Thermaltake Smart Pro RGB Bronze 850W

Serial Number PSSPR0850FPCBEURMU000014

Lab ID 106

Certification ID 25106

Test Result Report ID:

Certificate Issue Date: Sep 5, 2018

115V

Scheme: ETA-EMI PSU



115V



Scheme: LAMBDA PSU



Aristeidis Bitziopoulos, Certification Body General Manager

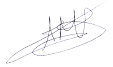
General Information

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	Smart Pro RGB Bronze 850W
OEM/ODM	Sirfa
Serial Number	PSSPR0850FPCBEURMU000014
Product Specifications	
Manufacturer-Provided Information	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	15
Rated Frequency (Hz)	50-60

Rated Power (W)	850
Operating Temperature (Continuous Full Load) (°C)	
Type	ATX12V
Cable Design	Fully Modular
Warranty	-
Cybenetics Measurements	
Dimensions (W x H x D)	
Weight	
Cooling	140mm HDB RGB Fan (TT-1425/A1425H12S)
Semi-Passive Operation	✗
Cybenetics Testing Information	
Lab ID	106
Date of receipt	Aug 29, 2018
Testing Date	Sep 2, 2018
Report Issued Date	Sep 5, 2018
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
ATX connector 20+4 pin (600mm)	1	1	18AWG
4+4 pin EPS12V (650mm)	1	1	18AWG
6+2 pin PCIe (500mm+150mm)	2	4	18AWG
SATA (500mm+150mm+150mm)	3	9	18AWG
4 pin Molex (500mm+150mm+150mm)	2	6	18AWG
FDD Adapter (+150mm)	1	1	22AWG

Power Specifications

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	22	22	70.5	3	0.5
	Watts	140		846	15	6
Total Max. Power (W)		850				

Parts Description

General Data	
Manufacturer (OEM)	Sirfa
Platform Model	-
Primary Side	
Transient Filter	4x Y caps, 2x X caps, 2x CM chokes, 1x MOV, 1x CM02X
Inrush Protection	NTC Thermistor
Bridge Rectifier(s)	2x GBU805 (600V, 8A @ 125°C)
APFC MOSFETS	2x Infineon SPW20N60C3 (650V, 13.1A @ 100°C, 0.19Ohm)
APFC Boost Diode	1x UnisonicBYC15-600 (600V, 15A @ 98°C)
Hold-up Cap(s)	1x Rubycon (400V, 680uF, 2000h @ 105°C, MXH)
Main Switchers	2x Infineon IPA50R140CP (550V, 15A @ 100°C, 0.14Ohm)
Combo APFC/PWM Controller	Champion CM6806 & CM03AX Green PFC controller
Topology	Primary side: Double-Forward Secondary side: Synchronous Rectification & DC-DC converters
Secondary Side	
+12V MOSFETS	4x Infineon IPP052NE7N3 G (75V, 80A @ 100°C, 5.2mOhm)
5V & 3.3V	DC-DC Converters: 8x Infineon IPD060N03L G (30V, 50A @ 100°C, 6mOhm) PWM Controller: Anpec APW7159C
Filtering Capacitors	Electrolytics: Teapo (1-3,000h @ 105°C, SC) Polymers: Teapo
Supervisor IC	SITI PS224 (OVP, UVP, OCP, SCP, PG)
Fan Model	A1425H12S (140mm, 9 - 13.8V, 0.39A, 1800RPM, 97.2CFM, 36.2dBA)
5VSB Circuit	

Switching FET	1x UTC 2N60L (600V, 2A @ 25°C,

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	✓

Performance Summary 115V

Accredited	
Average Efficiency (>1450 load combinations)	84.746%
Average Noise Output (>1450 Load Combinations)	39.42dBA
Average PF (>1450 Load Combinations)	0.986
Efficiency With 10W (≤500W) or 2% (>500W) Load	-
Standby Power Consumption	0.0567W
Non-Accredited	
12V Ripple (Full Load)	25.70mV
5V Ripple (Full Load)	11.77mV
3.3V Ripple (Full Load)	17.54mV
5VSB Ripple (Full Load)	19.17mV
12V Load Regulation	1.94%
5V Load Regulation	2.19%
3.3V Load Regulation	4.52%
5VSB Load Regulation	5.80%
Inrush Current	33.450A

Hold-Up Time & PWR_OK Signal

Hold-Up Time (ms)	13.6
AC Loss to PWR_OK Hold Up Time (ms)	11.7
PWR_OK Inactive to DC Loss Delay (ms)	1.9