TEST REPORT

Reference No.	:	WTD22F08163236N
Applicant.....	:	Jiangsu Chenyang Electron Co., Ltd.
Address.....	:	No. 58 Chenyang Road, Hexi Industrial Park, Huangtang Town, Danyang City, 212364 Jiangsu, P. R. China
Manufacturer	:	Jiangsu Chenyang Electron Co., Ltd.
Address.....	:	No. 58 Chenyang Road, Hexi Industrial Park, Huangtang Town, Danyang City, 212364 Jiangsu, P. R. China
Product Name.....	:	AC POWER SUPPLY
Model No......	:	MC-1252, MC-1253
Test specification	:	EU Energy-related Products (ErP) directive COMMISSION REGULATION (EU) 2019/1782 of 1 October 2019 laying down ecodesign requirements for external power supplies pursuant to Directive 2009/125/EC of the European Parliament and of the Council and repealing Commission Regulation (EC) No 278/2009 EN 50563:2011/A1:2013, EN 50564:2011
Date of Receipt sample	:	2022-08-11
Date of Test	:	2022-08-11 to 2022-09-02
Date of Issue.....	:	2022-09-09
Test Report Form No.	:	WSL-6059821A-04A
Test Result.....	:	Pass

Remarks:
The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of approver.

Prepared By:
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Tested by: Carry Chen
Carry Chen

Approved by: Jerry Mu

Energy Test Instruction for no-load condition electric power consumption and average active efficiency of external power supplies

Definitions:

EUT – equipment under test;

No-load condition – the condition in which the input of an external power supply is connected to the mains power source, but the output is not connected to any primary load;

Active mode – a condition in which the input of an external power supply is connected to the mains power source and the output is connected to a load;

Active mode efficiency – the ratio of the power produced by an external power supply in active mode, to the input power required to produce it;

Average active efficiency – the average of the active mode efficiencies at 25%, 50%, 75% and 100% of the nameplate output power.

General conditions for measurements:

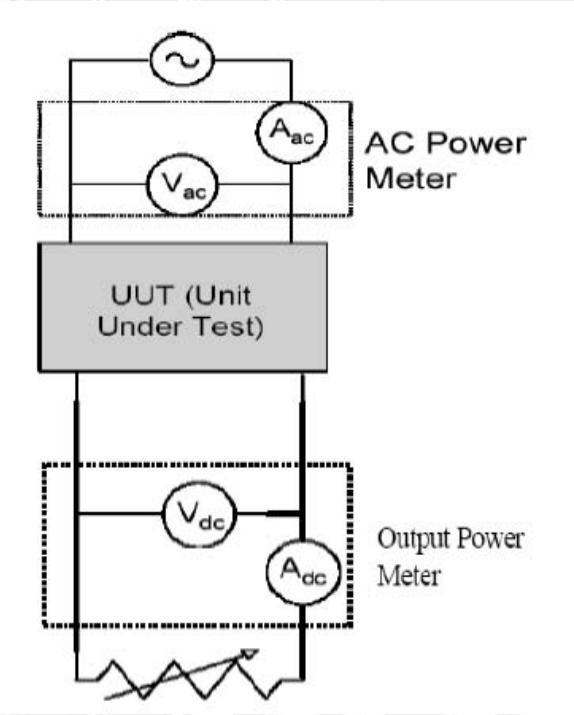
Test condition parameter:	
Air speed close to the EUT	≤0.5m/s
Ambient temperature	23°C±5°C
Humidity:	59.9%RH
Test voltage and frequency	230V±1%/50Hz±1%
Total harmonic content of the test voltage at the EUT	≤2%(up to and including the 13th harmonic)
Crest factor of test voltage	1.34 – 1.49
Power measurement accuracy	≤2%(power≥0.5W) ≤0.01W(power<0.5W)
Resolution of power meter	0.01W
Remark: 1. When determining for test conclusion, measurement uncertainty of tests has been considered. 2. Measurements of power of 0.50 W or greater was made with an uncertainty of less than or equal to 2 % at the 95 % confidence level. 3. Measurements of power of less than 0.50 W was made with an uncertainty of less than or equal to 0.01 W at the 95 % confidence level.	

Preparation of EUT & Measuring equipment

EUT preparation:

The EUT shall be operated at 100% of nameplate current output for at least 30 minutes immediately prior to conducting efficiency measurements.

Measuring equipment preparation:



Procedure:

Monitor ac input power for a period of 5 minutes to assess the stability of the EUT. If the power level does not drift by more than 5% from the maximum value observed, the EUT can be considered stable and the measurements can be recorded at the end of the 5 minute period. Subsequent load conditions (see below) can then be measured under the same 5 minute stability guidelines.

If ac input power is not stable over a 5 minute period, connect the EUT to the metering equipment and select the mode to be measured. Monitor the power. Average power is determined using either the average power or accumulated energy approaches outlined below.

a) Average power approach: where the power meter can record a true average power over a user selected period, the period selected shall not be less than 5 min (except if there is an operating cycle – see below).

b) Accumulated energy approach: where the power meter can accumulate energy over a user selected period, the period selected shall not be less than 5 min (except if there is an operating cycle – see below). The integrating period shall be such that the total recorded value for energy and time is more than 200 times the resolution of the meter for energy and time. Determine the average power by dividing the accumulated energy by the time for the monitoring period.

If the power varies over a cycle (i.e. a regular sequence of power states that occur over several minutes or hours), the period selected to average power or accumulate energy shall be one or more complete cycles in order to get a representative average value.

Efficiency measurements shall be conducted in sequence from Load Condition 1 to Load Condition 5 as indicated in follow table.

Percentage of nameplate output current	
Load condition 1	100 % ± 2 %
Load condition 2	75 % ± 2 %
Load condition 3	50 % ± 2 %
Load condition 4	25 % ± 2 %
Load condition 5	10 % ± 1 %
Load condition 6	0 % (no-load condition)

Product Information:

Model:	MC-1252, MC-1253
Product Powered (if known):	Unknown
Integral Input Power Switch	Not present
Input Cord Length (cm)	Not present
Output Cord Length (cm)	Not present
Brand:	Lenovo
Ratings:	INPUT: 100-240V~, 50/60Hz, 1.7A OUTPUT: 5.0V⎓ 3.0A, 15.0W or 9.0V⎓ 3.0A, 27.0W or 15.0V⎓ 3.0A, 45.0W or 20.0V⎓ 6.25A, 125.0W Max or 5.0V-20.0V⎓ 6.25A, 125.0W Max

Nameplate Specifications	Input (AC)	Output (DC)
Voltage (V)	100-240	5.0/9.0/15.0/20.0/5.0-20.0
Current (A)	1.7	3.0/3.0/3.0/6.25/6.25
Power (W)	Not Stated	15.0/27.0/45.0/125.0/125.0
Frequency (Hz)	50/60	DC

Nameplate output power (Po) : ☐ Less than or equal to 10W ☒ Greater than 10W

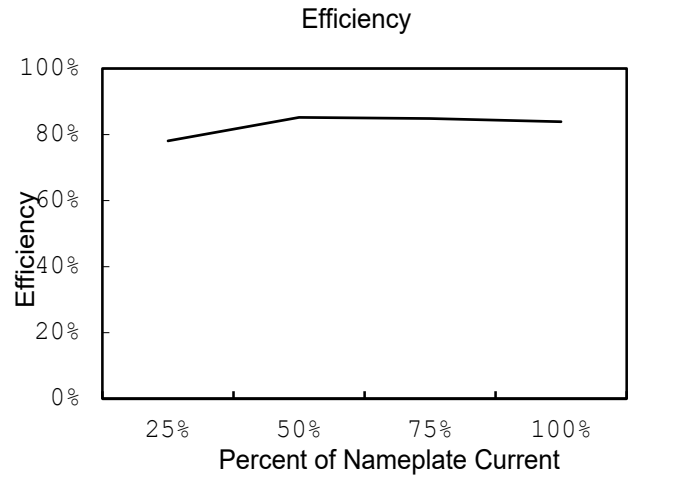
All models are identical to each other except for the model name and plug portion.

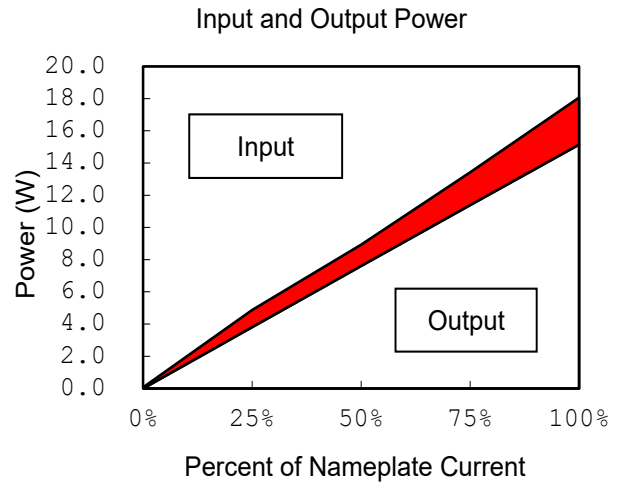
Sample 1#:

Measured and Calculated Data at 230V 50Hz (For 5.0VDC 3.0A)

	No Load	Active Power Values				
Percent of Nameplate Current	**0%**	**25%**	**50%**	**75%**	**100%**	**Average**
Output Current (mA)	0	750	1500	2250	3000	
Output Voltage (V)	5.080	5.070	5.070	5.060	5.050	
Output Power (W)	0	3.803	7.605	11.385	15.150	
Input Voltage (V)	**230**	**230**	**230**	**230**	**230**	
Input Power (W)	0.070	4.870	8.930	13.420	18.060	
Total Harmonic Distortion (THD)A%	31.23%	295.17%	275.31%	259.13%	247.83%	221.73%
True Power Factor (W/VA)	0.013	0.254	0.308	0.340	0.361	0.255
Input Frequency	**50**	**50**	**50**	**50**	**50**	**50**
Power Consumed by EUT (W)	0.070	1.068	1.325	2.035	2.910	
Efficiency		78.08%	85.16%	84.84%	83.89%	82.99%

Efficiency and Power Curve Chart (230V, 50Hz)





Sample 1#:

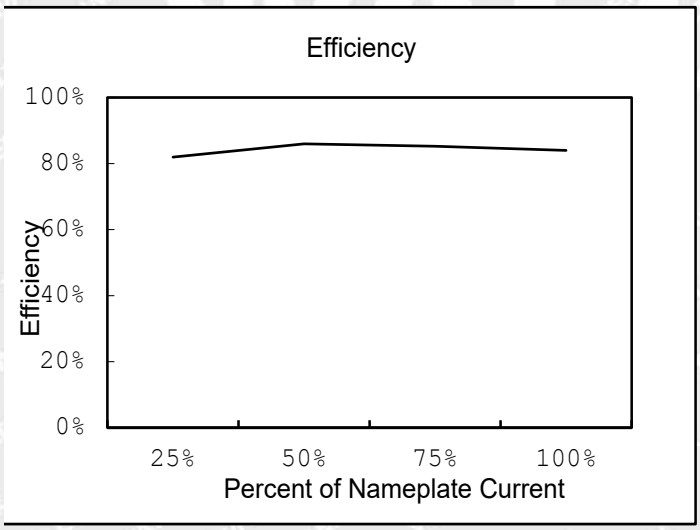
Measured and Calculated Data at 115V 60Hz (For 5.0VDC 3.0A)

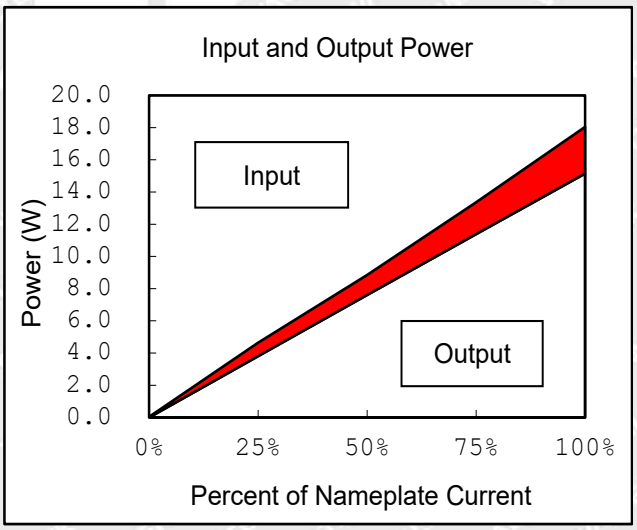
	No Load	Active Power Values				
Percent of Nameplate Current	**0%**	**25%**	**50%**	**75%**	**100%**	**Average**
Output Current (mA)	0	750	1500	2250	3000	
Output Voltage (V)	5.090	5.070	5.070	5.060	5.050	
Output Power (W)	0	3.803	7.605	11.385	15.150	

Input Voltage (V)	**115**	**115**	**115**	**115**	**115**	
Input Power (W)	0.034	4.640	8.850	13.360	18.040	
Total Harmonic Distortion (THD)A%	274.13%	231.21%	209.07%	190.18%	177.83%	216.48%
True Power Factor (W/VA)	0.037	0.384	0.416	0.5	0.476	0.363
Input Frequency	**60**	**60**	**60**	**60**	**60**	**60**

Power Consumed by EUT (W)	0.034	0.837	1.245	1.975	2.890	
Efficiency		81.95%	85.93%	85.22%	83.98%	84.27%

Efficiency and Power Curve Chart (115V, 60Hz)



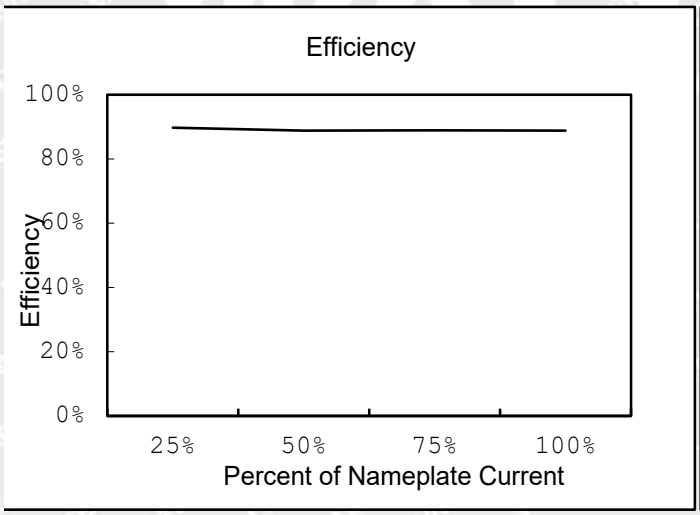


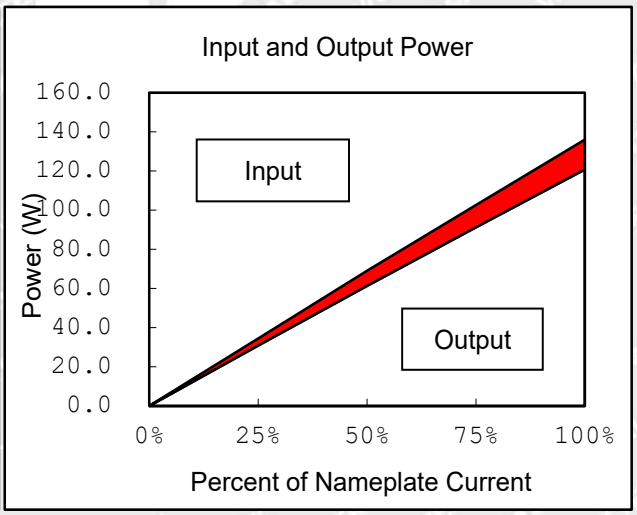
Sample 1#:

Measured and Calculated Data at 230V 50Hz (For 20.0VDC 6.25A)

	No Load	Active Power Values				
Percent of Nameplate Current	**0%**	**25%**	**50%**	**75%**	**100%**	**Average**
Output Current (mA)	0	1562.5	3125	4687.5	6250	
Output Voltage (V)	19.930	19.770	19.620	19.460	19.320	
Output Power (W)	0	30.891	61.313	91.219	120.750	
Input Voltage (V)	**230**	**230**	**230**	**230**	**230**	
Input Power (W)	0.072	34.420	69.060	102.620	135.980	
Total Harmonic Distortion (THD)A%	49.51%	228.13%	33.13%	37.61%	36.82%	77.04%
True Power Factor (W/VA)	0.039	0.389	0.846	0.879	0.899	0.610
Input Frequency	**50**	**50**	**50**	**50**	**50**	**50**
Power Consumed by EUT (W)	0.072	3.529	7.748	11.401	15.230	
Efficiency		89.75%	88.78%	88.89%	88.80%	89.05%

Efficiency and Power Curve Chart (230V, 50Hz)





Sample 1#:

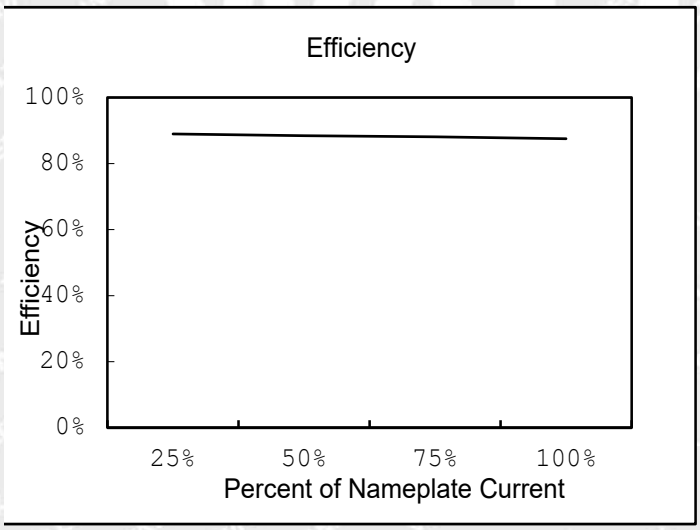
Measured and Calculated Data at 115V 60Hz (For 20.0VDC 6.25A)

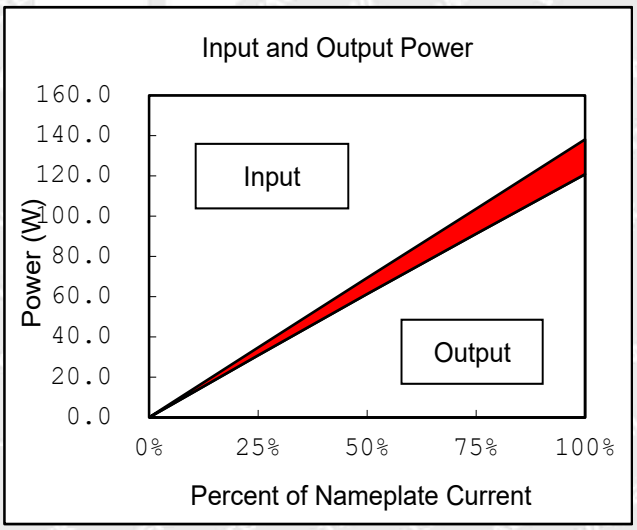
	No Load	Active Power Values				
Percent of Nameplate Current	**0%**	**25%**	**50%**	**75%**	**100%**	**Average**
Output Current (mA)	0	1562.5	3125	4687.5	6250	
Output Voltage (V)	19.920	19.770	19.620	19.470	19.340	
Output Power (W)	0	30.891	61.313	91.266	120.875	

Input Voltage (V)	**115**	**115**	**115**	**115**	**115**	
Input Power (W)	0.036	34.730	69.360	103.640	138.180	
Total Harmonic Distortion (THD)A%	289.13%	151.02%	19.62%	17.80%	11.81%	97.88%
True Power Factor (W/VA)	0.125	0.521	0.97	0.979	0.99	0.717
Input Frequency	**60**	**60**	**60**	**60**	**60**	**60**

Power Consumed by EUT (W)	0.036	3.839	8.048	12.374	17.305	
Efficiency		88.95%	88.40%	88.06%	87.48%	88.22%

Efficiency and Power Curve Chart (115V, 60Hz)





Sample 2#:

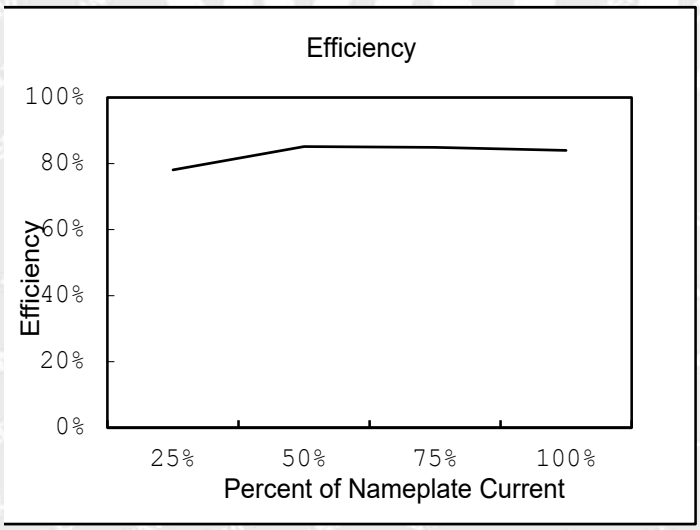
Measured and Calculated Data at 230V 50Hz (For 5.0VDC 3.0A)

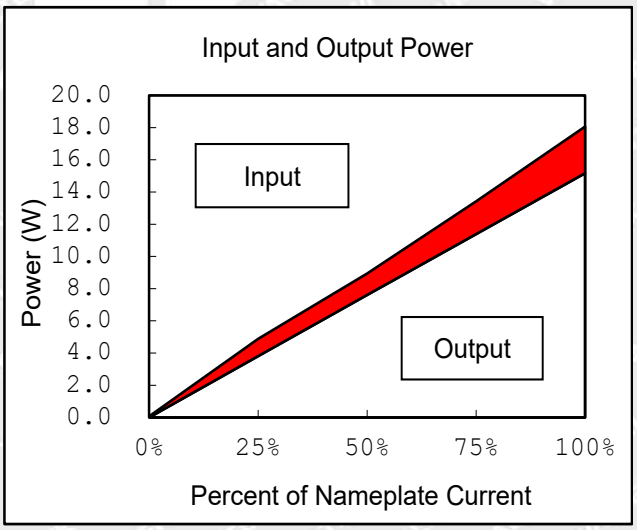
	No Load	Active Power Values				
Percent of Nameplate Current	**0%**	**25%**	**50%**	**75%**	**100%**	**Average**
Output Current (mA)	0	750	1500	2250	3000	
Output Voltage (V)	5.081	5.073	5.070	5.062	5.056	
Output Power (W)	0	3.805	7.605	11.390	15.168	

Input Voltage (V)	**230**	**230**	**230**	**230**	**230**	
Input Power (W)	0.071	4.875	8.933	13.421	18.065	
Total Harmonic Distortion (THD)A%	31.26%	294.12%	275.33%	258.15%	247.74%	221.32%
True Power Factor (W/VA)	0.014	0.255	0.306	0.343	0.362	0.256
Input Frequency	**50**	**50**	**50**	**50**	**50**	**50**

Power Consumed by EUT (W)	0.071	1.070	1.328	2.032	2.897	
Efficiency		78.05%	85.13%	84.86%	83.96%	83.00%

Efficiency and Power Curve Chart (230V, 50Hz)





Sample 2#:

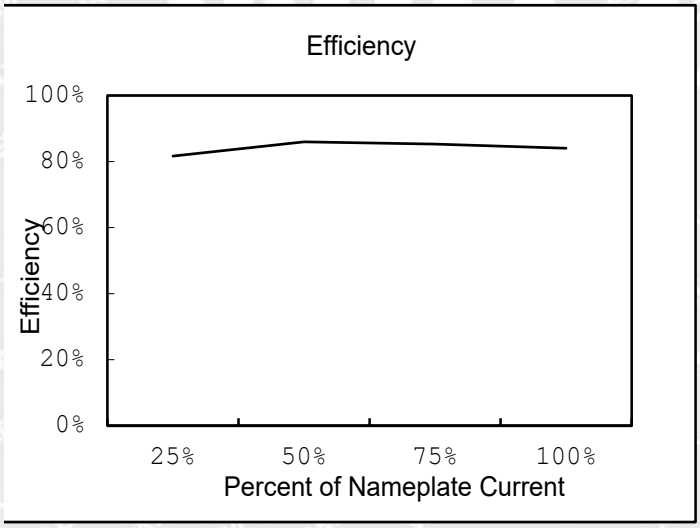
Measured and Calculated Data at 115V 60Hz (For 5.0VDC 3.0A)

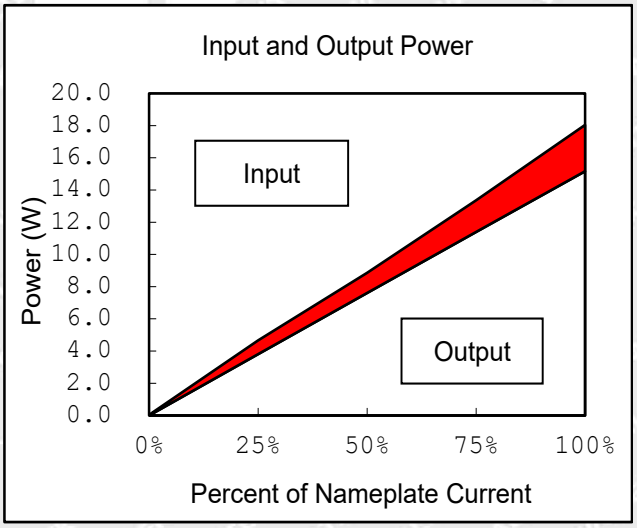
	No Load	Active Power Values				
Percent of Nameplate Current	**0%**	**25%**	**50%**	**75%**	**100%**	**Average**
Output Current (mA)	0	750	1500	2250	3000	
Output Voltage (V)	5.087	5.073	5.071	5.063	5.054	
Output Power (W)	0	3.805	7.607	11.392	15.162	

Input Voltage (V)	**115**	**115**	**115**	**115**	**115**	
Input Power (W)	0.034	4.661	8.852	13.362	18.045	
Total Harmonic Distortion (THD)A%	274.15%	231.22%	209.26%	190.46%	177.67%	216.55%
True Power Factor (W/VA)	0.037	0.384	0.416	0.532	0.476	0.369
Input Frequency	**60**	**60**	**60**	**60**	**60**	**60**

Power Consumed by EUT (W)	0.034	0.856	1.246	1.970	2.883	
Efficiency		81.63%	85.93%	85.25%	84.02%	84.21%

Efficiency and Power Curve Chart (115V, 60Hz)





Sample 2#:

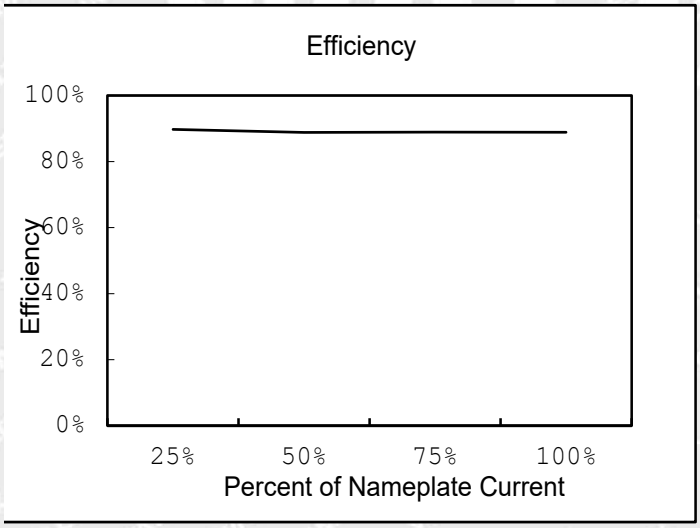
Measured and Calculated Data at 230V 50Hz (For 20.0VDC 6.25A)

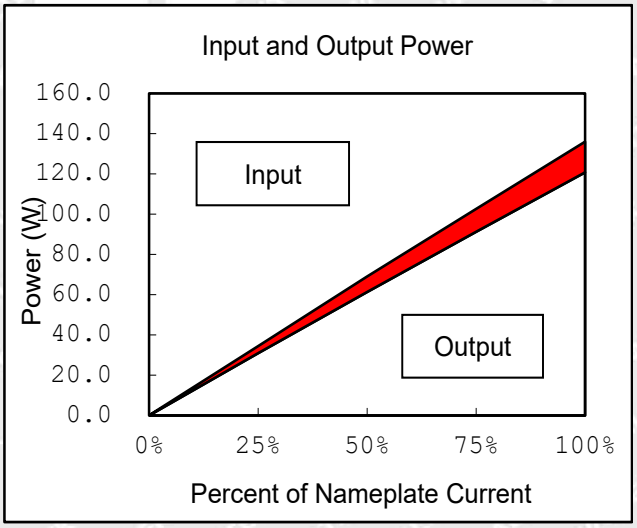
	No Load	Active Power Values				
Percent of Nameplate Current	**0%**	**25%**	**50%**	**75%**	**100%**	**Average**
Output Current (mA)	0	1562.5	3125	4687.5	6250	
Output Voltage (V)	19.932	19.773	19.624	19.462	19.326	
Output Power (W)	0	30.895	61.325	91.228	120.788	

Input Voltage (V)	**230**	**230**	**230**	**230**	**230**	
Input Power (W)	0.072	34.425	69.064	102.621	135.976	
Total Harmonic Distortion (THD)A%	49.48%	228.26%	33.45%	37.67%	36.78%	77.13%
True Power Factor (W/VA)	0.038	0.388	0.347	0.867	0.893	0.507
Input Frequency	**50**	**50**	**50**	**50**	**50**	**50**

Power Consumed by EUT (W)	0.072	3.530	7.739	11.393	15.189	
Efficiency		89.75%	88.79%	88.90%	88.83%	89.07%

Efficiency and Power Curve Chart (230V, 50Hz)



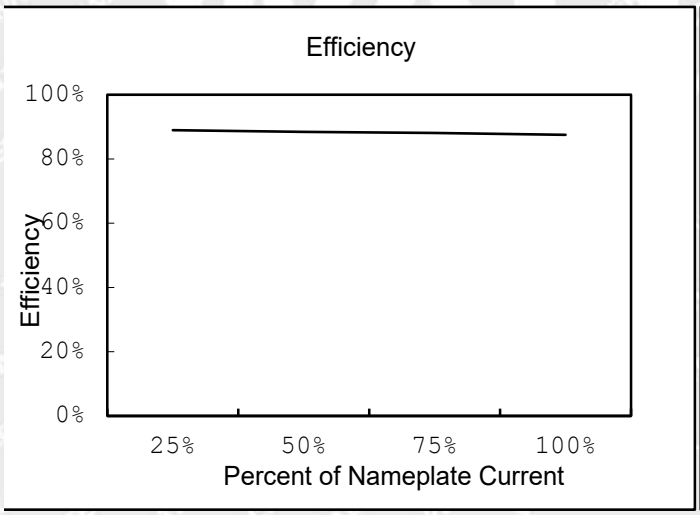


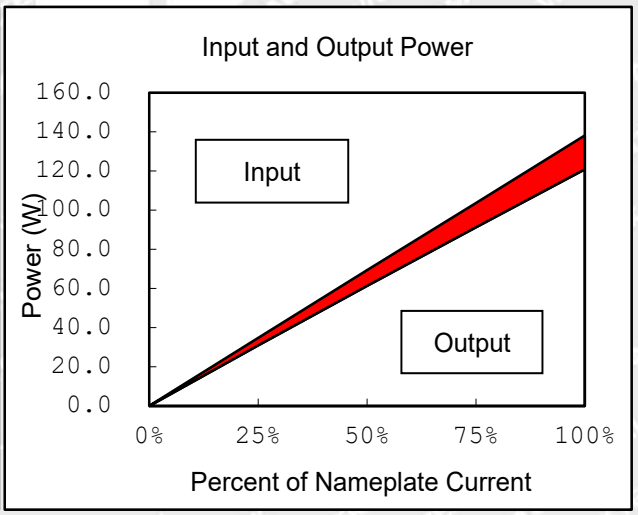
Sample 2#:

Measured and Calculated Data at 115V 60Hz (For 20.0VDC 6.25A)

	No Load	Active Power Values				
Percent of Nameplate Current	**0%**	**25%**	**50%**	**75%**	**100%**	**Average**
Output Current (mA)	0	1562.5	3125	4687.5	6250	
Output Voltage (V)	19.921	19.774	19.626	19.472	19.342	
Output Power (W)	0	30.897	61.331	91.275	120.888	
Input Voltage (V)	**115**	**115**	**115**	**115**	**115**	
Input Power (W)	0.036	34.733	69.362	103.644	138.184	
Total Harmonic Distortion (THD)A%	289.15%	151.64%	19.63%	17.82%	11.76%	98.00%
True Power Factor (W/VA)	0.125	0.521	0.972	0.978	0.996	0.718
Input Frequency	**60**	**60**	**60**	**60**	**60**	**60**
Power Consumed by EUT (W)	0.036	3.836	8.031	12.369	17.297	
Efficiency		88.96%	88.42%	88.07%	87.48%	88.23%

Efficiency and Power Curve Chart (115V, 60Hz)



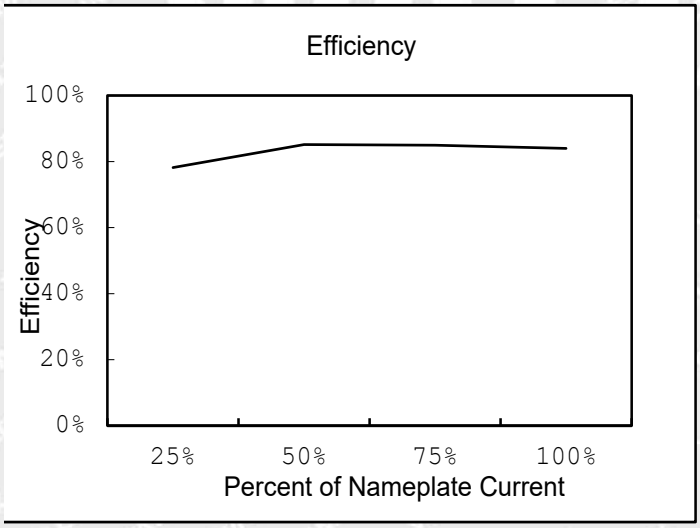


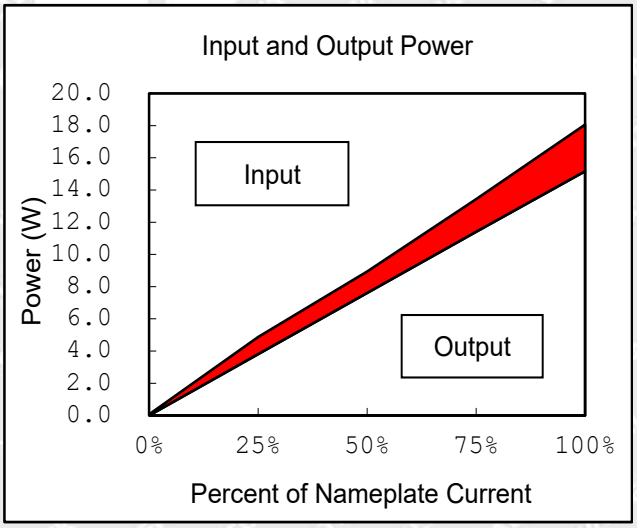
Sample 3#:

Measured and Calculated Data at 230V 50Hz (For 5.0VDC 3.0A)

	No Load	Active Power Values				
Percent of Nameplate Current	**0%**	**25%**	**50%**	**75%**	**100%**	**Average**
Output Current (mA)	0	750	1500	2250	3000	
Output Voltage (V)	5.082	5.072	5.071	5.069	5.055	
Output Power (W)	0	3.804	7.607	11.405	15.165	
Input Voltage (V)	**230**	**230**	**230**	**230**	**230**	
Input Power (W)	0.070	4.868	8.933	13.425	18.063	
Total Harmonic Distortion (THD)A%	31.24%	295.16%	275.35%	259.35%	247.67%	221.75%
True Power Factor (W/VA)	0.014	0.255	0.306	0.344	0.363	0.256
Input Frequency	**50**	**50**	**50**	**50**	**50**	**50**
Power Consumed by EUT (W)	0.070	1.064	1.327	2.020	2.898	
Efficiency		78.14%	85.15%	84.96%	83.96%	83.05%

Efficiency and Power Curve Chart (230V, 50Hz)





Sample 3#:

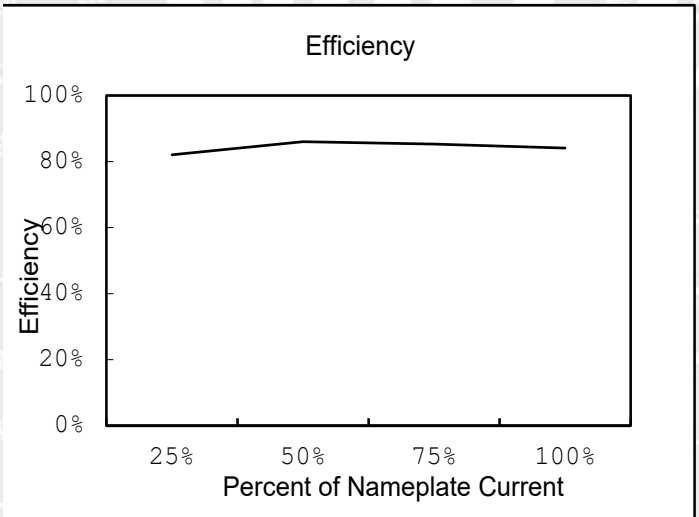
Measured and Calculated Data at 115V 60Hz (For 5.0VDC 3.0A)

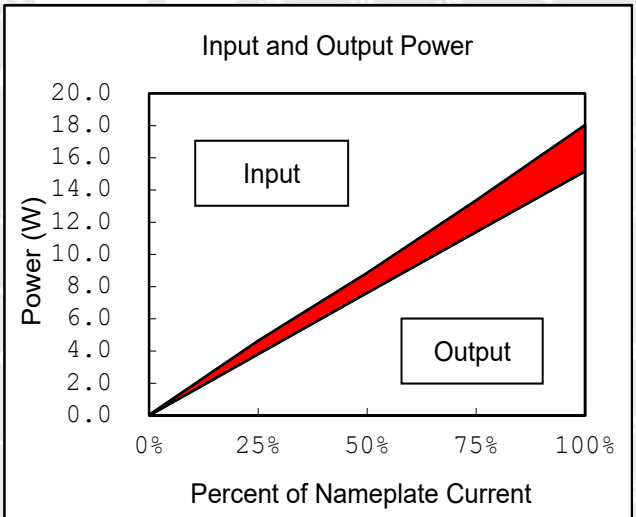
	No Load	Active Power Values				
Percent of Nameplate Current	**0%**	**25%**	**50%**	**75%**	**100%**	**Average**
Output Current (mA)	0	750	1500	2250	3000	
Output Voltage (V)	5.093	5.078	5.075	5.064	5.056	
Output Power (W)	0	3.809	7.613	11.394	15.168	

Input Voltage (V)	**115**	**115**	**115**	**115**	**115**	
Input Power (W)	0.034	4.644	8.852	13.363	18.045	
Total Harmonic Distortion (THD)A%	274.16%	231.25%	208.45%	190.36%	177.69%	216.38%
True Power Factor (W/VA)	0.036	0.384	0.414	0.524	0.477	0.367
Input Frequency	**60**	**60**	**60**	**60**	**60**	**60**

Power Consumed by EUT (W)	0.034	0.836	1.240	1.969	2.877	
Efficiency		82.01%	86.00%	85.27%	84.06%	84.33%

Efficiency and Power Curve Chart (115V, 60Hz)





Sample 3#:

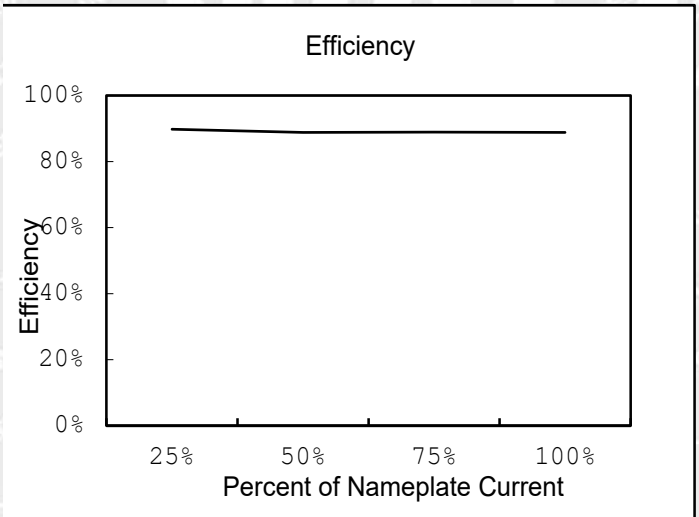
Measured and Calculated Data at 230V 50Hz (For 20.0VDC 6.25A)

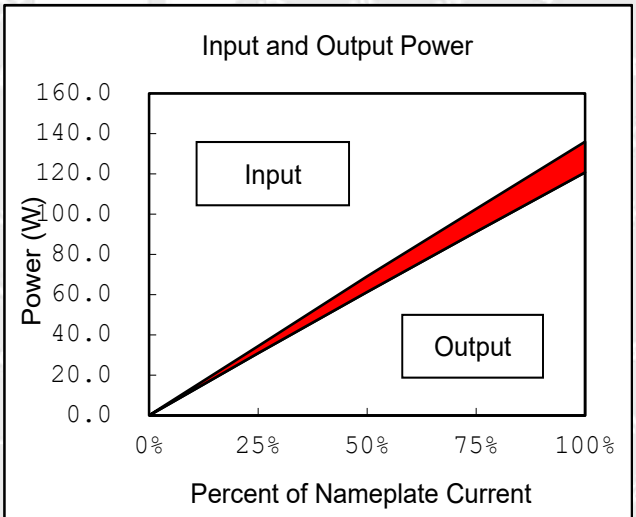
	No Load	Active Power Values				
Percent of Nameplate Current	**0%**	**25%**	**50%**	**75%**	**100%**	**Average**
Output Current (mA)	0	1562.5	3125	4687.5	6250	
Output Voltage (V)	19.932	19.776	19.626	19.464	19.323	
Output Power (W)	0	30.900	61.331	91.238	120.769	

Input Voltage (V)	**230**	**230**	**230**	**230**	**230**	
Input Power (W)	0.073	34.424	69.067	102.621	135.983	
Total Harmonic Distortion (THD)A%	49.54%	228.15%	33.16%	37.63%	36.84%	77.06%
True Power Factor (W/VA)	0.038	0.388	0.845	0.874	0.892	0.607
Input Frequency	**50**	**50**	**50**	**50**	**50**	**50**

Power Consumed by EUT (W)	0.073	3.524	7.736	11.384	15.214	
Efficiency		89.76%	88.80%	88.91%	88.81%	89.07%

Efficiency and Power Curve Chart (230V, 50Hz)





Sample 3#:

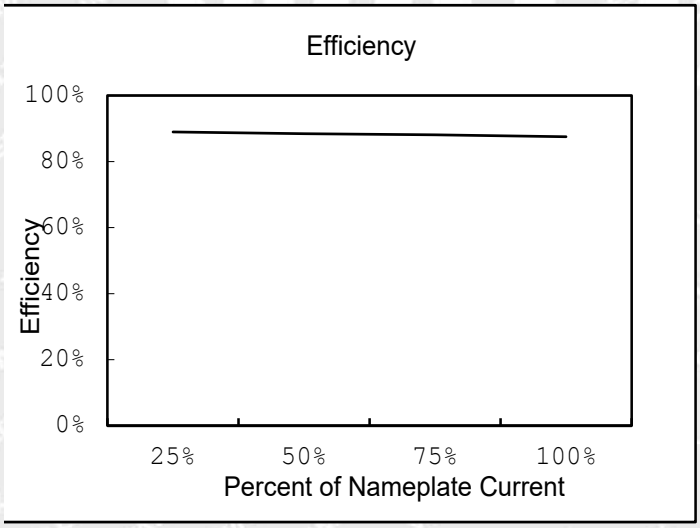
Measured and Calculated Data at 115V 60Hz (For 20.0VDC 6.25A)

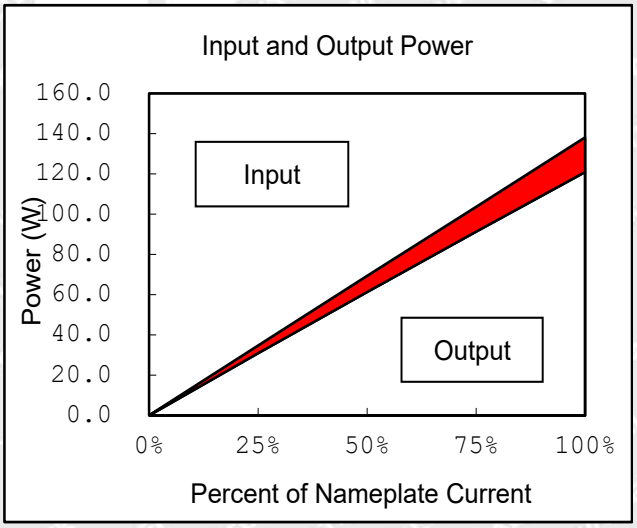
	No Load	Active Power Values				
Percent of Nameplate Current	**0%**	**25%**	**50%**	**75%**	**100%**	**Average**
Output Current (mA)	0	1562.5	3125	4687.5	6250	
Output Voltage (V)	19.921	19.775	19.623	19.476	19.344	
Output Power (W)	0	30.898	61.322	91.294	120.900	

Input Voltage (V)	**115**	**115**	**115**	**115**	**115**	
Input Power (W)	0.036	34.732	69.365	103.647	138.179	
Total Harmonic Distortion (THD)A%	289.14%	151.23%	19.64%	17.81%	11.84%	97.93%
True Power Factor (W/VA)	0.125	0.521	0.970	0.979	0.990	0.717
Input Frequency	**60**	**60**	**60**	**60**	**60**	**60**

Power Consumed by EUT (W)	0.036	3.834	8.043	12.353	17.279	
Efficiency		88.96%	88.40%	88.08%	87.50%	88.24%

Efficiency and Power Curve Chart (115V, 60Hz)





Tested model:	MC-1252			**at 230V/50Hz**
Nameplate Output:	**5.0Vdc,3.0 A, 15.0W**			
Test specimen	**1**	**2**	**3**	
Percent of Nameplate Current	**10%**	**10%**	**10%**	**Remark**
RMS Input Voltage (V)	**230.0**	**230.0**	**230.0**	
Input Frequency (Hz)	**50**	**50**	**50**	
RMS Input Power (W)	2.13	2.16	2.14	Input Power (Pin)
Total Harmonic Distortion (THD A, %)	311.23	310.13	310.13	
True Power Factor	0.155	0.156	0.158	
Output Voltage (Vdc)	5.07	5.08	5.08	
Output Current (mA)	300	300	300	
Active Output Power (W)	1.519	1.521	1.515	Output Power (Pout)
Power Consumed by UUT (W)	0.611	0.639	0.625	
Efficiency (%)	**71.31**	**70.42**	**70.79**	(Pout/Pin)*100% at 10% active mode *)
Note: *) No energy efficiency requirement at 10% load active condition; only test for nameplate output power (Po) greater than 10W.				

Tested model:	MC-1252			**at 230V/50Hz**
Nameplate Output:	**20.0Vdc,6.25 A, 125.0 W**			
Test specimen	**1**	**2**	**3**	
Percent of Nameplate Current	**10%**	**10%**	**10%**	**Remark**
RMS Input Voltage (V)	**230.0**	**230.0**	**230.0**	
Input Frequency (Hz)	**50**	**50**	**50**	
RMS Input Power (W)	14.11	14.10	14.12	Input Power (Pin)
Total Harmonic Distortion (THD A, %)	183.25	184.54	184.36	
True Power Factor	0.337	0.335	0.338	
Output Voltage (Vdc)	19.81	19.87	19.88	
Output Current (mA)	625	625	625	
Active Output Power (W)	12.381	12.419	12.425	Output Power (Pout)
Power Consumed by UUT (W)	1.729	1.681	1.695	
Efficiency (%)	**87.75**	**88.08**	**88.00**	(Pout/Pin)*100% at 10% active mode *)
Note: *) No energy efficiency requirement at 10% load active condition; only test for nameplate output power (Po) greater than 10W.				

Result:

The samples submitted were tested and comply with the efficiency in the active mode and the energy consumption in the no-load mode at the corresponding national AC mains supply voltage according to following regulations:

☒	EU Energy-related Products (ErP) directive COMMISSION REGULATION (EU) 2019/1782 of 1 October 2019

And the use of an efficiency mark, according to the international efficiency marking protocol, qualified with efficiency marking: ☒ VI

Details of Minimum Efficiency Performance Standard (MEPS) refer to following table

EU Energy-related Products (ErP) directive

Ecodesign requirements

set out in Annex II, 1 a) & b) of COMMISSION REGULATION (EU) 2019/1782

for no-load electric power consumption and average active efficiency of external power supplies

Single-Voltage External AC-DC or AC-AC Power Supply, Basic-Voltage			
Nameplate Output Power (Pno)	**Minimum Average Efficiency in Active Mode**		**Verdict**
≤ 1W	≥ 0.5 ×Pno + 0.16		N/A
1 W < to ≤ 49 W	≥ 0.071 × ln(Pno) − 0.0014 ×Pno +0.67		N/A
49W < to ≤ 250W	≥ 0.880		N/A
Nameplate Output Power (Pno)	**Maximum Power in No-Load Mode**		**Verdict**
	☐ **Ac-Ac EPS**	☐ **Ac-Dc EPS**	
≤ 49 W	≤ 0.21W	≤ 0.10W	N/A
49W < to ≤ 250W	≤ 0.21W		N/A

Single-Voltage External AC-DC or AC-AC Power Supply, Low-Voltage (For 5VDC 3.0A)			
Nameplate Output Power (Pno)	**Minimum Average Efficiency in Active Mode**		**Verdict**
≤ 1W	≥ 0.517 × Pno + 0.087		N/A
1 W < to ≤ 49 W	≥0.0834 × ln(Pno) −0.0014 × Pno + 0.609		P
49W < to ≤ 250W	≥ 0.870		N/A
Nameplate Output Power (Pno)	**Maximum Power in No-Load Mode**		**Verdict**
	☐ **Ac-Ac EPS**	☒ **Ac-Dc EPS**	
≤ 49 W	≤ 0.10W	≤ 0.10W	P
49W < to ≤ 250W	≤ 0.21W		N/A

Multiple-Voltage		
Nameplate Output Power (Pno)	**Minimum Average Efficiency in Active Mode**	**Verdict**
0 to ≤ 1 W	≥ 0.497 * Pno+ 0.067	N/A
1 to ≤ 49 W	≥ 0.075 * ln(Pno) + 0.561	N/A
49 W	≥ 0.860	N/A
Nameplate Output Power (Pno)	**Maximum Power in No-Load Mode**	**Verdict**
Any	≤ 0.30	N/A
Notes: For model MC-1252 with output rating of DC 5.0V, 3.0A, 15.0W, required minimum average active efficiency limit is 81.39%, the minimum average active efficiency from the tested sample is 82.99%; Limit for no load power is 0.100W, the maximum no load power tested sample is 0.071W. The minimum active efficiency at 10 % load of full rated output current from the tested sample is 70.42%.		

Single-Voltage External AC-DC or AC-AC Power Supply, Basic-Voltage (For 20VDC 6.25A)			
Nameplate Output Power (Pno)	**Minimum Average Efficiency in Active Mode**		**Verdict**
≤ 1W	≥ 0.5 ×Pno + 0.16		N/A
1 W < to ≤ 49 W	≥ 0.071 × ln(Pno) − 0.0014 ×Pno +0.67		N/A
49W < to ≤ 250W	≥ 0.880		P
Nameplate Output Power (Pno)	**Maximum Power in No-Load Mode**		**Verdict**
	☐ **Ac-Ac EPS**	☐ **Ac-Dc EPS**	
≤ 49 W	≤ 0.21W	≤ 0.10W	N/A
49W < to ≤ 250W	≤ 0.21W		P

Single-Voltage External AC-DC or AC-AC Power Supply, Low-Voltage		
Nameplate Output Power (Pno)	**Minimum Average Efficiency in Active Mode**	**Verdict**
≤ 1W	≥ 0.517 × Pno + 0.087	N/A

1 W < to ≤ 49 W	≥0.0834 × ln(Pno) −0.0014 × Pno + 0.609		N/A
49W < to ≤ 250W	≥ 0.870		N/A
Nameplate Output Power (Pno)	**Maximum Power in No-Load Mode**		**Verdict**
	☐ **Ac-Ac EPS**	☐ **Ac-Dc EPS**	
≤ 49 W	≤ 0.10W	≤ 0.10W	N/A
49W < to ≤ 250W	≤ 0.21W		N/A

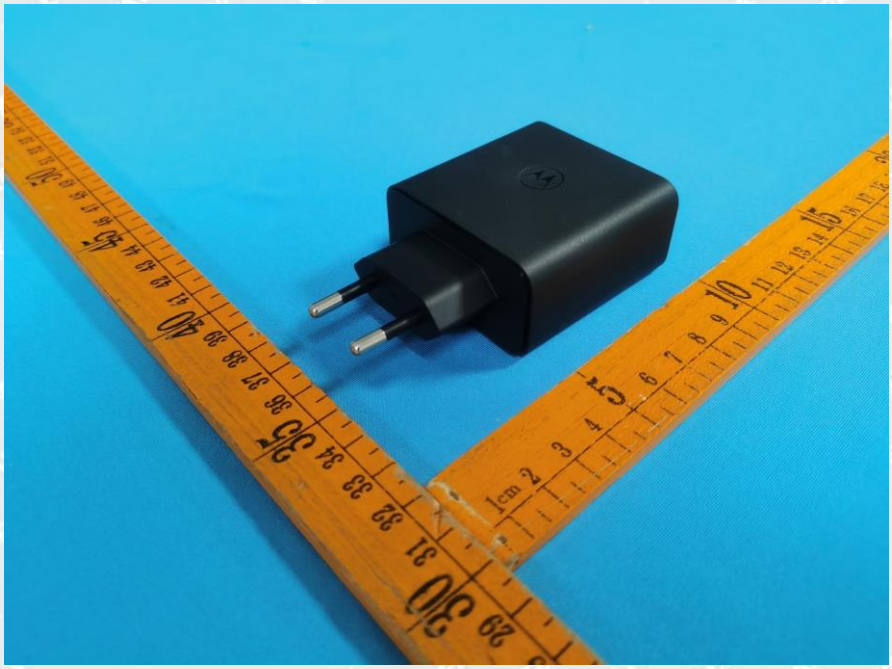
Multiple-Voltage		
Nameplate Output Power (Pno)	**Minimum Average Efficiency in Active Mode**	**Verdict**
0 to ≤ 1 W	≥ 0.497 * Pno+ 0.067	N/A
1 to ≤ 49 W	≥ 0.075 * ln(Pno) + 0.561	N/A
49 W	≥ 0.860	N/A
Nameplate Output Power (Pno)	**Maximum Power in No-Load Mode**	**Verdict**
Any	≤ 0.30	N/A
Notes: For model MC-1252 with output rating of DC 20.0V, 6.25A, 125.0W, required minimum average active efficiency limit is 88.00%, the minimum average active efficiency from the tested sample is 88.22%; Limit for no load power is 0.210W, the maximum no load power tested sample is 0.073W. The minimum active efficiency at 10 % load of full rated output current from the tested sample is 87.75%.		

Supplementary information to test procedure for multiple-voltage:

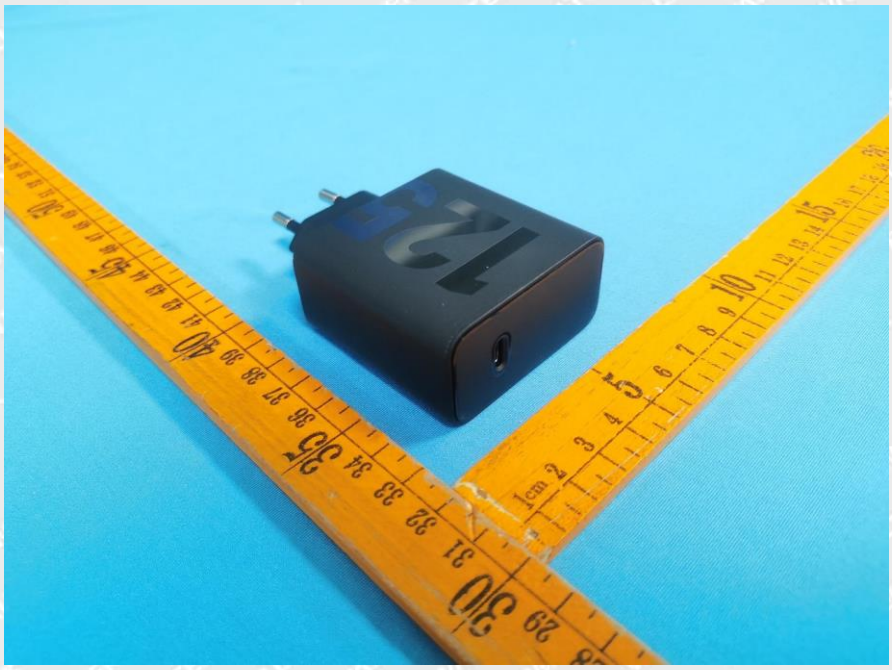
According to Annex II, 3 Measurements and calculations of COMMISSION REGULATION (EU) 2019/1782

For the purposes of compliance and verification of compliance with the requirements of this Regulation, measurements and calculations shall be made using harmonised standards the reference numbers of which have been published for this purpose in the Official Journal of the European Union, or other reliable, accurate and reproducible methods, which take into account the generally recognised state of the art.

Photo and Label of Product



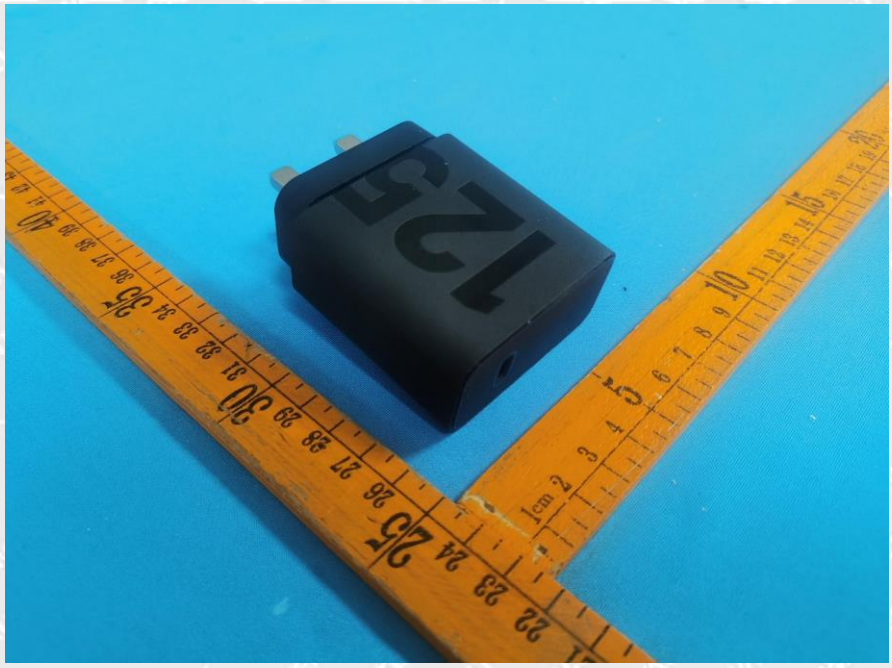
Model: MC-1252



Model: MC-1252

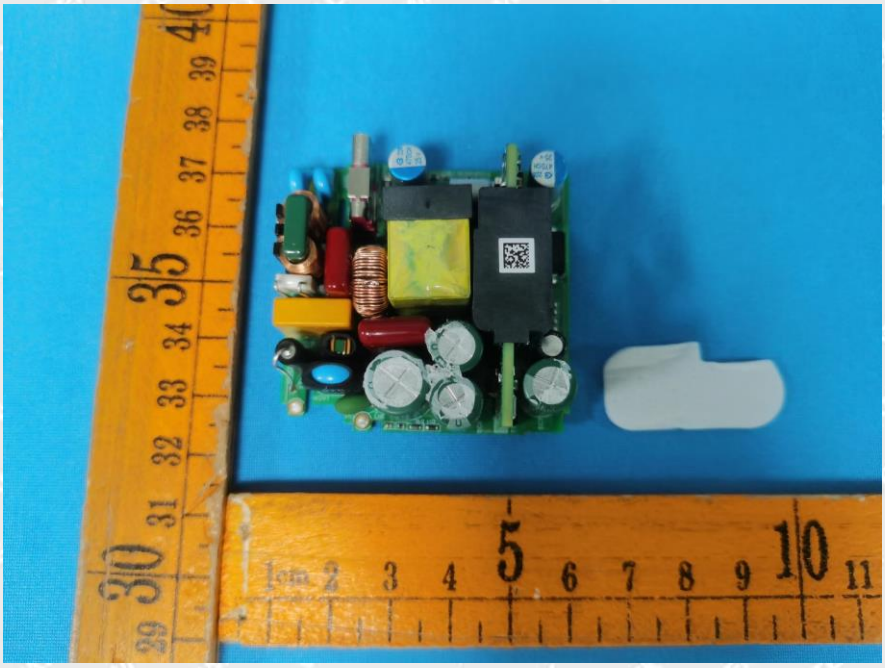
Photo and Label of Product

Model: MC-1253

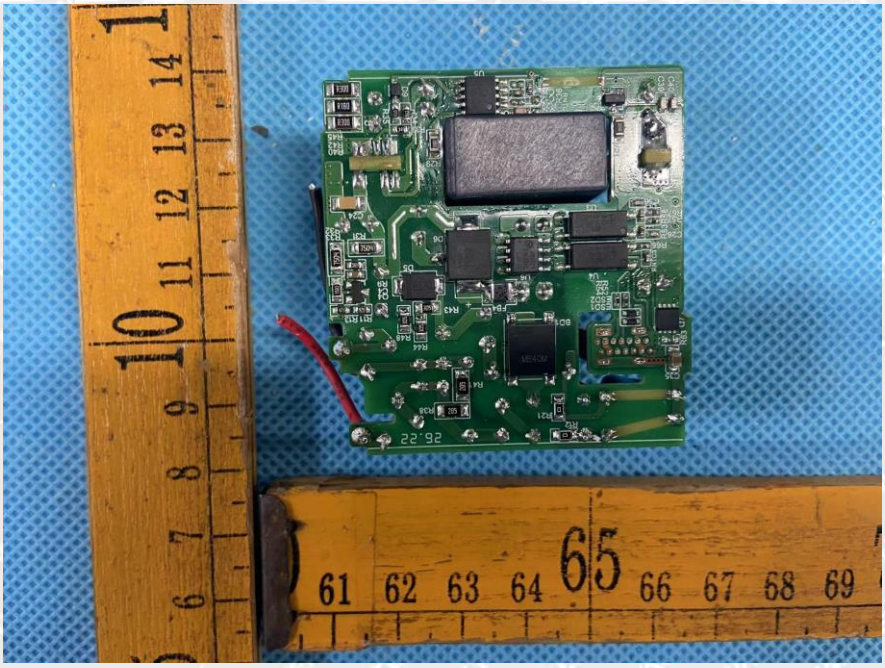


Model: MC-1253

Photo and Label of Product

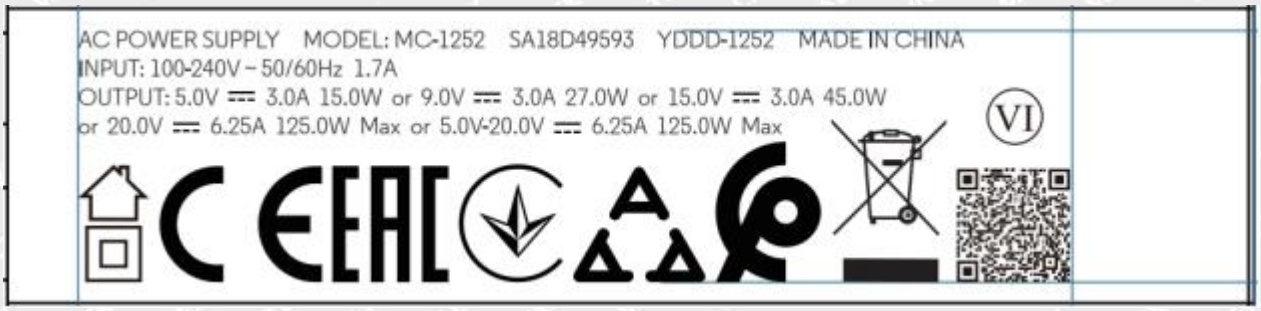


PCB view

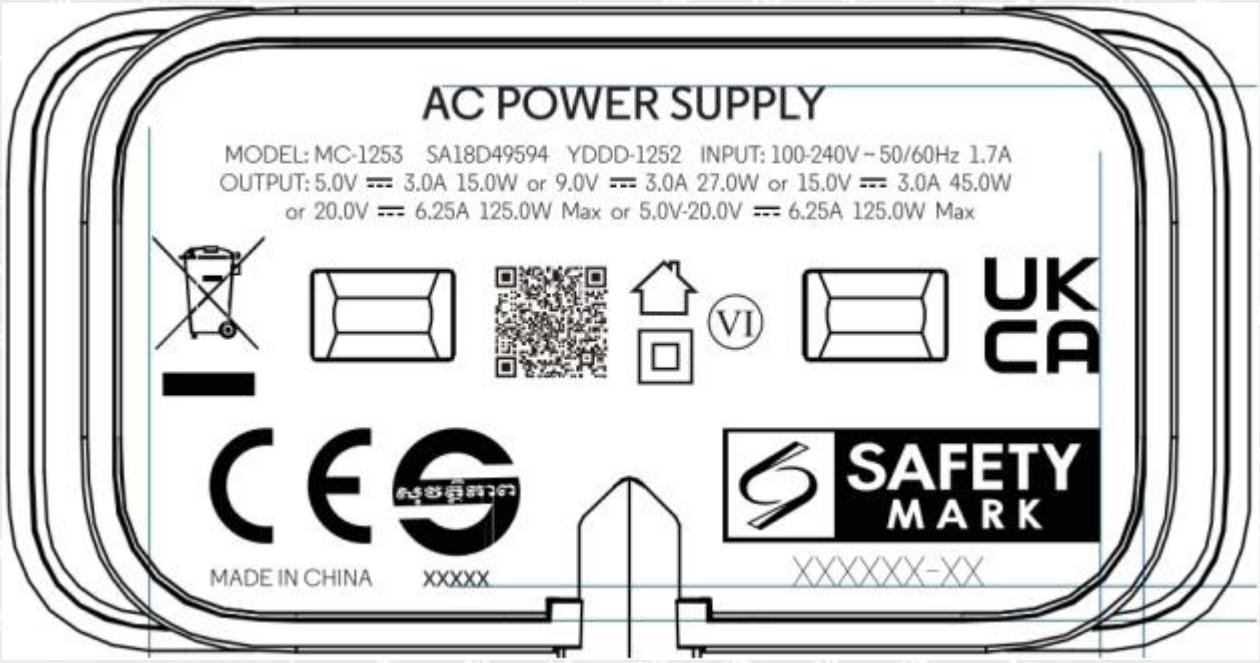


PCB view

Photo and Rating Label of Product



Model: MC-1252



Model: MC-1253

Trademark: “ ” or “Lenovo” marked on the enclosure.

Test Equipment List

Equipment	Model/Type	Measurement	Cal. Date	Valid Date
Digital Power Meter	WT210	No load and active output	Apr. 01, 2022	Mar. 31, 2023
DC electronic load	3311F	No load and active output	Oct. 11, 2022	Oct. 10, 2023
Clock	PC397	No load and active output	Feb. 18, 2022	Feb. 17, 2023
Hygrothermograph	AW5147W	No load and active output	Oct. 23, 2021	Oct. 22, 2022

Ambient Temperature and Humidity

Temperature: 24.2°C Humidity: 61.4%RH

====== End of Report ======