Anex

FSP Technology PT-1200FM

Lab ID#: 300
Receipt Date: -
Test Date: -

Report:
Report Date: Feb 28, 2018

DUT INFORMATION

Brand	FSP Technology
Manufacturer (OEM)	FSP
Series	AURUM PT
Model Number	PT-1200FM
Serial Number	S4290000157
DUT Notes	

DUT SPECIFICATIONS

Rated Voltage (Vrms)	100-240
Rated Current (Arms)	15-9
Rated Frequency (Hz)	50-60
Rated Power (W)	1200
Type	ATX12V
Cooling	135mm Hydro Dynamic Bearing Fan (PLA13525S12M)
Semi-Passive Operation	✗
Cable Design	Fully Modular

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	25	25	100	3	0.8
	Watts	160		1200	15	9.6
Total Max. Power (W)		1200				

CABLES AND CONNECTORS

Modular Cables

Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 20+4 pin (600mm)	1	1	18-24AWG	No
4+4 pin EPS12V (700mm)	2	2	18AWG	No
6+2 pin PCIe (500mm+100mm)	4	8	18AWG	No
SATA (550mm+150mm+150mm)	3	9	18AWG	No
SATA (550mm+50mm+50mm+50mm)	1	4	18AWG	No
4 pin Molex (550mm+150mm+150mm)	2	6	18AWG	No
FDD Adapter (+100mm)	1	1	22AWG	No
AC Power Cord (1380mm) - C13 coupler	1	1	18AWG	-

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

FSP Technology PT-1200FM

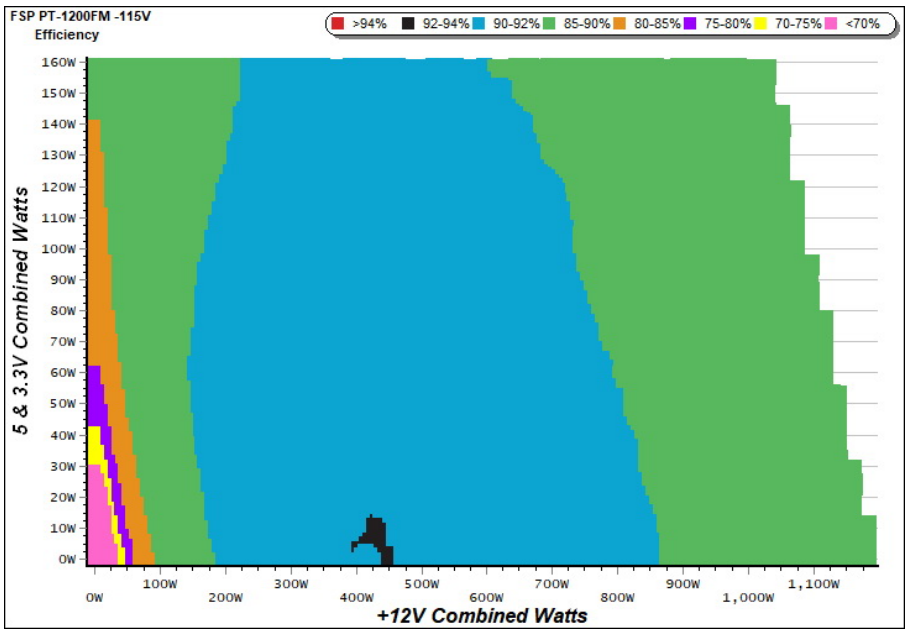
RESULTS	
Temperature Range (°C /°F)	30-32 / 86-89.6
Average Efficiency	89.557
Efficiency With 10W (≤500W) or 2% (>500W) Load -115V	0.000
Average Efficiency 5VSB	77.419
Standby Power Consumption (W) -115V	0.0538541
Standby Power Consumption (W) -230V	0.0854534
Average PF	0.992
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓
Avg Noise Output	32.61
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	Standard++

TEST EQUIPMENT		
Electronic Loads	Chroma 6314A x2 63123A x6 63102A 63101A	Chroma 63601-5 x2 Chroma 63600-2 63640-80-80 x10 63610-80-20
AC Sources	Chroma 6530, Chroma 61604	
Power Analyzers	N4L PPA1530, N4L PPA5530	
Oscilloscopes	Picoscope 4444 & 3424, Keysight DSOX3024A, Rigol DS2072A	
Voltmeter	Keithley 2015 THD 6.5 Digit	
Sound Analyzer	Bruel & Kjaer 2250-L G4	
Microphone	Bruel & Kjaer Type 4955-A, Bruel & Kjaer Type 4189	
Data Loggers	Picoscope TC-08 x2, Labjack U3-HV x2	

Anex

FSP Technology PT-1200FM

EFFICIENCY GRAPH



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

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

FSP Technology PT-1200FM

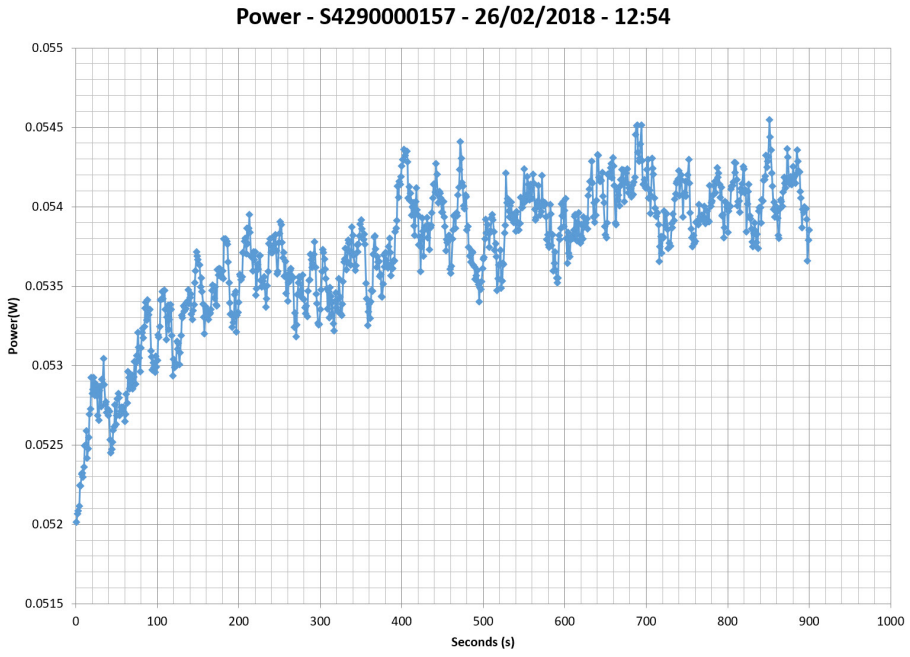
5VSB EFFICIENCY (ERP LOT 3/6 & CEC)

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.042A	0.211	65.123%	0.028
	5.057V	0.324		115.08V
2	0.087A	0.441	72.652%	0.052
	5.056V	0.607		115.08V
3	0.542A	2.737	78.514%	0.237
	5.048V	3.486		115.08V
4	1.002A	5.050	78.477%	0.336
	5.039V	6.435		115.08V
5	1.502A	7.555	78.371%	0.395
	5.030V	9.640		115.08V
6	3.001A	15.016	75.754%	0.473
	5.003V	19.822		115.07V

5VSB EFFICIENCY -230V (ERP LOT 3/6 & CEC)

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.042A	0.212	58.726%	0.009
	5.057V	0.361		230.22V
2	0.087A	0.442	66.970%	0.017
	5.056V	0.660		230.22V
3	0.542A	2.737	76.517%	0.088
	5.047V	3.577		230.22V
4	1.002A	5.050	78.282%	0.150
	5.039V	6.451		230.22V
5	1.502A	7.555	78.690%	0.205
	5.030V	9.601		230.22V
6	3.001A	15.019	78.261%	0.313
	5.004V	19.191		230.21V

VAMPIRE POWER -115V



INFO

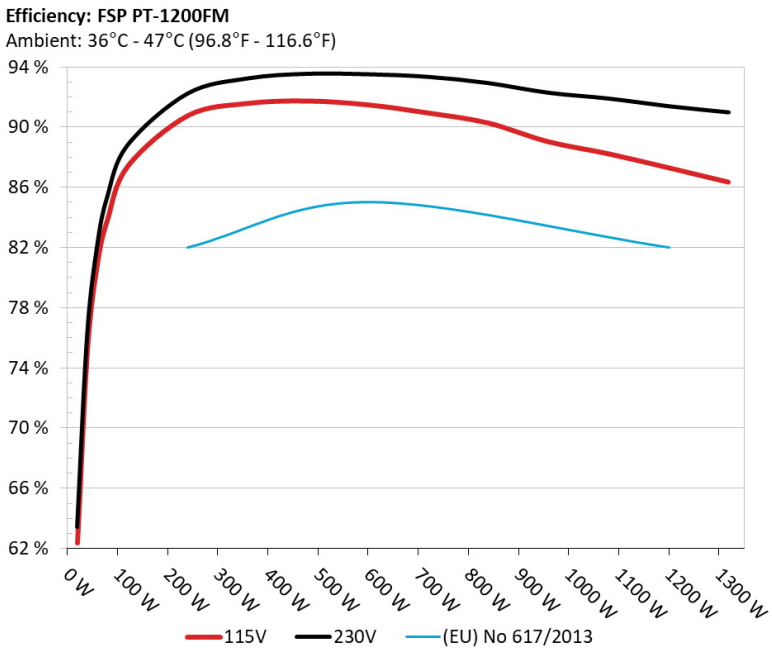
This graph is generated by the PPA Standby Power Analysis software which takes full control of the power analyzer during the whole procedure. This application features all of the EN50564 & IEC62301 test limits for standby power software testing

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

FSP Technology PT-1200FM

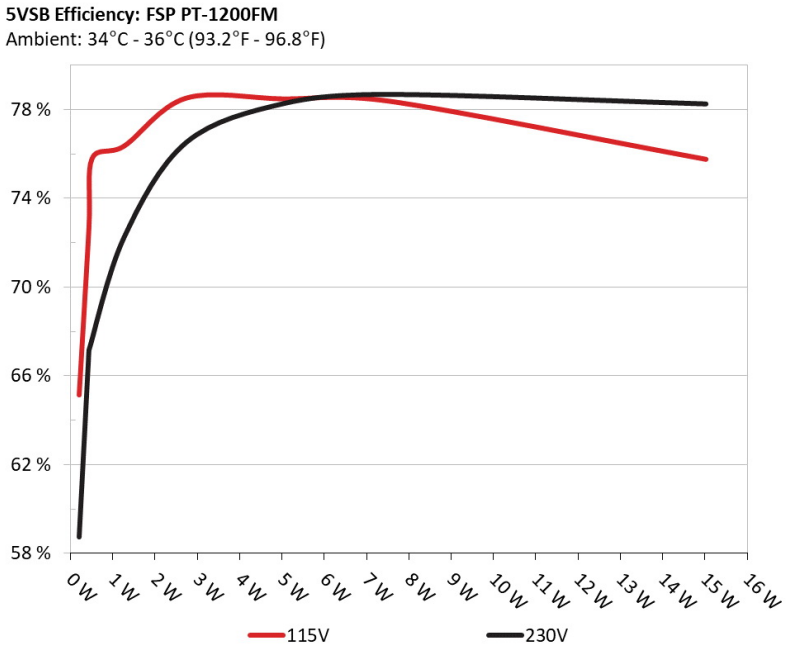
EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE



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

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

FSP Technology PT-1200FM

TYPICAL LOAD TESTS

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
1	8.063A	1.930A	1.959A	0.991A	119.810	87.393%	775	26.5	39.09°C	0.980
	12.183V	5.180V	3.366V	5.032V	137.093				43.69°C	115.08V
2	17.147A	2.905A	2.948A	1.191A	239.661	90.759%	775	26.5	39.79°C	0.994
	12.175V	5.171V	3.356V	5.022V	264.064				44.64°C	115.12V
3	26.599A	3.383A	3.463A	1.396A	359.738	91.578%	775	26.5	40.82°C	0.994
	12.169V	5.163V	3.348V	5.010V	392.823				46.30°C	115.08V
4	36.037A	3.873A	3.949A	1.598A	479.460	91.736%	775	26.5	41.63°C	0.995
	12.163V	5.155V	3.339V	5.001V	522.652				47.59°C	115.06V
5	45.159A	4.855A	4.950A	1.801A	599.268	91.483%	775	26.5	44.04°C	0.995
	12.155V	5.146V	3.331V	4.991V	655.061				50.26°C	115.08V
6	54.286A	5.839A	5.959A	2.006A	719.297	90.943%	805	27.0	45.09°C	0.995
	12.149V	5.137V	3.321V	4.981V	790.929				51.55°C	115.08V
7	63.416A	6.823A	6.975A	2.211A	839.131	90.278%	1255	34.6	45.41°C	0.994
	12.143V	5.127V	3.312V	4.970V	929.494				52.81°C	115.11V
8	72.583A	7.820A	7.993A	2.416A	959.113	89.036%	1630	39.9	45.01°C	0.994
	12.134V	5.118V	3.301V	4.960V	1077.217				53.14°C	115.08V
9	82.166A	8.323A	8.532A	2.421A	1078.946	88.237%	1875	44.8	45.93°C	0.993
	12.126V	5.108V	3.293V	4.953V	1222.780				54.55°C	115.09V
10	91.540A	8.826A	9.043A	3.037A	1198.777	87.308%	2000	45.6	46.48°C	0.993
	12.116V	5.098V	3.284V	4.935V	1373.050				55.35°C	115.08V
11	101.489A	8.840A	9.068A	3.041A	1318.723	86.353%	2000	45.6	46.88°C	0.992
	12.110V	5.091V	3.275V	4.929V	1527.125				56.46°C	115.08V
CL1	0.099A	19.028A	19.001A	0.005A	162.840	84.788%	935	27.4	42.79°C	0.988
	12.179V	5.156V	3.342V	5.041V	192.055				48.36°C	115.11V
CL2	99.961A	1.002A	1.002A	1.002A	1224.539	87.606%	1990	45.6	45.67°C	0.993
	12.116V	5.110V	3.295V	4.979V	1397.773				54.61°C	115.10V

www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

FSP Technology PT-1200FM

LIGHT LOAD TESTS

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	PF/AC Volts
1	1.201A	0.480A	0.470A	0.196A	19.703	62.377%	775	26.5	0.848
	12.187V	5.188V	3.373V	5.051V	31.587				115.08V
2	2.423A	0.954A	0.977A	0.396A	39.770	75.295%	775	26.5	0.924
	12.187V	5.186V	3.372V	5.047V	52.819				115.08V
3	3.645A	1.445A	1.482A	0.594A	59.898	81.030%	775	26.5	0.951
	12.186V	5.184V	3.370V	5.042V	73.921				115.08V
4	4.860A	1.924A	1.957A	0.791A	79.766	83.869%	775	26.5	0.966
	12.185V	5.183V	3.368V	5.036V	95.108				115.08V

RIPPLE MEASUREMENTS

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	19.7 mV	4.1 mV	6.8 mV	11.1 mV	Pass
20% Load	25.4 mV	4.6 mV	7.2 mV	12.0 mV	Pass
30% Load	29.1 mV	5.2 mV	8.1 mV	11.8 mV	Pass
40% Load	32.6 mV	4.9 mV	8.9 mV	15.2 mV	Pass
50% Load	32.6 mV	5.1 mV	8.0 mV	13.0 mV	Pass
60% Load	33.0 mV	5.1 mV	8.3 mV	14.6 mV	Pass
70% Load	34.8 mV	6.6 mV	15.1 mV	15.1 mV	Pass
80% Load	29.4 mV	7.1 mV	12.1 mV	18.5 mV	Pass
90% Load	31.3 mV	7.1 mV	12.5 mV	20.8 mV	Pass
100% Load	38.4 mV	7.8 mV	10.6 mV	22.8 mV	Pass
110% Load	40.8 mV	8.0 mV	10.8 mV	24.6 mV	Pass
Crossload 1	21.7 mV	4.5 mV	7.3 mV	11.3 mV	Pass
Crossload 2	38.8 mV	7.4 mV	8.9 mV	20.8 mV	Pass

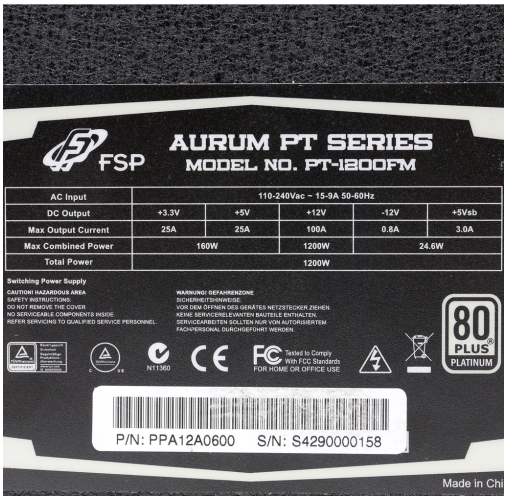
www.cybenetics.com -info@cybenetics.com
CYBENETICS LTD
Syrou 6, Latsia, 2231, Nicosia Cyprus

Anex

FSP Technology PT-1200FM

HOLD-UP TIME & POWER OK SIGNAL (230V)	
Hold-Up Time (ms)	12.80
AC Loss to PWR_OK Hold Up Time (ms)	10.70
PWR_OK Inactive to DC Loss Delay (ms)	2.10

Top side



Power specifications label

CERTIFICATIONS

CYBENETICS PLATINUM

CYBENETICS STANDARD++