.65mV | 11.30mV | Pass |
| 50% Load | 28.67mV | 13.86mV | 13.50mV | 11.92mV | Pass |
| 60% Load | 30.52mV | 14.01mV | 13.44mV | 12.13mV | Pass |
| 70% Load | 32.79mV | 14.73mV | 13.71mV | 12.80mV | Pass |
| 80% Load | 27.58mV | 15.05mV | 14.63mV | 12.64mV | Pass |
| 90% Load | 28.36mV | 16.02mV | 14.69mV | 13.63mV | Pass |
| 100% Load | 28.42mV | 15.45mV | 14.16mV | 12.25mV | Pass |
| 110% Load | 29.10mV | 14.99mV | 14.29mV | 13.20mV | Pass |
| Crossload1 | 22.44mV | 14.45mV | 13.93mV | 9.95mV | Pass |
| Crossload2 | 22.74mV | 16.95mV | 13.60mV | 10.12mV | Pass |

| Test | 12V | 5V | 3.3V | 5VSB | Pass/Fail |
|---|---|---|---|---|---|
| Crossload3 | 20.78mV | 14.63mV | 14.84mV | 9.81mV | Pass |
| Crossload4 | 27.67mV | 13.73mV | 14.30mV | 11.10mV | Pass |

The results above are not used in the certification process

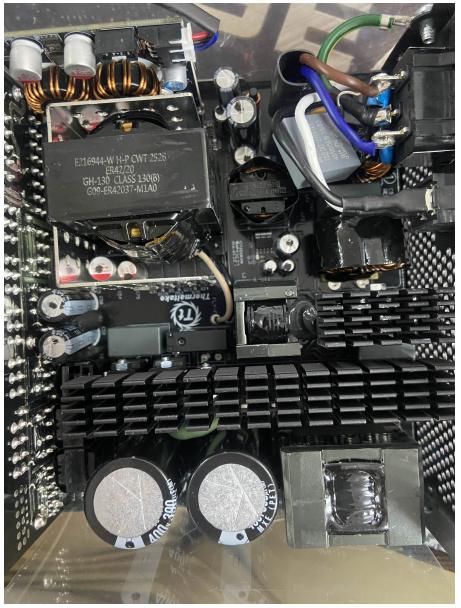
**230V**

| Test | 12V | 5V | 3.3V | 5VSB | Pass/Fail |
|---|---|---|---|---|---|
| 10% Load | 22.89mV | 16.13mV | 15.67mV | 11.82mV | Pass |
| 20% Load | 27.22mV | 14.94mV | 15.41mV | 12.65mV | Pass |
| 30% Load | 28.25mV | 16.64mV | 16.60mV | 12.70mV | Pass |
| 40% Load | 27.69mV | 14.94mV | 14.94mV | 11.98mV | Pass |
| 50% Load | 29.33mV | 14.89mV | 15.20mV | 12.08mV | Pass |
| 60% Load | 32.33mV | 16.59mV | 16.65mV | 13.57mV | Pass |
| 70% Load | 34.85mV | 16.59mV | 16.75mV | 13.47mV | Pass |
| 80% Load | 29.85mV | 17.26mV | 17.38mV | 13.99mV | Pass |
| 90% Load | 30.16mV | 17.31mV | 17.48mV | 14.51mV | Pass |
| 100% Load | 29.30mV | 16.50mV | 16.68mV | 13.53mV | Pass |
| 110% Load | 31.78mV | 16.62mV | 17.67mV | 14.01mV | Pass |
| Crossload1 | 22.43mV | 15.79mV | 15.96mV | 11.20mV | Pass |
| Crossload2 | 23.87mV | 18.39mV | 15.56mV | 11.98mV | Pass |
| Crossload3 | 21.09mV | 14.53mV | 17.27mV | 11.56mV | Pass |
| Crossload4 | 30.42mV | 17.80mV | 16.68mV | 13.02mV | Pass |

The results above are not used in the certification process

Thermaltake Toughpower PT 1000W









Top side Power specifications label

Fan PSU Internals

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