



LE GOUVERNEMENT  
DU GRAND-DUCHÉ DE LUXEMBOURG

Ministère des Transports

L-2938 Luxembourg

SOCIÉTÉ NATIONALE DE  
CERTIFICATION ET D'HOMOLOGATION

s.à r.l.

Registre de Commerce: B 27180

L-5201 Sandweiler

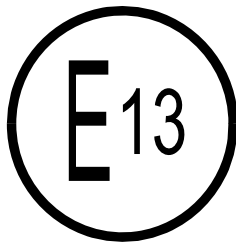


Référence: E13\*10R00\*10R02\*9837\*00

Annexes: - Rapport Technique  
- Fiche de Renseignements du constructeur

Sandweiler, le 05 novembre 2008

Communication concernant:<sup>(2)</sup>  
Communication concerning:




- la délivrance d'une homologation  
approval granted
- l'extension d'homologation  
approval extended
- le refus d'homologation  
approval refused
- le retrait d'homologation  
approval withdrawn
- l'arrêt définitif de la production  
production definitely discontinued

d'un type de sous-ensemble électrique/électronique<sup>(2)</sup> en ce qui concerne le Règlement N° 10  
of a type of electrical/electronic sub-assembly with regard to Regulation N° 10

Numéro d'homologation par type:  
Approval number:

E13\*10R00\*10R02\*9837\*00

Marque d'homologation:  
Approval mark:

 10R-02 9837

1. Fabricant (marque commerciale du constructeur):  
Make (trade name of manufacturer):

MasPower, as option: GlacialPower

2. Type:  
Type:

MP-100AD

Dénomination(s) commerciale(s) générale(s):  
General commercial description(s):

Combo adapter

Version(s)/Variante(s):  
Version(s)/Variant(s):

Not applicable

3. Moyens d'identification du type, s'ils sont marqués sur le véhicule / composant / entité technique<sup>(2)</sup>:  
Means of identification of type, if marked on the vehicle / component / separate technical unit:

MP-100AD (for MasPower), GP-AC100P-0C (for GlacialPower)

3.1. Emplacement de ce marquage:  
Location of that marking:

On the back of the main unit

4. **Catégorie du véhicule:**  
Category of vehicle: Not applicable
5. **Nom et adresse du constructeur:**  
Name and address of manufacturer: Maspower Electronic Company  
3F.-1, No. 307, Dunhua N. Rd.,  
Taipei City 105, Taiwan, R.O.C.
6. **Dans le cas de composants ou d'entités techniques, emplacement et procédé de fixation de la marque de réception CEE:**  
In the case of components and separate technical units, location and method of affixing of the ECE approval mark: Label fixed on the back of the main unit
7. **Adresse(s) de l' (des) usine(s) d'assemblage:**  
Address(es) of assembly plant(s): FULLGOOD ELECTRONICS CO., LTD.  
No. 29, Alley 28, Lane 520, Nan Shang Road,  
Da Keng Village, Gueishan Township,  
Taoyuan Country, Taiwan, R.O.C.
8. **Informations supplémentaires (s'il y a lieu):**  
Additional informations (where applicable): See appendix
9. **Autorité déléguée:**  
*Assigned authority:* *Société Nationale de Certification et d'Homologation*  
*L-5230 Sandweiler*
- Service technique responsable de l'exécution des essais:**  
Technical service responsible for carrying out the tests: TÜV Rheinland Luxemburg GmbH  
2a, Kalchesbruck  
L-1852 Luxembourg
10. **Date du rapport d'essai:**  
Date of test report: 04.11.2008
11. **Numéro du rapport d'essai:**  
Number of test report: 84-R10-01287/08
12. **Remarques (s'il y a lieu):**  
Remarks (if any): See appendix

13. **Lieu:** Sandweiler  
Place:
14. **Date:** 05 novembre 2008  
Date:
15. **Signature:**  
Signature:

Pour le Ministre des Transports



Handwritten signature of Marco Feltes in black ink.

**Marco FELTES**  
**Inspecteur Principal**

Pour la SNCH



Handwritten signature of Claude Liesch in black ink.

**Claude LIESCH**  
**Conseiller de Direction**

16. **L'index de l'ensemble des renseignements déposé chez l'autorité de réception, qui peut être obtenu sur demande, est joint.**  
The index to the information package lodged with the approval authority, which may be obtained on request, is attached.  
See index to type-approval report

<sup>2</sup> **Biffer la mention inutile**  
Strike out what does not apply

## Appendice

### Appendix

**au certificat d'homologation par type N° E13\*10R00\*10R02\*9837\*00**  
 to type-approval certificate N° E13\*10R00\*10R02\*9837\*00  
**concernant l'homologation par type d'un sous ensemble électrique/électronique selon le Règlement N° 10.**  
 concerning the type-approval of an electrical/electronic sub-assembly under Regulation N° 10.

- |               |   |                             |
|---------------|---|-----------------------------|
| <b>1.</b>     | <b>Informations supplémentaires</b><br>Additional informations  |                             |
| <b>1.1.</b>   | <b>Tension nominale du système électrique [V]:</b><br>Electrical system rated voltage [V]:  | 11 ~ 15V DC                 |
|               | <b>Masse:</b><br>Ground:  | Negative                    |
| <b>1.2.</b>   | <b>Ce SEEE peut être utilisé sur n'importe quel type de véhicule avec les restrictions suivantes:</b><br>This ESA can be used on any vehicle type with the following restrictions:  | Vehicles with 12V DC supply |
| <b>1.2.1.</b> | <b>Conditions d'installation, s'il y a lieu:</b><br>Installation conditions, if any:  | Not applicable              |
| <b>1.3.</b>   | <b>CE SEEE peut seulement être utilisé sur les types de véhicules suivants:</b><br>This ESA can be used only on the following vehicle types:  | Not applicable              |
| <b>1.3.1.</b> | <b>Conditions d'installation, s'il y a lieu:</b><br>Installation conditions, if any:  | Not applicable              |
| <b>1.4.</b>   | <b>La (les) méthode(s) spécifique(s) d'essais utilisée(s) et les bandes de fréquences couvertes pour déterminer l'immunité étai(ent): (indiquez s'il vous plaît à partir de l'annexe 9 la méthode précise utilisée):</b><br>The specific test method(s) used and the frequency ranges covered to determine immunity were: (Please specify precise method used from annex 9) | Not applicable              |
| <b>1.5.</b>   | <b>Laboratoire approuvé/accrédité (dans le cadre de ce Règlement) responsable de l'exécution des essais:</b><br>Approved/accredited laboratory (for the purpose of this Regulation) responsible for carrying out the test:  | Not applicable              |
| <b>2.</b>     | <b>Commentaires:</b><br>Remarks:  | Not applicable              |
|               | <b>Raison(s) de l'extension:</b><br><i>Reason(s) for extension:</i>   | <i>Not applicable</i>       |



**Référence:** E13\*10R00\*10R02\*9837\*00

**Annexes:** - Rapport Technique  
- Fiche de Renseignements du constructeur

Sandweiler, le 05 novembre 2008

## Index du dossier d'homologation

Index to type-approval

	<b>Numéro d'homologation:</b> Approval number:	E13*10R00*10R02*9837*00
	<b>Révision:</b> Revision:	00
	<b>Marque de fabrique ou de commerce:</b> Trade name or mark:	<i>MasPower, as option: GlacialPower</i>
	<b>Type:</b> Type:	<i>MP-100AD</i>
<b>1.</b>	<b>Procès-verbal d'essai:</b> Test report:	84-R10-01287/08
	- Technical report:	Page 1 to 5;
	- Technical informations:	Appendix L - Page 6 & 7;
	- List of modifications:	Appendix 0 - Page 8;
	- Test protocol:	Appendix 1 – Page 9 & 10.
<b>2.</b>	<b>Dossier du constructeur:</b> Report of the manufacturer:	No. MP-100AD-00
	- Information document:	Page 1 & 2;
	- List of annexes:	Page 3;
	- Annexes:	Refer to page 3.
<b>3.</b>	<b>Autres documents annexés:</b> Other documents annexed:	Not applicable
<b>4.</b>	<b>Date de délivrance de l'homologation initiale:</b> Date of issue of initial type approval:	05.11.2008
<b>5.</b>	<b>Date de la dernière délivrance de pages révisées:</b> Date of last issue of revised pages:	Not applicable
<b>6.</b>	<b>Date de la dernière délivrance d'une homologation révisée:</b> Date of last extension:	Not applicable

Manufacturer : Maspower Electronic Company  
Type : MP-100AD

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## TEST REPORT

according to ECE-Regulation

### Uniform provisions concerning the approval of vehicles with regard to electromagnetic compatibility

No.: **ECE-R10**

including

No.: **02 series of amendments, suppl. 2**

Previously granted	
ECE-type approval	: --

Structure of report:

1. Test object(s) and general test information
2. Test minutes
3. Remark concerning tested object(s)
4. Appendices
5. Statement of conformity

The Test Report shall be reproduced and published in full by the client only. It shall however be reproduced partially with the written permission of the Testing Laboratory only.

**Manufacturer** : **Maspower Electronic Company**  
**Type** : **MP-100AD**

---

## **0. General information**

- 0.1. Trade mark or trade name of type : MasPower, as option: GlacialPower
- 0.2. Manufacturer's name for the type of the ESA : MP-100AD
- 0.3. Name and address of manufacturer : Maspower Electronic Company  
3F.-1, No. 307, Dunhua N. Rd.,  
Taipei City 105, Taiwan, R.O.C.
- 0.4. Name and address of authorised representative, if any : Not applicable
- 0.5. No. of information document : MP-100AD-00  
date of issue : September 18, 2008  
date of last amendment : --

Manufacturer : Maspower Electronic Company  
Type : MP-100AD

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## 1. Test object(s) and general test information

### 1.1. Test object(s)

Identification no. : Not applicable  
Model : MP-100AD  
Remark : Combo adapter

### 1.2. General test information

1.2.1 Order issued by : --  
(if different from manufacturer)  
1.2.2 Test object received on : --  
1.2.3 Test date : October 2, 2008  
1.2.4 Test site : Audix Technology Corp., Lin-kou, Taiwan  
1.2.5 Remark : The results of the test refer exclusively to the objects mentioned under point 1.1. of this report.



Manufacturer : Maspower Electronic Company  
Type : MP-100AD

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## 2. Test minutes

- 2.1. Test facilities** : The measurement equipment used was in compliance with the test requirements.
- 2.2. Test results** : ~~The ESA has been tested according to the amendments mentioned in Appendix 0.~~  
~~The actual measurement test of the ESA was not required. The test results of the previous test are still valid.~~  
Tests of ~~immunity and~~ radiated narrow band / broad band electromagnetic emission have been conducted.
- 2.2.1 Markings : The approval mark is marked clearly legible and indelible on the back of the main unit.
- 2.2.2 Test data : See Appendix 1.
- 2.3. Variants and components** : Not applicable

Manufacturer : Maspower Electronic Company  
Type : MP-100AD

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### 3. Remark concerning tested object(s)

All versions of the ESA type as stated in the information document are covered with the tested version(s) and test object(s) respectively.

### 4. Appendices

- L **Technical information about the separate technical unit (ESA) according to Annex 3B of the communication concerning the ECE-type approval**
- 0 **List of modifications**
- 1 **Test protocol**
- 2 **Information folder No. : MP-100AD-00 (3 pages)**  
**(excluding apps.)**

### 5. Statement of conformity

The above mentioned information folder and the type described in that comply with the requirements mentioned on page 1.

Luxemburg, date see Appendix L  
KFO/BL



B.S.E.E. B. Liu

**Manufacturer** : Maspower Electronic Company  
**Type** : MP-100AD

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**Technical information about the separate technical unit (ESA) according to Annex 3B of the communication concerning the ECE-type approval**

**Appendix L**

1. **Make (trade name of manufacturer)** : MasPower, as option: GlacialPower
2. **Type and general commercial description(s)** : MP-100AD  
commercial description(s) : Combo adapter  
version(s) : Not applicable
3. **Means of identification of type, if marked on the component/separate technical unit** : MP-100AD (for MasPower), GP-AC100P-0C (for GlacialPower)
  - 3.1. Location of that marking : On the back of the main unit
4. **Category of vehicle** : Not applicable
5. **Name and address of manufacturer** : Maspower Electronic Company  
3F.-1, No. 307, Dunhua N. Rd.,  
Taipei City 105, Taiwan, R.O.C.  
Name and address of authorized representative, if any : Not applicable
6. **In the case of components and separate technical units, location and method of affixing of the ECE approval mark** : Label fixed on the back of the main unit
7. **Address(es) of the assembly plant(s)** : FULLGOOD ELECTRONICS CO., LTD.  
No. 29, Alley 28, Lane 520, Nan Shang Road,  
Da Keng Village, Gueishan Township,  
Taoyuan Country, Taiwan, R.O.C.
8. **Additional information** : See Information Folder No. MP-100AD-00
10. **Date of Report** : November 4, 2008
12. **Remarks (if any)** : Not applicable

**Manufacturer** : Maspower Electronic Company  
**Type** : MP-100AD

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## Appendix

- 1. Additional information** :
- 1.1. Electrical system rated voltage : 11~15V DC, negative ground
- 1.2. This ESA can be used on any vehicle type with the following restrictions : Vehicles with 12V DC supply
- 1.2.1. Installation conditions, if any : Not applicable
- 1.3. This ESA can be used only on the following vehicle types : Not applicable
- 1.3.1. Installation conditions, if any : Not applicable
- 1.4. The specific test method(s) used and the frequency ranges covered to determine immunity were (please specify precise method used from Annex 9) : ~~Free field, 20 ~ 1000 MHz~~  
Not applicable
- 1.5. Approved/recognised laboratory (for the purpose of this Regulation) responsible for carrying out the test : TÜV Rheinland Luxemburg GmbH
- 2. Remarks** : Not applicable

**Manufacturer** : Maspower Electronic Company  
**Type** : MP-100AD

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**List of modifications**

**Appendix 0**

**Correction of** : --

**Modification of** : --

**Addition of** : --

**Deletion of** : --

Manufacturer : Maspower Electronic Company  
Type : MP-100AD

**Test protocol**

**Appendix 1**

**Test object**

Trade name : MP-100AD  
Version : Not applicable  
Technical data of the tested ESA type : See Appendix L

**Test results of radiated broadband electromagnetic emissions**

Antenna position : Horizontal and vertical

No.	frequency		measured data		correction factor		corrected data		limit value	
	MHz		dB( $\mu$ V/m)		dB( $\mu$ V/m)		dB( $\mu$ V/m)		dB( $\mu$ V/m)	
	horiz.	vertic.	horiz.	vertic.	horiz.	vertic.	horiz.	vertic.	horiz.	vertic.
1	50.0	43.6	7.7	12.4	17.9	20.7	25.6	33.1	56.4	57.9
2	60.0	60.0	6.8	12.6	14.4	14.4	21.2	27.0	54.4	54.4
3	95.0	95.0	7.1	5.3	18.5	18.5	25.6	23.8	53.6	53.6
4	115.0	118.3	3.1	1.9	21.0	21.2	24.1	23.1	54.8	55.0
5	145.0	147.4	1.2	0.8	23.0	23.1	24.2	23.9	56.3	56.4
6	185.0	185.0	2.0	0.8	24.3	24.3	26.3	25.0	57.9	57.9
7	225.0	227.9	1.4	0.6	25.3	25.3	26.7	25.9	59.2	59.3
8	292.9	283.2	2.4	1.9	30.1	29.3	32.5	31.1	61.0	60.7
9	380.0	388.9	0.1	-0.3	21.9	22.3	21.9	22.0	62.7	62.8
10	450.0	452.0	-0.8	1.5	23.1	23.1	22.3	24.5	63.0	63.0
11	600.0	600.0	-0.2	-0.1	27.6	27.6	27.5	27.5	63.0	63.0
12	750.0	752.7	-0.3	0.4	30.0	30.2	29.6	30.6	63.0	63.0
13	904.0	901.1	0.2	0.0	32.3	32.4	32.5	32.4	63.0	63.0

Manufacturer : Maspower Electronic Company  
Type : MP-100AD

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### Test results of radiated narrowband electromagnetic emissions

Radiated narrowband emissions during initial step according to annex 8(VIII), paragraph 1.3 in any of the bands identified in paragraph 6.1 were 10 dB below the reference limit. Therefore the requirements concerning the emissions are fulfilled, no further tests were required.

**Test results of Immunity Test** : Not applicable. The ESA is not related to immunity-related functions with regard to the direct control of the vehicle.

Test method : ~~Free field~~

Specified frequency range : ~~20-1000 MHz~~

Tested frequency points : ~~27, 45, 65, 90, 120, 150, 190, 230, 280, 380, 450, 600, 750 and 900 MHz~~

Field strength : ~~30 V/m (25% above the reference limit i.e. 24V/m)~~

~~At the above mentioned frequency points the ESA did not exhibit any malfunction which would cause any degradation of performance which could cause confusion to other road users or any degradation in the driver's direct control of a vehicle fitted with the system which could be observed by the driver or other road user.~~

1. Make (trade name of manufacturer) : MasPower, as option: GlacialPower
  
2. Type and general commercial description(s) : MP-100AD  
commercial description(s) : Combo adapter  
version(s) : Not applicable
  
3. Means of identification of type, if marked on : MP-100AD (for MasPower), GP-AC100P-0C  
the ~~component~~ / separate technical unit (for GlacialPower)
  
- 3.1. Location of that marking : On the back of the main unit
  
4. Category of vehicle : Not applicable
  
5. Name and address of manufacturer : Maspower Electronic Company  
3F.-1, No. 307, Dunhua N. Rd.,  
Taipei City 105, Taiwan, R.O.C.
  
- Name and Address of authorized : Not applicable  
representative, if any
  
6. In the case of components and separate : Label fixed on the back of the main unit  
technical units, location and method of affixing  
of the ECE approval mark
  
7. Address(es) of the assembly plant(s) : FULLGOOD ELECTRONICS CO., LTD.  
No. 29, Alley 28, Lane 520, Nan Shang Road,  
Da Keng Village, Gueishan Township,  
Taoyuan Country, Taiwan, R.O.C.



Additional information

- 1.1. Electrical system rated voltage : 11~15V DC, negative ground
- 1.2. This ESA can be used on any vehicle type with the following restrictions : Vehicles with 12V DC supply
- 1.2.1. Installation conditions, if any : Not applicable
- 1.3. This ESA can be used only on the following vehicle types : Not applicable
- 1.3.1. Installation conditions, if any : Not applicable
- 1.4. The specific test method(s) used and the frequency ranges covered to determine immunity were (please specify precise method used from Annex 9) : ~~Free field, 20 ~ 1000 MHz~~  
Not applicable
2. Remark : Not applicable

## List of Annexes

<b>Annex</b>	<b>Page</b>
A Drawing or photo of the ESA	A1 ~ A3
B Specification	B1
C System layout and block diagram	C1 ~ C3

### ESA Photo

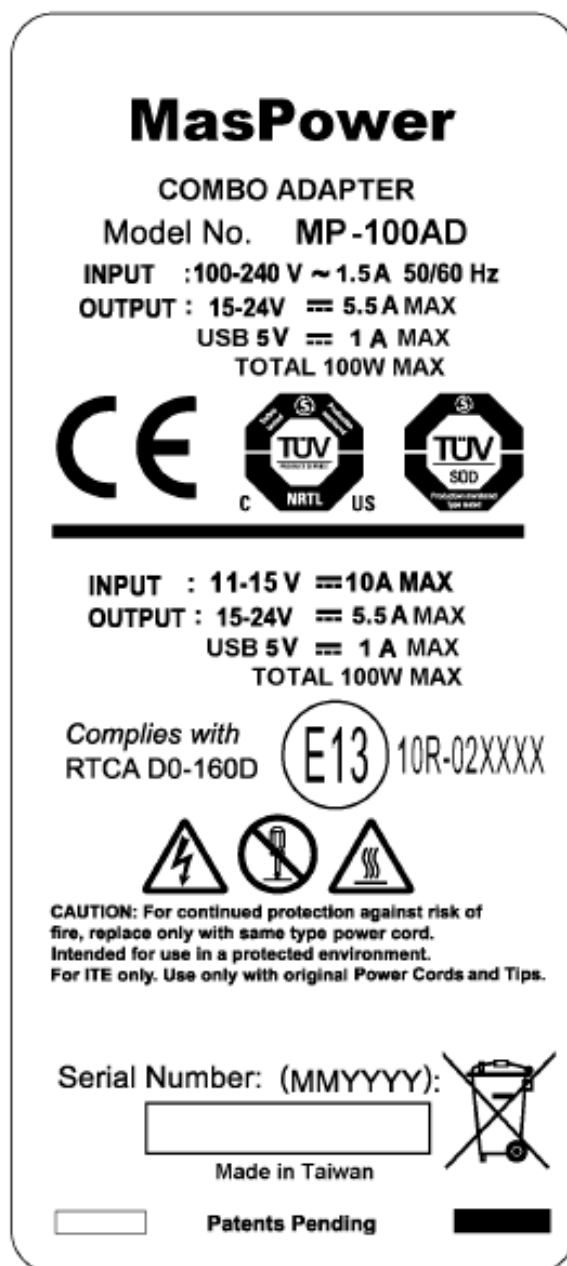


Power cord



Label Location

## Label





## Specification

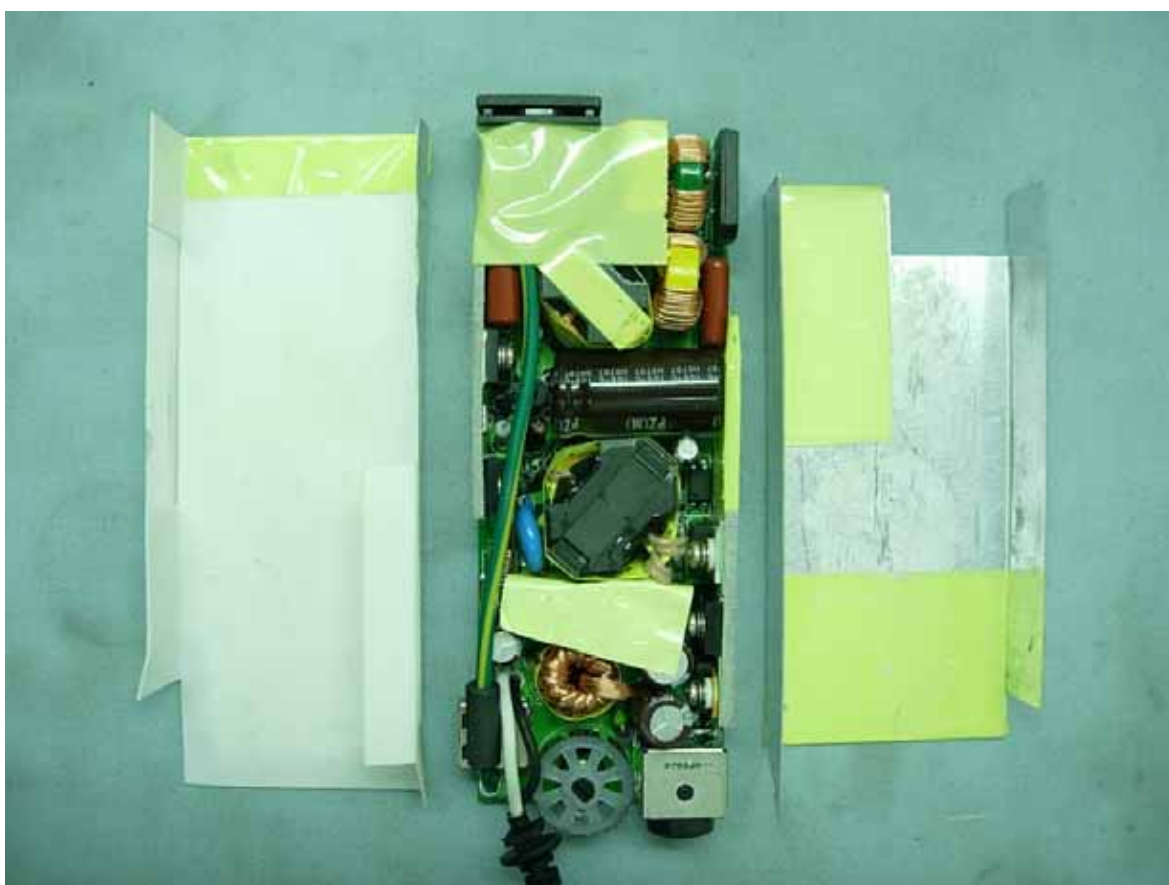
### MASPOWER

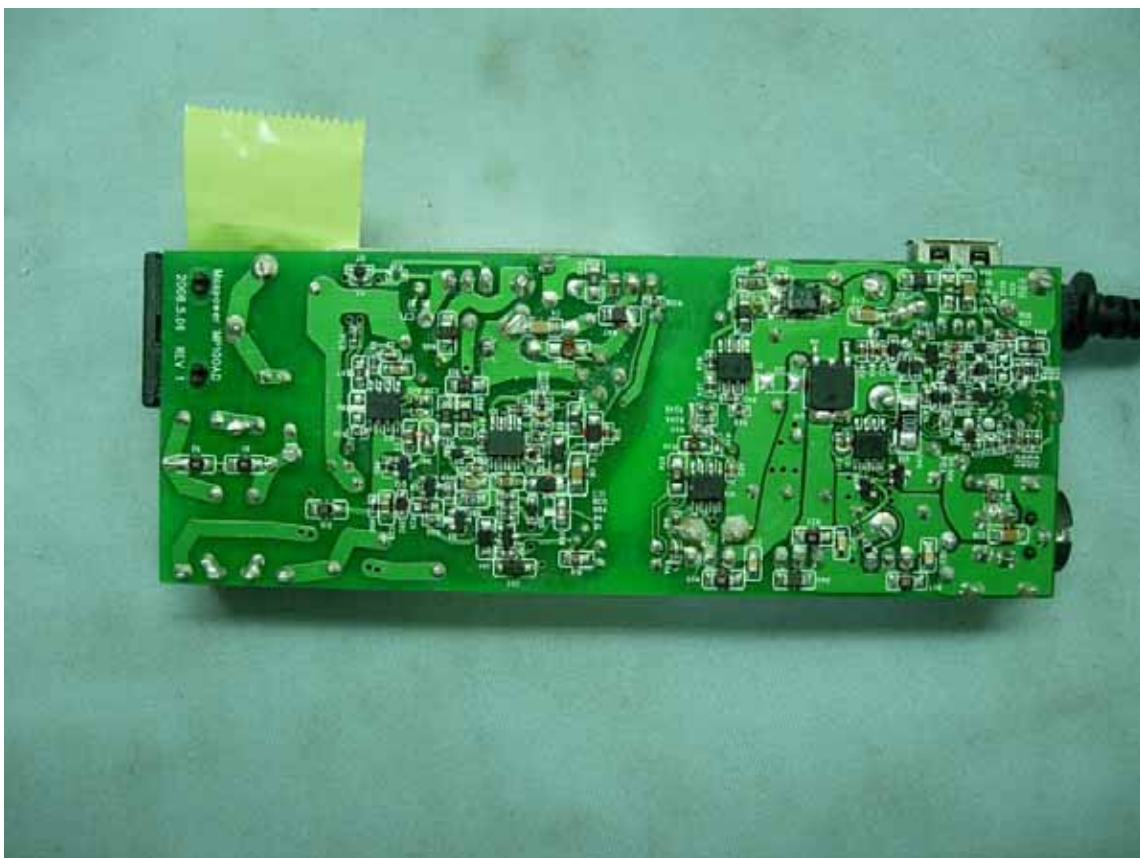
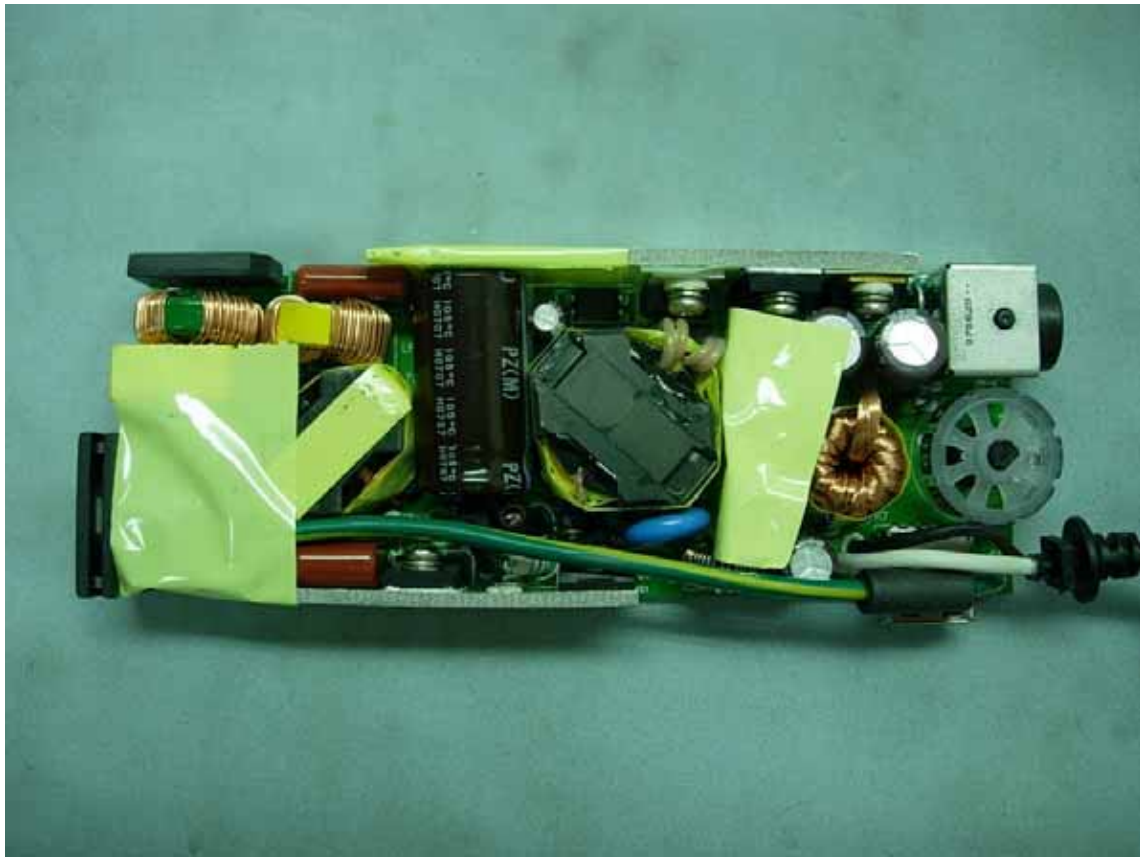
MP-100AD	PRIMARY OUTPUT								SECONDARY OUTPUT
	15	16	18.5	19	19.5	20	20.5	24	
OUTPUT									5V
OUTPUT CURRENT	5.5	5.5	5.15	5	4.9	4.75	4.65	4	1A
OUTPUT VOLTAGE	AC input 90-264 Vac DC input 11-15V								

### GLACIALPOWER

GP-AC100P-0C	PRIMARY OUTPUT								SECONDARY OUTPUT
	15	16	18.5	19	19.5	20	20.5	24	
OUTPUT									5V
OUTPUT CURRENT	5.5	5.5	5.15	5	4.9	4.75	4.65	4	1A
OUTPUT VOLTAGE	AC input 90-264 Vac DC input 11-15V								

## PCB Layout







# Block Diagram

