Thermaltake Toughpower SFX 1000W (ATX v3.1)

PSSTP1000FNFAPA10DCH00184

Lab ID TT10002575

Certification ID 252575

Test Result Report ID: 24PS2575A

Certificate Issue Date: Sep 25, 2024

Scheme: ETA-EMI PSU

115V



230V



Scheme: LAMBDA PSU

115V



230V





Outside Validation Scope



General Information

Test Equipment

Electronic Loads	Chroma 63601-5 x2 Chroma 63600-2 Chroma 63640-80-80 x10 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 SFX 1000W (ATX v3.1)
OEM/ODM	CE-Link
Serial Number	PSSTP1000FNFAPA10DCH00184
Product Specifications	
Manufacturer-Provided Information	
□□□ (Vrms)	100-240

□□□□ (Arms)	15-8
□□□□ (Hz)	50-60
□□□□ (W)	1000
Operating Temperature (Continuous Full Load) (°C)	
□□	SFX
□□□□	Fully Modular
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
□□	92mm Fluid Dynamic Bearing Fan (EFS-09C12H)
□□□□□	✓
Cybenetics Testing Information	
Lab ID	TT10002575
Date of receipt	Sep 10, 2024
Testing Date	Sep 19, 2024
Report Issued Date	Sep 25, 2024
□□□□□	The unit had voltage drop during OCP testing and didn't shut down. This occurred under both normal and hot conditions.
Engineer Name	-
Authorized By the Laboratory Technical Manager	Aristeidis Bitziopoulos
Signature	

□□□□□
(Non-accredited measurements)

□□□□□				
□□	□□□□	□□□□□□	**Gauge**	In Cable Capacitors
ATX □□ 24 pin (300mm)	1	1	16-22AWG	□
4+4 pin EPS 12V □□ (400mm)	2	2	16AWG	□
6+2pin PCIe□□ (400mm+150mm)	2	4	16-18AWG	□
12+4 pin PCIe (400mm) (600W)	1	1	16-26AWG	□

SATA□□ (290mm+150mm+150mm+150mm)	2	8	18AWG	□
4-pin Molex (300mm+150mm+150mm+150mm) / FDD (+150mm)	1	4 / 1	18AWG	□
AC Power Cord (1400mm) - C13 coupler	1	1	17AWG	-

Protection Features

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
□□□□	□□	18	18	83.3	2.5	0.3
	□	120		1000	12.5	3.6
□□□□□ (W)		1000				

Parts Description

General Data	
Manufacturer (OEM)	CE-Link
PCB Type	Single-Sided
Primary Side	
Transient Filter	4x Y caps, 2x X caps, 2x CM chokes, 1x MOV
Inrush Protection	1x NTC Thermistor MF72-5D15 (5 ohm @ 25°C) & Relay
Bridge Rectifier(s)	2x GBU2506L (600V, 25A @ 100°C)
APFC MOSFETs	2x Lonten LSD65R070GT (650V, 30A @ 100°C, Rds(on): 0.070Ohm)

APFC Boost Diode	1x Global Power G4S06510AT (650V, 10A @ 151°C)
Bulk Cap(s)	2x Rubycon (400V, 470uF or combined 940uF, 2,000h @ 105°C, MXE)
Main Switchers	2x Lonten LSD65R099GF (650V, 25.3A @ 100°C, Rds(on): 0.99Ohm) & 1x Champion CM03X (For no load consumption)
Resonant Controller	Champion CM6901T6X
APFC Controller	ATK AT6103ZSPC & Champion CM03AX
Topology	Primary side: APFC, Half-Bridge & LLC converter Secondary side: Synchronous Rectification & DC-DC converters
Secondary Side	
+12V MOSFETs	8x Lonten LSGN04R013WE (40V, 101A @ 100°C, Rds(on): 1.35mOhm)
5V & 3.3V	DC-DC Converters: 2x Xintan NDP23B0QB (30V, 20A @ 25°C, Rds(on): 3mOhm) PWM Controller(s): No Info
Filtering Capacitors	Electrolytic: 3x Rubycon (5-6,000h @105°C, ZLH) 1x Rubycon (4-10,000h @105°C, YXJ) 1x Rubycon (4-10,000h @105°C, YXF) Polymer: 55x
Supervisor IC	IN1S3151-SAG
Fan Model	EFS-09C12H (92mm, 12V, 0.40A, Fluid Dynamic Bearing Fan)
5VSB	
Rectifier	1x UTC MGBR10L45 (45V, 10A)
Standby PWM Controller	Esthome EST.2915HP

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)	89.597%
Average Noise Output (>1450 Load Combinations)	31.46dBA
PF□□□ (>1450 Load Combinations)	0.980
Efficiency With 10W (≤500W) or 2% (>500W) Load	72.005%
□□□□□□	0.0672W
Non-Accredited	
12V Ripple (Full Load)	27.95mV
5V Ripple (Full Load)	11.52mV
3.3V Ripple (Full Load)	13.38mV
5VSB Ripple (Full Load)	14.54mV
12V Load Regulation	0.29%
5V Load Regulation	1.76%
3.3V Load Regulation	2.82%
5VSB Load Regulation	2.25%
Inrush Current	34.110A

230V

Accredited	
□□□□ (>1450 load combinations)	91.728%
Average Noise Output (>1450 Load Combinations)	30.69dBA
PF□□□ (>1450 Load Combinations)	0.924
Efficiency With 10W (≤500W) or 2% (>500W) Load	71.636%
□□□□□□	0.1627W
Non-Accredited	
12V Ripple (Full Load)	24.78mV

5V Ripple (Full Load)		15.70mV
3.3V Ripple (Full Load)		14.92mV
5VSB Ripple (Full Load)		14.96mV
12V Load Regulation		0.52%
5V Load Regulation		1.67%
3.3V Load Regulation		3.03%
5VSB Load Regulation		2.40%
Inrush Current		64.240A
12V Transient Response (200%)		11.34V
5V Transient Response (200%)		4.918V
3.3V Transient Response (200%)		3.219V
5VSB Transient Response (200%)		4.924V
□□□□ & PG□□		16.60ms
AC Loss to PWR_OK Hold Up Time		13.50ms
PWR_OK Inactive to DC Loss Delay		3.10ms
PSU Timings: T1 (20% / 100%)	122.0ms	122.0ms
PSU Timings: T3 (20% / 100%)	126.0ms	126.0ms
12V OCP (30.0°C / 43.8°C)	115.00A (138.06%), 11.987V	107.00A (128.45%), 11.992V
5V OCP (30.0°C / 43.8°C)	21.8A (121.11%), 4.812V*	21.4A (118.89%), 4.808V*
3.3V OCP (30.0°C / 43.8°C)		
5VSB OCP (30.0°C / 43.8°C)	21A (116.67%), 3.271V*	20.8A (115.56%), 3.208V*
OPP (29.88°C / 44.25°C)	132.48%	116.54%

□□□□ & PG□□

Hold-Up Time (ms)	16.6
AC Loss to PWR_OK Hold Up Time (ms)	13.5
PWR_OK Inactive to DC Loss Delay (ms)	3.1

Tables

115V

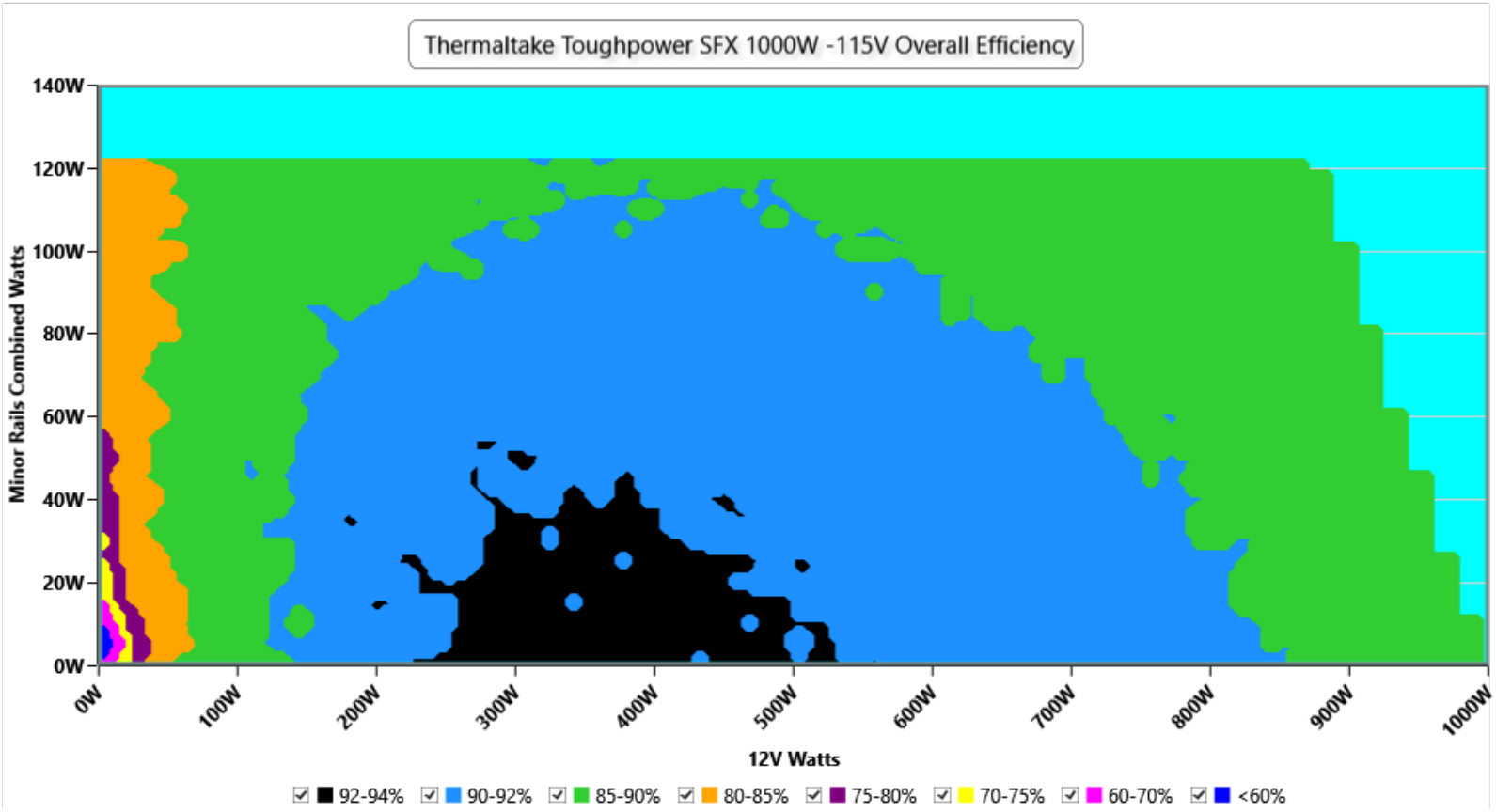
Detailed Results						
	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	115.09 V	115.04 V	113.85 V	115.12 V	116.15 V	PASS
Mains Frequency:	60.00 Hz	59.95 Hz	59.40 Hz	60.02 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.416	1.415	1.340	1.418	1.490	PASS
Mains Voltage THD:	0.14 %	0.08 %	N/A	0.20 %	2.00 %	PASS
Real Power:	0.067 W	0.009 W	N/A	0.115 W	N/A	N/A
Apparent Power:	14.374 W	13.455 W	N/A	15.265 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:	231.02 V	230.91 V	227.70 V	231.09 V	232.30 V	PASS
Mains Frequency:	50.00 Hz	49.99 Hz	49.50 Hz	50.01 Hz	50.50 Hz	PASS
Mains Voltage CF:	1.417	1.416	1.340	1.418	1.490	PASS
Mains Voltage THD:	0.17 %	0.15 %	N/A	0.26 %	2.00 %	PASS
Real Power:	0.163 W	0.123 W	N/A	0.234 W	N/A	N/A
Apparent Power:	44.265 W	43.275 W	N/A	45.221 W	N/A	N/A
Power Factor:	0.003	N/A	N/A	N/A	N/A	N/A

□□□□□□

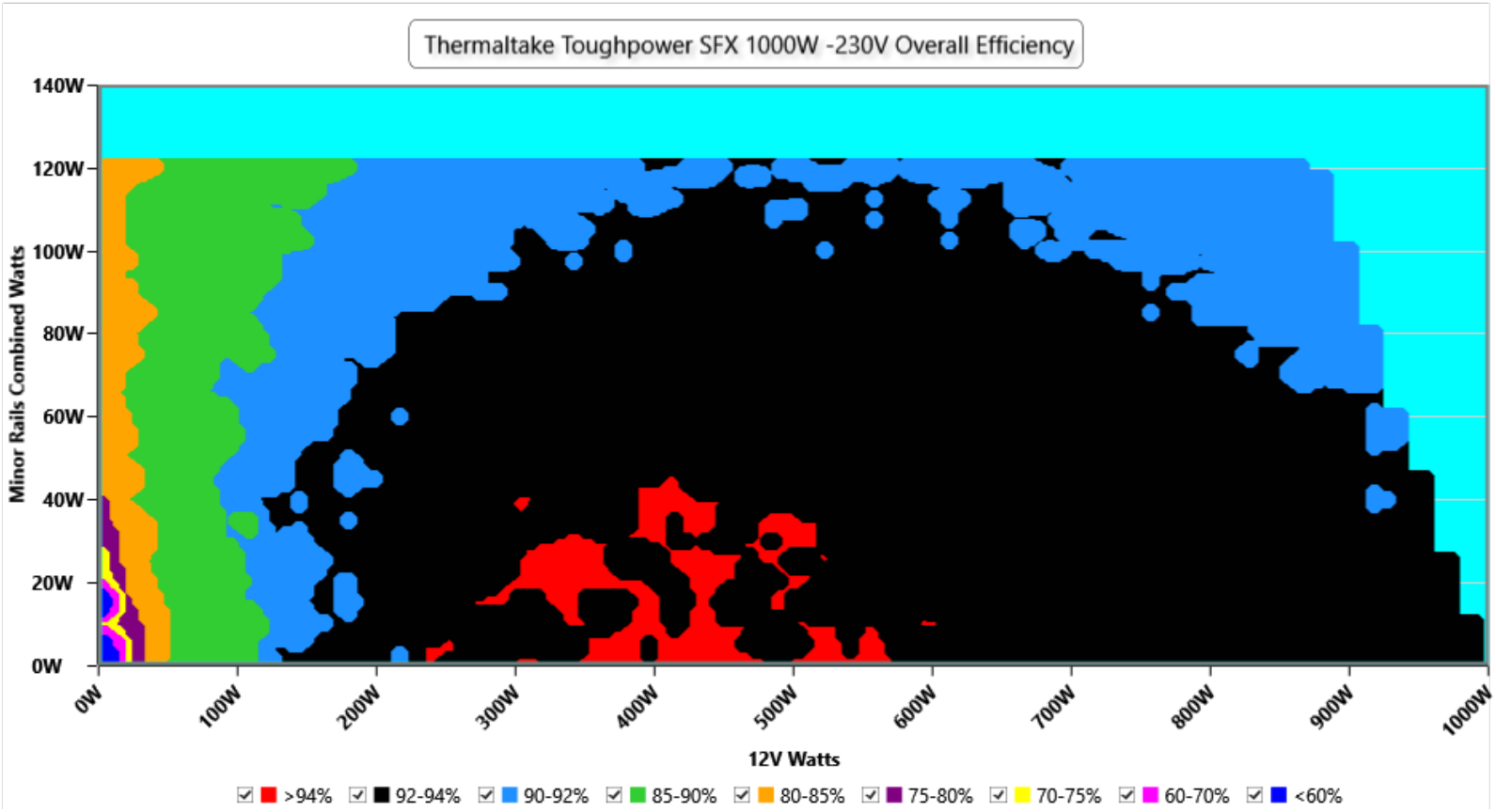
115V



□□

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



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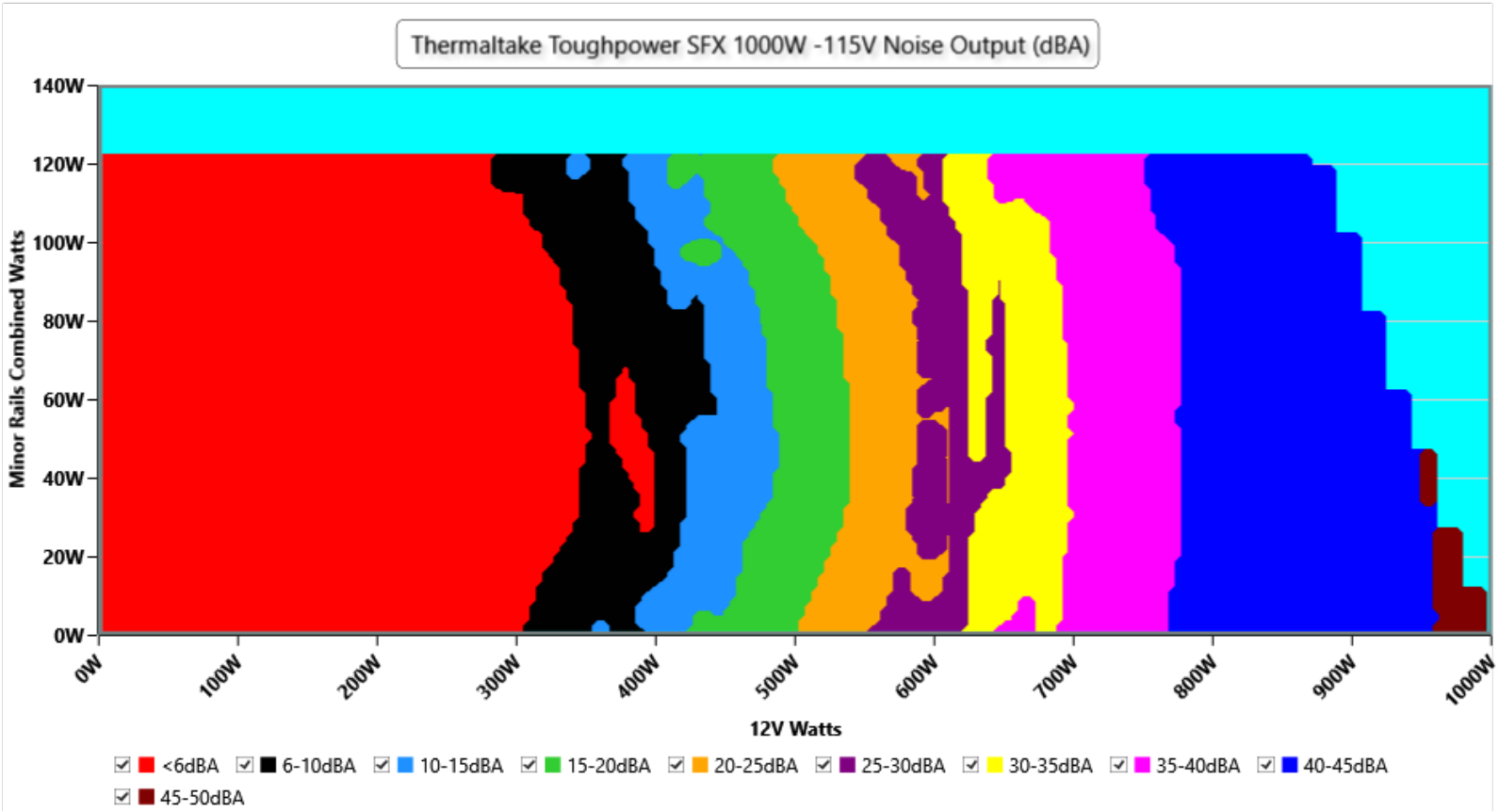
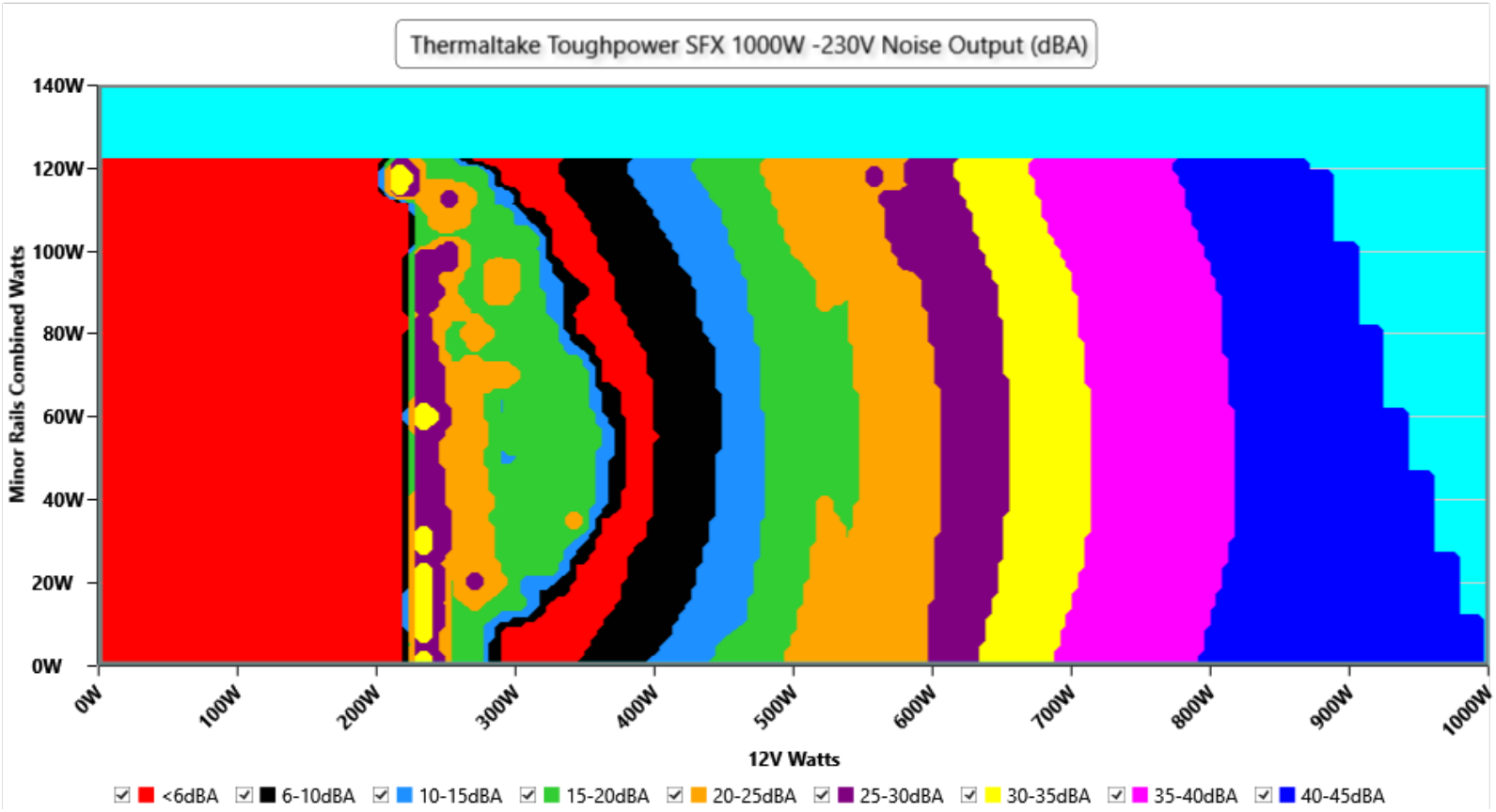
115V



□□

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 fan · noise · intake	High ambient fan · noise · intake	Noise change
10%	0 RPM · <6.0 dB(A) · 38.5 °C	0 RPM · <6.0 dB(A) · 48.1 °C	fan off in both
20%	0 RPM · <6.0 dB(A) · 40.4 °C	0 RPM · <6.0 dB(A) · 49.7 °C	fan off in both
50%	0 RPM · <6.0 dB(A) · 49.4 °C	1323 RPM · 23.1 dB(A) · 42.2 °C	fan starts (<6.0 → 23.1)
100%	2784 RPM · 44.8 dB(A) · 30.4 °C	3307 RPM · 48.8 dB(A) · 45.3 °C	**+4.0 dB(A)**

230V

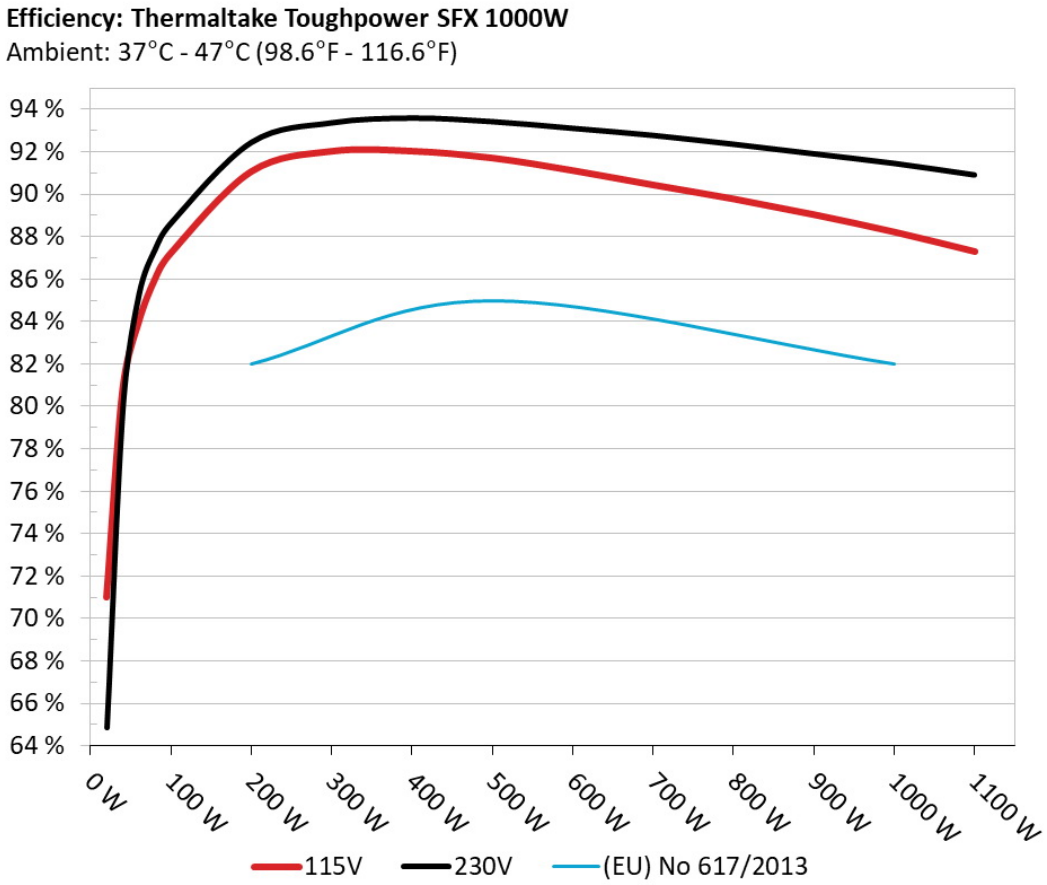
Load	Normal ambient fan · noise · intake	High ambient fan · noise · intake	Noise change
10%	0 RPM · <6.0 dB(A) · 33.2 °C	0 RPM · <6.0 dB(A) · 47.4 °C	fan off in both
20%	0 RPM · <6.0 dB(A) · 33.8 °C	0 RPM · <6.0 dB(A) · 48.2 °C	fan off in both
50%	0 RPM · <6.0 dB(A) · 40.8 °C	1256 RPM · 20.8 dB(A) · 42.1 °C	fan starts (<6.0 → 20.8)
100%	2589 RPM · 42.8 dB(A) · 30.1 °C	3395 RPM · 49.6 dB(A) · 45.1 °C	**+6.8 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.

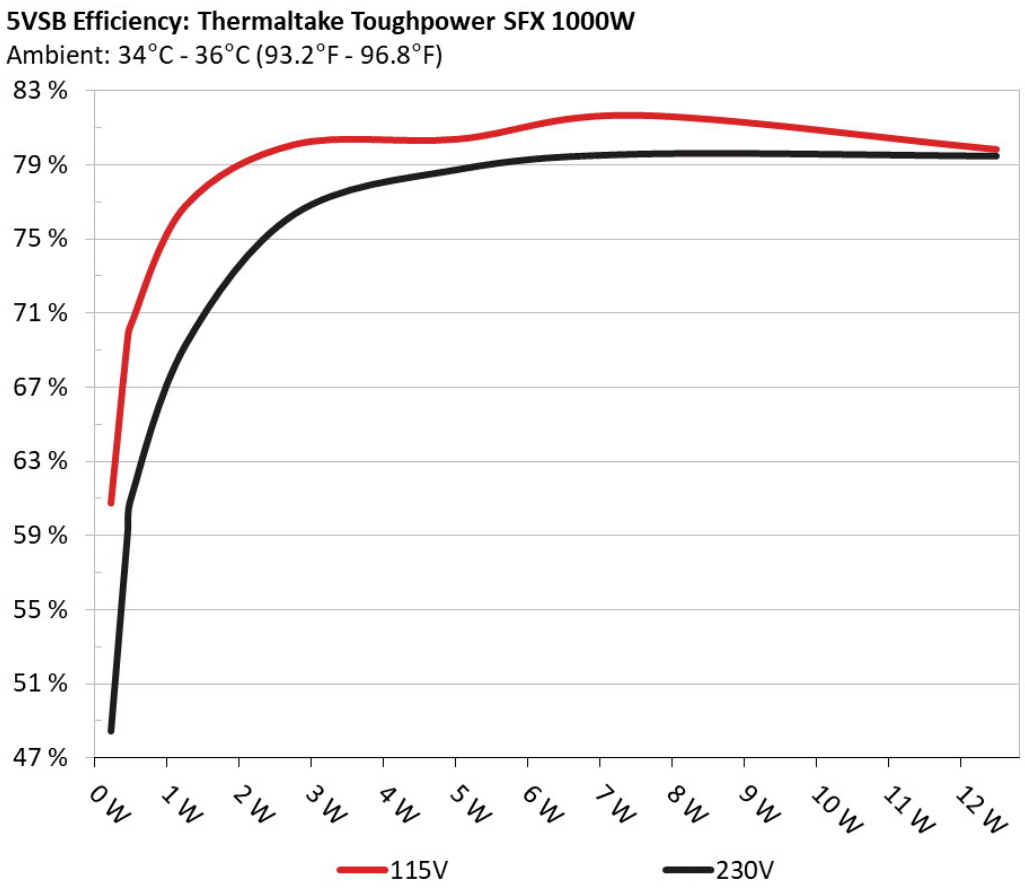
Informational. Not part of the ETA or LAMBDA rating.

Indicative Performance



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**	0.227W	60.721%	0.03
	5.04V	0.374W		115.16V
2	**0.09A**	0.454W	69.506%	0.053
	5.039V	0.653W		115.16V
3	**0.55A**	2.768W	80.113%	0.232
	5.03V	3.455W		115.18V
4	**1A**	5.023W	80.401%	0.335
	5.021V	6.247W		115.17V
5	**1.5A**	7.519W	81.692%	0.392
	5.011V	9.204W		115.16V
6	**2.501A**	12.482W	79.846%	0.456
	4.991V	15.632W		115.16V

230V

□□ #	5VSB	DC/AC (□)	□□	PF/AC □□
1	**0.045A**	0.227W	48.424%	0.011
	5.04V	0.469W		230.42V
2	**0.09A**	0.454W	58.977%	0.019
	5.039V	0.771W		230.41V
3	**0.55A**	2.767W	76.349%	0.086
	5.03V	3.625W		230.41V
4	**1A**	5.022W	78.753%	0.143
	5.021V	6.377W		230.4V
5	**1.5A**	7.518W	79.586%	0.198
	5.011V	9.444W		230.4V
6	**2.501A**	12.479W	79.484%	0.278
	4.991V	15.699W		230.4V

Protection Features

OCP (Normal @ 30°C)	12V: 115A (138.06%), 11.987V 5V: 21.8A (121.11%), 4.812V* *Didn't shut down. Voltage Drop (4.561V@22A) 3.3V: 21A (116.67%), 3.271V* *Didn't shut down. Voltage Drop (2.888V@21.2A) 5VSB: 4.1A (164%), 4.965
OCP (Hot @ 43.8°C)	12V: 107A (128.45%), 11.992V 5V: 21.4A (118.89%), 4.808V* *Didn't shut down. Voltage Drop (4.572V@21.6A) 3.3V: 20.8A (115.56%), 3.208V* *Didn't shut down. Voltage Drop (2.968V@21A) 5VSB: 4.1A (164%), 4.963V
OPP (Normal @ 29.9°C)	1324.82W (132.48%)
OPP (Hot @ 44.3°C)	1165.39W (116.54%)
OTP	✓ (120°C @ Heat Sink)
SCP	12V to Earth: ✓ 5V to Earth: ✓ 3.3V to Earth: ✓ 5VSB to Earth: ✓ -12V to Earth: ✓
PWR_OK	Proper Operation
NLO	✓
Fan Failure Protection	✗
SIP	Surge: MOV Inrush: NTC & Bypass Relay

Supplementary Tests (For Reference)

10-110%□□□□

115V

□□	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
10%	**6.536A**	**1.993A**	**1.975A**	**0.997A**	100.039	87.206%	0	<6.0	48.12°C	0.971
	12.001V	5.019V	3.343V	5.017V	114.723				40.21°C	115.16V
20%	**14.085A**	**2.996A**	**2.971A**	**1.199A**	200	91.046%	0	<6.0	49.66°C	0.97
	12.005V	5.009V	3.333V	5.006V	219.669				40.67°C	115.14V
30%	**21.996A**	**3.5A**	**3.474A**	**1.402A**	300.056	92.006%	0	<6.0	53.18°C	0.985
	12.002V	5.002V	3.325V	4.996V	326.119				41.05°C	115.12V
40%	**29.889A**	**4.006A**	**3.98A**	**1.605A**	399.88	92.011%	983	13.7	41.86°C	0.991
	12.000V	4.995V	3.317V	4.985V	434.63				54.47°C	115.09V
50%	**37.440A**	**5.016A**	**4.989A**	**1.81A**	499.578	91.689%	1323	23.1	42.22°C	0.991
	11.994V	4.985V	3.308V	4.974V	544.863				53.97°C	115.06V
60%	**45.061A**	**6.031A**	**6.004A**	**2.001A**	600.014	91.098%	1783	31.8	42.86°C	0.996
	11.990V	4.976V	3.298V	4.964V	658.677				54.08°C	115.04V
70%	**52.622A**	**7.049A**	**7.026A**	**2.222A**	699.799	90.417%	2243	38	43.48°C	0.995
	11.985V	4.967V	3.288V	4.952V	774.003				54.46°C	115.01V
80%	**60.261A**	**8.07A**	**8.052A**	**2.327A**	799.824	89.76%	2608	43.2	43.89°C	0.996
	11.980V	4.957V	3.279V	4.943V	891.182				55.45°C	114.99V
90%	**68.238A**	**8.587A**	**8.561A**	**2.433A**	899.606	89.02%	2993	47.2	44.98°C	0.997
	11.975V	4.95V	3.271V	4.934V	1010.578				57.42°C	114.97V
100%	**76.288A**	**9.106A**	**9.104A**	**2.539A**	1000.34	88.196%	3307	48.8	45.33°C	0.998
	11.970V	4.943V	3.262V	4.925V	1134.235				59.43°C	114.94V
110%	**83.934A**	**10.138A**	**10.239A**	**2.543A**	1100.175	87.278%	3374	49.4	46.51°C	0.998
	11.966V	4.932V	3.252V	4.917V	1260.499				62.17°C	114.91V
CL1	**0.117A**	**14.549A**	**14.427A**	**0A**	121.313	81.148%	1299	21.9	41.34°C	0.954
	12.019V	4.963V	3.306V	5.024V	149.471				49.81°C	115.15V

CL2	**0.116A**	**18.158A**	**0A**	**0A**	91.396	80.77%	0	<6.0	44.04°C	0.972
	12.013V	4.956V	3.349V	5.034V	113.138				41.35°C	115.14V
CL3	**0.116A**	**0A**	**18.193A**	**0A**	60.793	74.499%	0	<6.0	43.28°C	0.738
	12.008V	5.016V	3.265V	5.03V	81.671				40.85°C	115.17V
CL4	**83.549A**	**0A**	**0A**	**0A**	1000.099	89.011%	3186	48.6	45.29°C	0.998
	11.970V	4.984V	3.297V	4.981V	1123.549				58.68°C	114.94V

The results above are not used in the certification process

230V

□□	**12V**	**5V**	**3.3V**	**5VSB**	**DC/AC (□)**	□□	□□□□ **(RPM)**	□□□□□□□ **(dB[A])**	□□ **(□□ /□□)**	**PF/AC □□**
10%	**6.487A**	**1.983A**	**1.971A**	**1A**	100.032	88.654%	0	<6.0	47.43°C	0.718
	12.090V	5.046V	3.35V	5V	112.842				40.34°C	230.42V
20%	**13.982A**	**2.979A**	**2.965A**	**1.203A**	199.99	92.453%	0	<6.0	48.15°C	0.897
	12.093V	5.036V	3.339V	4.989V	216.363				40.76°C	230.41V
30%	**21.841A**	**3.481A**	**3.468A**	**1.405A**	300.047	93.374%	0	<6.0	50.23°C	0.931
	12.086V	5.029V	3.331V	4.981V	321.337				41.28°C	230.4V
40%	**29.688A**	**3.984A**	**3.974A**	**1.61A**	399.816	93.595%	0	<6.0	51.35°C	0.947
	12.079V	5.022V	3.322V	4.971V	427.202				41.79°C	230.39V
50%	**37.198A**	**4.988A**	**4.982A**	**1.815A**	499.54	93.43%	1256	20.8	42.08°C	0.959
	12.071V	5.014V	3.312V	4.959V	534.731				47.71°C	230.38V
60%	**44.783A**	**5.996A**	**5.996A**	**2.001A**	599.983	93.113%	1748	30.9	42.51°C	0.964
	12.064V	5.005V	3.303V	4.948V	644.349				47.91°C	230.37V
70%	**52.311A**	**7.007A**	**7.016A**	**2.229A**	699.83	92.78%	2311	39.2	43.02°C	0.969
	12.057V	4.997V	3.293V	4.935V	754.317				48.4°C	230.36V
80%	**59.914A**	**8.021A**	**8.043A**	**2.335A**	799.855	92.363%	2763	44.4	43.84°C	0.974
	12.049V	4.988V	3.282V	4.926V	866.04				49.52°C	230.35V
90%	**67.855A**	**8.535A**	**8.554A**	**2.441A**	899.636	91.913%	3131	48.7	44.51°C	0.979
	12.042V	4.98V	3.273V	4.916V	978.687				50.41°C	230.33V
100%	**75.877A**	**9.051A**	**9.098A**	**2.548A**	1000.34	91.458%	3395	49.6	45.11°C	0.983
	12.034V	4.973V	3.264V	4.907V	1093.666				51.55°C	230.32V

110%	**83.521A**	**10.075A**	**10.238A**	**2.552A**	1100.146	90.917%	3403	49.7	46.29°C	0.986
	12.025V	4.963V	3.252V	4.899V	1210.056				53.23°C	230.3V
CL1	**0.116A**	**14.441A**	**14.482A**	**0A**	121.309	82.046%	706	<6.0	40.32°C	0.85
	12.083V	5V	3.293V	5.013V	147.86				48.78°C	230.38V
CL2	**0.115A**	**18.092A**	**0A**	**0A**	91.398	81.653%	0	<6.0	45.91°C	0.716
	12.091V	4.975V	3.342V	5.017V	112.08				41.11°C	230.38V
CL3	**0.115A**	**0A**	**18.097A**	**0A**	60.789	75.362%	0	<6.0	43.08°C	0.651
	12.089V	5.038V	3.282V	5.019V	80.715				41.64°C	230.37V
CL4	**83.041A**	**0A**	**0A**	**0A**	1000.111	92.242%	3188	48.7	45.15°C	0.982
	12.043V	5.009V	3.305V	4.969V	1084.273				50.27°C	230.3V

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	**1.240A**	**0.497A**	**0.492A**	**0.199A**	20.014	70.982%	0	<6.0	41.22°C	0.621
	11.992V	5.03V	3.354V	5.036V	28.216				36.57°C	115.19V
40W	**2.726A**	**0.696A**	**0.689A**	**0.298A**	40.011	80.775%	0	<6.0	42.07°C	0.689
	11.994V	5.027V	3.351V	5.033V	49.549				37.33°C	115.19V
60W	**4.213A**	**0.896A**	**0.887A**	**0.398A**	60.011	83.954%	0	<6.0	44.16°C	0.72
	11.995V	5.025V	3.35V	5.03V	71.509				38.07°C	115.19V
80W	**5.698A**	**1.095A**	**1.084A**	**0.498A**	79.99	85.96%	0	<6.0	46.07°C	0.738
	11.998V	5.024V	3.349V	5.027V	93.072				39.11°C	115.2V

The results above are not used in the certification process

230V

□□	12V	5V	3.3V	5VSB	DC/AC (□)	□□	□□□□ (RPM)	□□□□□□□ (dB[A])	□□ (□□ /□□)	PF/AC □□
20W	**1.228A**	**0.495A**	**0.491A**	**0.199A**	20.012	64.834%	0	<6.0	41.85°C	0.452
	12.097V	5.056V	3.363V	5.025V	30.866				36.63°C	230.43V
40W	**2.704A**	**0.693A**	**0.687A**	**0.299A**	40.01	79.992%	0	<6.0	42.54°C	0.544
	12.095V	5.054V	3.36V	5.022V	50.018				37.49°C	230.43V
60W	**4.179A**	**0.891A**	**0.885A**	**0.399A**	60.01	85.299%	0	<6.0	43.65°C	0.623
	12.093V	5.051V	3.358V	5.019V	70.393				38.49°C	230.43V
80W	**5.653A**	**1.09A**	**1.082A**	**0.499A**	79.985	87.409%	0	<6.0	45.62°C	0.677
	12.091V	5.05V	3.356V	5.012V	91.416				39.28°C	230.43V

The results above are not used in the certification process

□□□□

115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	27.7 mV	8.5 mV	5.6 mV	13.4 mV	Pass
20% Load	11.7 mV	8.2 mV	5.7 mV	14.9 mV	Pass
30% Load	10.6 mV	8.4 mV	6.2 mV	15.1 mV	Pass
40% Load	12.3 mV	9.0 mV	6.2 mV	13.5 mV	Pass
50% Load	13.8 mV	9.0 mV	6.7 mV	15.4 mV	Pass
60% Load	15.7 mV	9.4 mV	7.4 mV	12.4 mV	Pass
70% Load	16.1 mV	9.5 mV	8.0 mV	13.7 mV	Pass
80% Load	18.5 mV	10.6 mV	11.3 mV	14.7 mV	Pass
90% Load	20.5 mV	10.7 mV	12.6 mV	14.0 mV	Pass
100% Load	28.0 mV	11.5 mV	13.4 mV	14.5 mV	Pass
110% Load	32.7 mV	12.4 mV	13.8 mV	14.7 mV	Pass
Crossload 1	21.7 mV	10.6 mV	13.7 mV	9.4 mV	Pass
Crossload 2	18.4 mV	7.6 mV	8.5 mV	6.8 mV	Pass

Test	12V	5V	3.3V	5VSB	Pass/Fail
Crossload 3	8.6 mV	8.6 mV	13.7 mV	9.8 mV	Pass
Crossload 4	27.5 mV	11.7 mV	11.5 mV	8.5 mV	Pass

The results above are not used in the certification process

230V

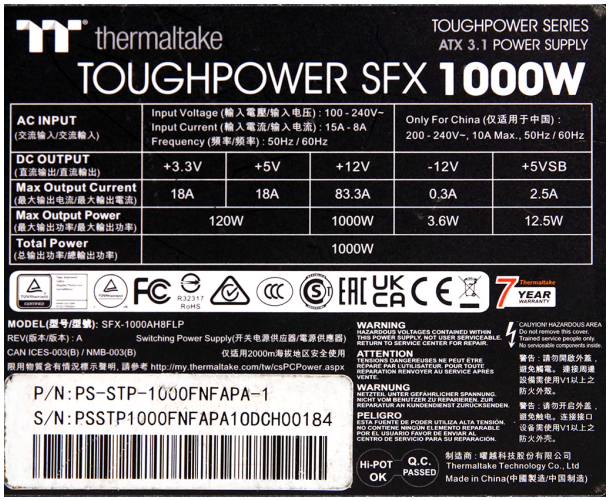
Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	10.8 mV	8.3 mV	6.6 mV	12.5 mV	Pass
20% Load	15.0 mV	8.3 mV	6.9 mV	13.0 mV	Pass
30% Load	12.0 mV	8.5 mV	7.4 mV	13.1 mV	Pass
40% Load	12.2 mV	9.3 mV	8.2 mV	13.3 mV	Pass
50% Load	12.7 mV	10.0 mV	8.4 mV	12.2 mV	Pass
60% Load	13.6 mV	11.4 mV	8.4 mV	12.5 mV	Pass
70% Load	15.6 mV	13.2 mV	10.1 mV	12.5 mV	Pass
80% Load	16.8 mV	13.4 mV	13.5 mV	12.9 mV	Pass
90% Load	18.1 mV	16.0 mV	13.6 mV	13.4 mV	Pass
100% Load	24.8 mV	15.7 mV	14.9 mV	15.0 mV	Pass
110% Load	26.7 mV	16.7 mV	16.3 mV	16.6 mV	Pass
Crossload 1	15.7 mV	17.0 mV	16.7 mV	11.9 mV	Pass
Crossload 2	10.3 mV	8.6 mV	9.4 mV	9.7 mV	Pass
Crossload 3	7.4 mV	9.2 mV	11.2 mV	9.1 mV	Pass
Crossload 4	24.8 mV	13.1 mV	14.0 mV	11.1 mV	Pass

The results above are not used in the certification process

Thermaltake Toughpower SFX 1000W (ATX v3.1)



Top side



Power specifications label

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