

Anex

Super Flower Leadex II 750W

Lab ID#: 97

Receipt Date: Apr 10, 2018

Test Date: Apr 19, 2018

Report: 19PS97A

Report Date: Apr 23, 2018

DUT INFORMATION	
Brand	Super Flower
Manufacturer (OEM)	Super Flower
Series	Leadex II
Model Number	SF-750F14EG
Serial Number	S1609199008
DUT Notes	

DUT SPECIFICATIONS	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	10
Rated Frequency (Hz)	50-60
Rated Power (W)	750
Type	ATX12V
Cooling	135mm Fluid Dynamic Bearing Fan (RL4Z S1352512HH)
Semi-Passive Operation	✓ (selectable)
Cable Design	Fully Modular

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	Briel & Kjaer 2250-L G4	
Microphone	Briel & Kjaer Type 4189	
Data Loggers	Picoscope TC-08 x2, Labjack U3-HV x2	

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RESULTS

Temperature Range (°C /°F)	30-32 / 86-89.6
ErP Lot 3/6 Ready	ErP Lot 6 2010: ✓ ErP Lot 6 2013: Partially ErP Lot 3 2014: ✓
(EU) No 617/2013 Compliance	✓

115V

Average Efficiency	89.161%
Efficiency With 10W (≤500W) or 2% (>500W)	0.000
Average Efficiency 5VSB	76.891%
Standby Power Consumption (W)	0.1190430
Average PF	0.989
Avg Noise Output	29.84 dB(A)
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	A-

230V

Average Efficiency	91.143%
Average Efficiency 5VSB	0.000%
Standby Power Consumption (W)	0.2273260
Average PF	0.957
Avg Noise Output	29.28 dB(A)
Efficiency Rating (ETA)	
Noise Rating (LAMBDA)	A-

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	24	24	62.4	3	0.5
	Watts	120		748.8	15	6
Total Max. Power (W)		750				

HOLD-UP TIME & POWER OK SIGNAL (230V)

Hold-Up Time (ms)	18.44
AC Loss to PWR_OK Hold Up Time (ms)	16.64
PWR_OK Inactive to DC Loss Delay (ms)	1.80

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CABLES AND CONNECTORS

Modular Cables

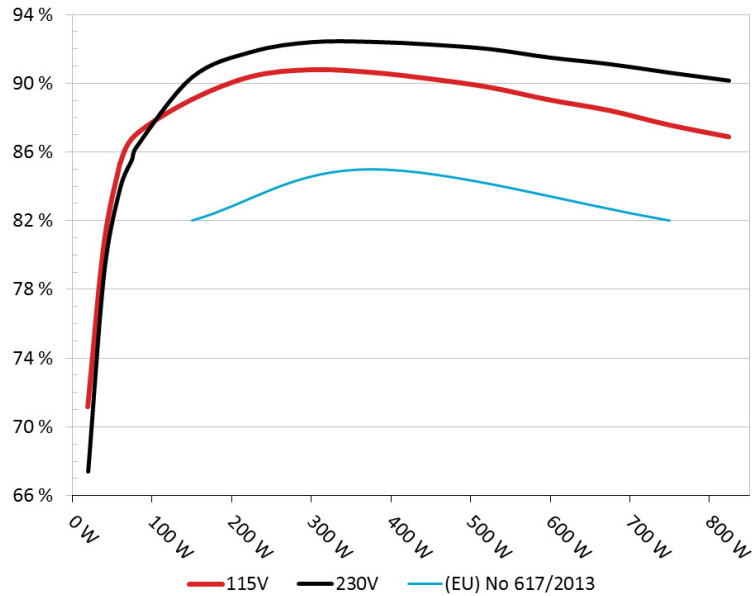
Description	Cable Count	Connector Count (Total)	Gauge
ATX connector 20+4 pin (540mm)	1	1	18-22AWG
4+4 pin EPS12V (650mm)	2	2	18-22AWG
6+2 pin PCIe (550mm+150mm)	2	4	18-22AWG
SATA (500mm+100mm+100mm)	3	9	18AWG
4 pin Molex (500mm+100mm+100mm+100)	1	4	18AWG

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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Super Flower SF-750F14EG
Ambient: 37°C - 46°C (98.6°F - 114.8°F)

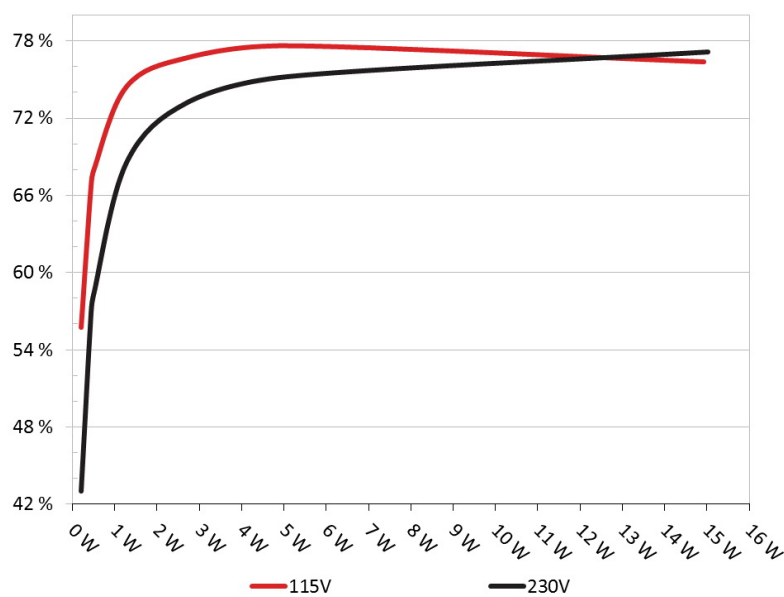


INFO

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

5VSB Efficiency: Super Flower SF-750F14EG
Ambient: 34°C - 36°C (93.2°F - 96.8°F)



INFO

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

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5VSB EFFICIENCY -115V (ERP LOT 3/6 & CEC)

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.042A	0.213	55.759%	0.046
	5.108V	0.382		115.09V
2	0.087A	0.445	66.717%	0.078
	5.107V	0.667		115.10V
3	0.532A	2.709	76.720%	0.292
	5.093V	3.531		115.10V
4	3.003A	14.928	76.409%	0.492
	4.971V	19.537		115.08V

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

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.042A	0.213	43.030%	0.018
	5.107V	0.495		230.27V
2	0.087A	0.446	56.815%	0.028
	5.107V	0.785		230.27V
3	0.532A	2.709	73.196%	0.123
	5.093V	3.701		230.27V
4	3.001A	15.025	77.146%	0.353
	5.006V	19.476		230.26V

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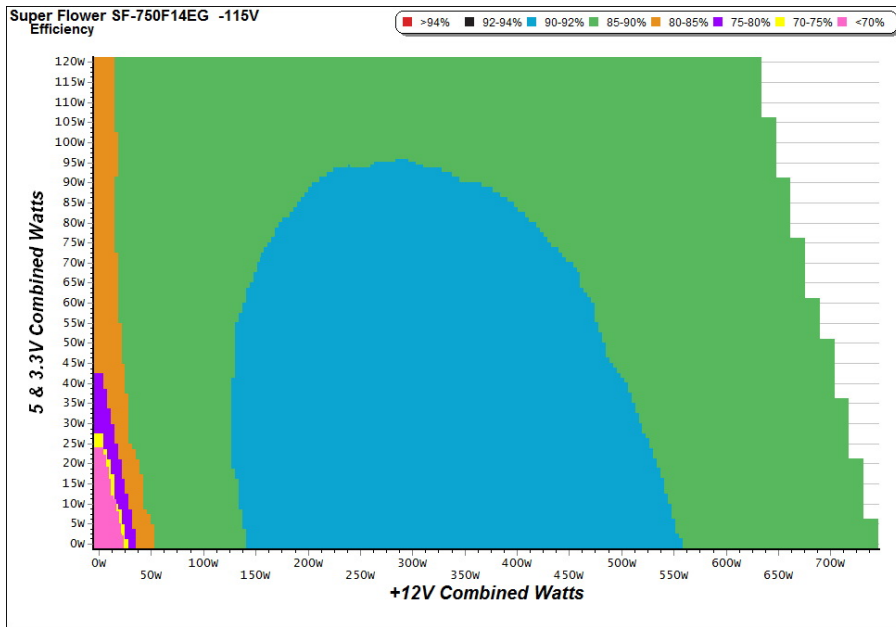
115V

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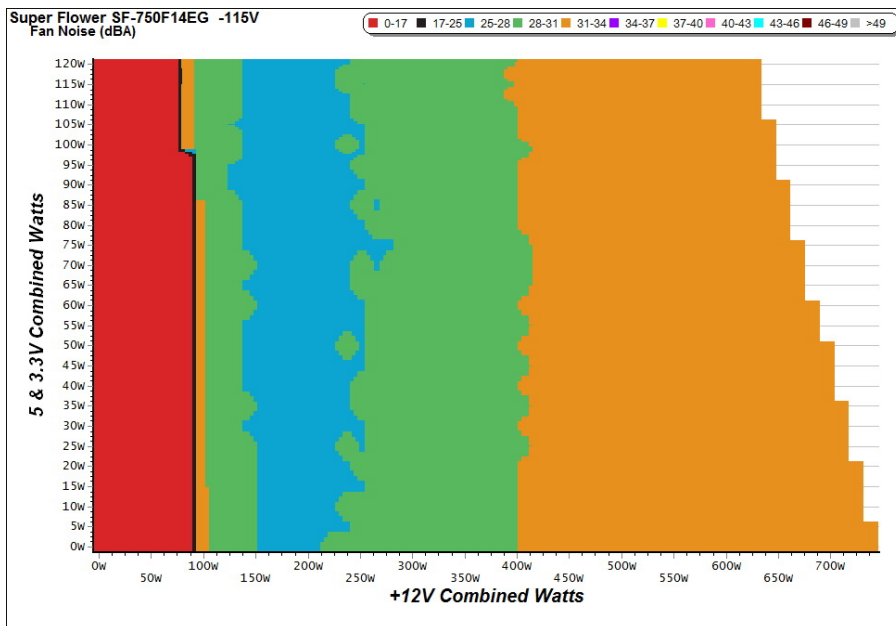
EFFICIENCY GRAPH 115V



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

NOISE GRAPH 115V



INFO

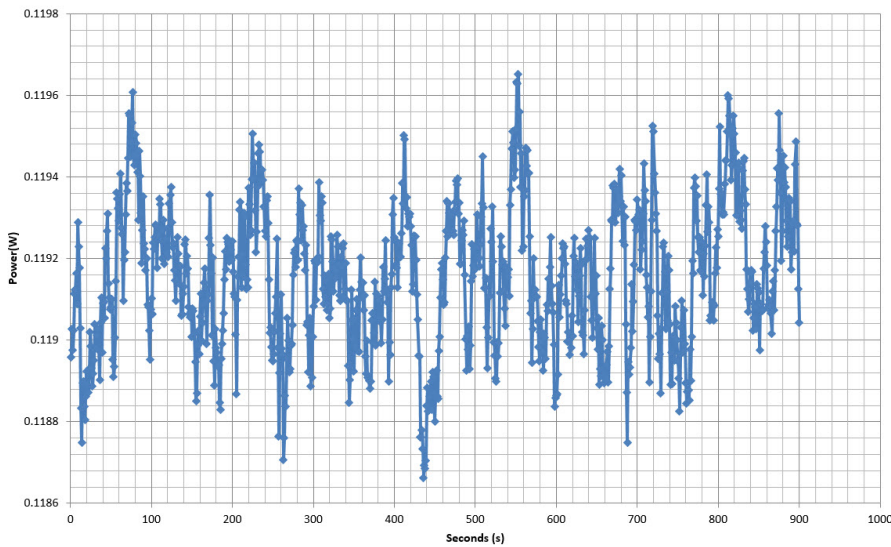
The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

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VAMPIRE POWER -115V

Power - S1609199008 - 22/04/2017 - 21:58



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

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10-110% LOAD TESTS 115V

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	Fan Noise (dB[A])	Temps (In/Out)	PF/AC Volts
1	4.407A	1.986A	1.989A	0.985A	74.783	84.566%	1339	33.3	37.52°C	0.966
	12.074V	5.028V	3.316V	5.067V	88.431				39.43°C	115.11V
2	9.856A	2.981A	2.984A	1.185A	149.782	89.023%	1339	33.3	38.20°C	0.981
	12.064V	5.030V	3.316V	5.055V	168.251				39.88°C	115.11V
3	15.662A	3.483A	3.494A	1.386A	224.890	90.372%	1364	33.5	38.81°C	0.989
	12.055V	5.028V	3.315V	5.043V	248.848				40.79°C	115.11V
4	21.454A	3.977A	3.980A	1.590A	299.743	90.770%	1384	33.8	39.58°C	0.992
	12.052V	5.026V	3.314V	5.032V	330.223				41.87°C	115.11V
5	26.911A	4.973A	4.976A	1.791A	374.723	90.617%	1415	35.2	40.00°C	0.993
	12.049V	5.026V	3.314V	5.019V	413.525				42.87°C	115.11V
6	32.362A	5.965A	5.972A	1.996A	449.637	90.239%	1448	37.6	41.41°C	0.994
	12.047V	5.028V	3.314V	5.004V	498.276				44.55°C	115.10V
7	37.813A	6.968A	6.969A	2.200A	524.645	89.742%	1476	36.9	41.98°C	0.995
	12.047V	5.028V	3.314V	4.992V	584.618				45.74°C	115.10V
8	43.265A	7.955A	7.963A	2.409A	599.558	89.013%	1530	37.1	42.69°C	0.995
	12.046V	5.028V	3.315V	4.978V	673.564				46.98°C	115.10V
9	49.156A	8.463A	8.480A	2.409A	674.644	88.400%	1583	38.1	43.59°C	0.995
	12.044V	5.026V	3.313V	4.973V	763.171				48.51°C	115.10V
10	54.786A	8.962A	8.965A	3.031A	749.496	87.559%	1631	39.9	44.87°C	0.996
	12.043V	5.024V	3.312V	4.946V	855.994				50.52°C	115.10V
11	61.015A	8.968A	8.972A	3.032A	824.382	86.870%	1667	40.1	46.45°C	0.996
	12.041V	5.021V	3.309V	4.942V	948.987				52.60°C	115.10V
CL1	0.099A	14.025A	14.005A	0.004A	119.170	82.812%	1544	37.4	43.16°C	0.977
	12.071V	5.069V	3.346V	5.081V	143.905				45.77°C	115.12V
CL2	62.452A	1.004A	1.003A	1.002A	765.148	88.041%	1596	38.2	44.76°C	0.996
	12.038V	4.995V	3.290V	5.027V	869.081				49.69°C	115.11V

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Super Flower Leadex II 750W

20-80W LOAD TESTS 115V

Test #	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	Fan Noise (dB[A])	PF/AC Volts
1	1.207A	0.493A	0.481A	0.195A	19.648	71.176%	0	0	0.846
	12.082V	5.025V	3.314V	5.097V	27.605				115.12V
2	2.443A	0.990A	0.994A	0.391A	39.770	80.573%	0	0	0.929
	12.079V	5.026V	3.315V	5.089V	49.359				115.12V
3	3.678A	1.487A	1.506A	5.080A	59.887	85.302%	0	0	0.965
	12.076V	5.028V	3.315V	5.080V	70.206				115.11V
4	4.905A	1.984A	1.989A	0.786A	79.772	86.991%	0	0	0.966
	12.073V	5.028V	3.315V	5.071V	91.701				115.11V

RIPPLE MEASUREMENTS 115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	4.3 mV	4.1 mV	5.4 mV	4.5 mV	Pass
20% Load	5.6 mV	4.2 mV	6.0 mV	4.9 mV	Pass
30% Load	7.0 mV	4.6 mV	6.0 mV	5.2 mV	Pass
40% Load	7.6 mV	4.7 mV	6.5 mV	5.4 mV	Pass
50% Load	8.6 mV	5.2 mV	6.6 mV	5.8 mV	Pass
60% Load	9.3 mV	5.8 mV	7.2 mV	5.9 mV	Pass
70% Load	9.8 mV	7.0 mV	6.7 mV	6.4 mV	Pass
80% Load	11.0 mV	6.9 mV	7.5 mV	7.9 mV	Pass
90% Load	11.5 mV	7.9 mV	8.0 mV	9.3 mV	Pass
100% Load	12.3 mV	8.4 mV	9.4 mV	10.2 mV	Pass
107% Load	12.8 mV	9.0 mV	9.8 mV	10.2 mV	Pass
Crossload 1	6.8 mV	5.8 mV	8.3 mV	11.6 mV	Pass
Crossload 2	11.7 mV	8.4 mV	8.8 mV	8.2 mV	Pass

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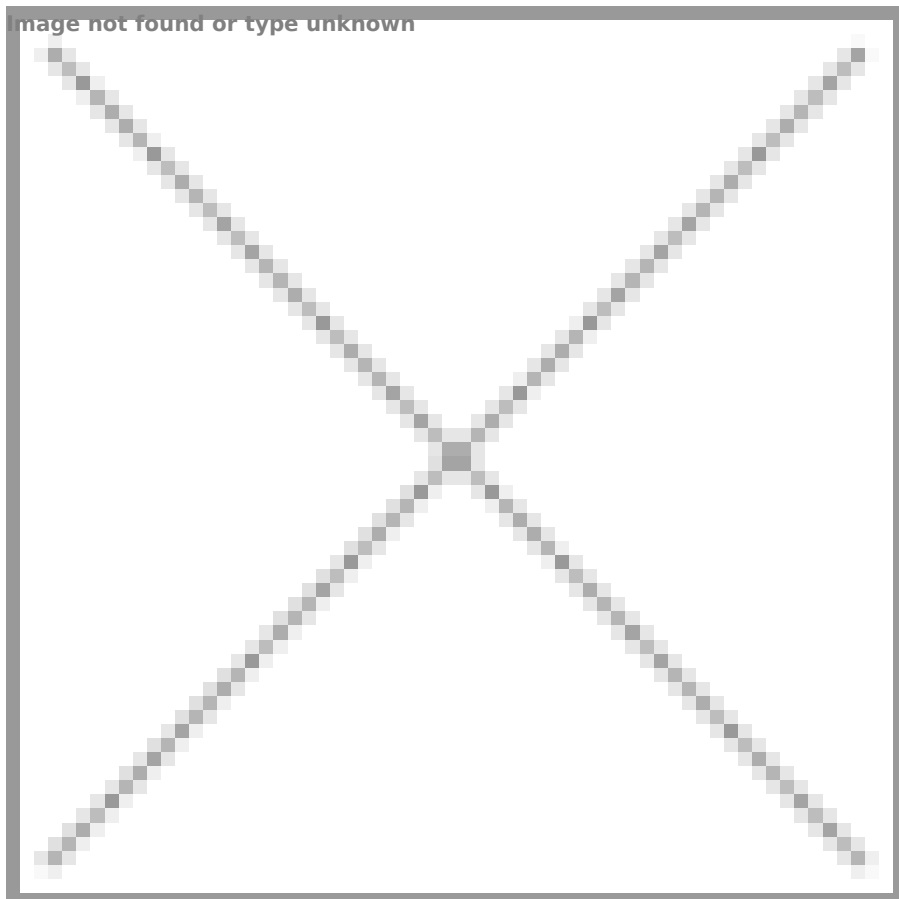
230V

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EFFICIENCY GRAPH 230V



INFO

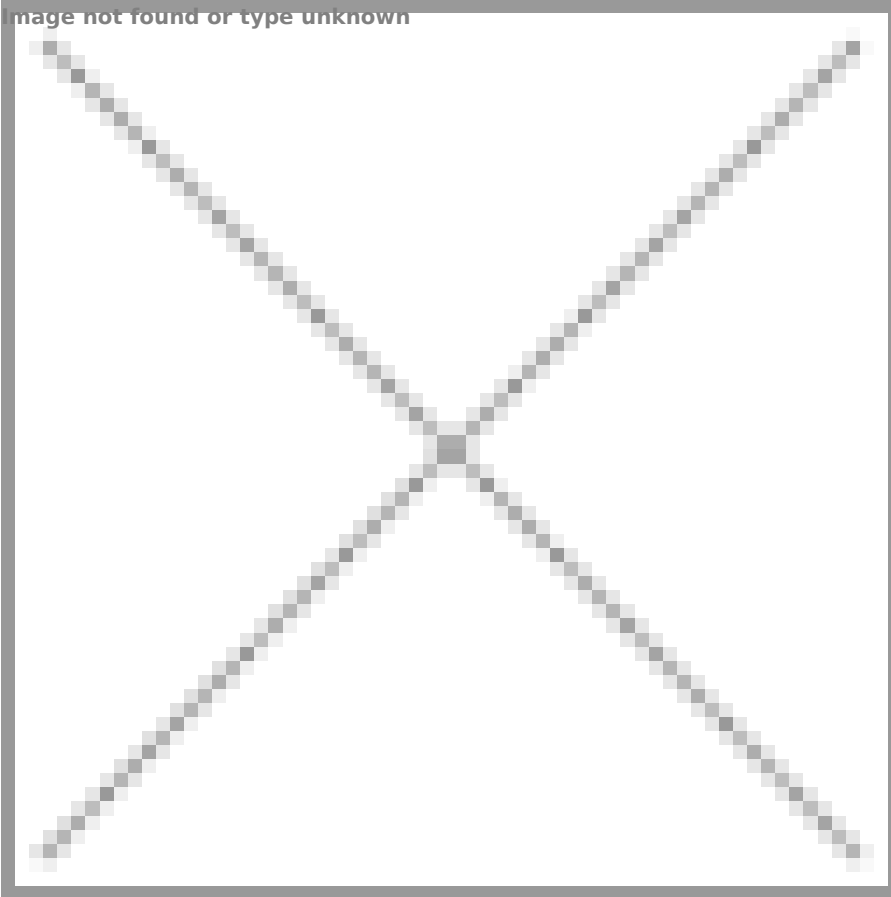
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20-80W LOAD TESTS 230V

RIPPLE MEASUREMENTS 230V

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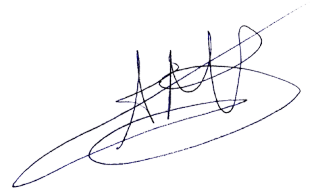


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Power specifications label

CERTIFICATIONS 115V

Aristeidis Bitziopoulos
Lab Director

CERTIFICATIONS 230V



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