LE GOUVERNEMENT
DU GRAND-DUCHÉ DE LUXEMBOURG

Ministère des Transports

L-2938 Luxembourg

SOCIETE 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:**[2]
Communication concerning:

E13

- **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  ~~approval withdrawn~~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[2] 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:** E13*10R00*10R02*9837*00
Approval number:

**Marque d'homologation:** E13 10R-02 9837
Approval mark:

| | | |
|---|---|---|
| **1.** | **Fabricant (marque commerciale du constructeur):**<br>Make (trade name of manufacturer): | MasPower, as option: GlacialPower |
| **2.** | **Type:**<br>Type: | MP-100AD |
| | **Dénomination(s) commerciale(s) générale(s):**<br>General commercial description(s): | Combo adapter |
| | ***Version(s)/Variante(s):***<br>*Version(s)/Variant(s):* | *Not applicable* |
| **3.** | **Moyens d'identification du type, s'ils sont marqués sur le ~~véhicule~~ / composant / ~~entité technique~~[2]:**<br>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:**<br>Location of that marking: | On the back of the main unit |

| | | |
|---|---|---|
| **4.** | **Catégorie du véhicule:**<br>Category of vehicle: | Not applicable |
| **5.** | **Nom et adresse du constructeur:**<br>Name and address of manufacturer: | Maspower Electronic Company<br>3F.-1, No. 307, Dunhua N. Rd.,<br>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:**<br>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:**<br>Address(es) of assembly plant(s): | FULLGOOD ELECTRONICS CO., LTD.<br>No. 29, Alley 28, Lane 520, Nan Shang Road,<br>Da Keng Village, Gueishan Township,<br>Taoyuan Country, Taiwan, R.O.C. |
| **8.** | **Informations supplémentaires (s'il y a lieu):**<br>Additional informations (where applicable): | See appendix |
| **9.** | ***Autorité déléguée:***<br>*Assigned authority:* | *Société Nationale de Certification et d'Homologation*<br>*L-5230 Sandweiler* |
| | **Service technique responsable de l'exécution des essais:**<br>Technical service responsible for carrying out the tests: | TÜV Rheinland Luxemburg GmbH<br>2a, Kalchesbruck<br>L-1852 Luxembourg |
| **10.** | **Date du rapport d'essai:**<br>Date of test report: | 04.11.2008 |
| **11.** | **Numéro du rapport d'essai:**<br>Number of test report: | 84-R10-01287/08 |
| **12.** | **Remarques (s'il y a lieu):**<br>Remarks (if any): | See appendix |

**13.** **Lieu:** Sandweiler
Place:

**14.** **Date:** 05 novembre 2008
Date:

**15.** **Signature:**
Signature:

| **Pour le Ministre des Transports** | **Pour la SNCH** |
|---|---|
| **Marco FELTES**<br>**Inspecteur Principal** | **Claude LIESCH**<br>**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

[2] **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.

| | | |
|---|---|---|
| **1.** | **Informations supplémentaires**<br>Additional informations | |
| **1.1.** | **Tension nominale du système électrique [V]:**<br>Electrical system rated voltage [V]: | 11 ~ 15V DC |
| | **Masse:**<br>Ground: | Negative |
| **1.2.** | **Ce SEEE peut être utilisé sur n'importe quel type de véhicule avec les restrictions suivantes:**<br>This ESA can be used on any vehicle type with the following restrictions: | Vehicles with 12V DC supply |
| **1.2.1.** | **Conditions d'installation, s'il y a lieu:**<br>Installation conditions, if any: | Not applicable |
| **1.3.** | **CE SEEE peut seulement être utilisé sur les types de véhicules suivants:**<br>This ESA can be used only on the following vehicle types: | Not applicable |
| **1.3.1.** | **Conditions d'installation, s'il y a lieu:**<br>Installation conditions, if any: | Not applicable |
| **1.4.** | **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):**<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 |
| **1.5.** | **Laboratoire approuvé/accrédité (dans le cadre de ce Règlement) responsable de l'exécution des essais:**<br>Approved/accredited laboratory (for the purpose of this Regulation) responsible for carrying out the test: | Not applicable |
| **2.** | **Commentaires:**<br>Remarks: | Not applicable |
| | ***Raison(s) de l'extension:***<br>*Reason(s) for extension:* | *Not applicable* |

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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

# Index du dossier d'homologation

Index to type-approval

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

# 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.

E13*10R00*10R02*9837*00
Société Nationale de Certification et d'Homologation
L-5201 SANDWEILER (Luxembourg)
Organisme accrédité OLAS EN 45011
Accréditation N° 5/001 (Portée communiquée sur demande)

## 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<br>3F.-1, No. 307, Dunhua N. Rd.,<br>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<br>date of issue<br>date of last amendment | : MP-100AD-00<br>: September 18, 2008<br>: -- |

## 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. |

## 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

## 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. (excluding apps.)** | : MP-100AD-00 (3 pages) |

## 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

**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<br>3F.-1, No. 307, Dunhua N. Rd.,<br>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.<br>No. 29, Alley 28, Lane 520, Nan Shang Road,<br>Da Keng Village, Gueishan Township,<br>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 |

E13*10R00*10R02*9817*00
Société Nationale de Certification et d'Homologation
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Organisme accrédité OLAS EN 45011
Accréditation N° 5/001 (Portée communiquée sur demande)

## 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 |

## List of modifications

**Appendix 0**

**Correction of** : --

**Modification of** : --

**Addition of** : --

**Deletion of** : --

## 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

| | frequency | | measured data | | correction factor | | corrected data | | limit value | |
|---|---|---|---|---|---|---|---|---|---|---|
| No. | MHz | | dB(µV/m) | | dB(µV/m) | | dB(µV/m) | | dB(µV/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 |

**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.~~

# Information Document No.: MP-100AD-00 for type approval of an ESA with respect to electromagnetic compatibility according to the ECE Regulation R10, 02 series of amendments

Date: September 18, 2008

| | | | |
|---|---|---|---|
| 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<br>3F.-1, No. 307, Dunhua N. Rd.,<br>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.<br>No. 29, Alley 28, Lane 520, Nan Shang Road,<br>Da Keng Village, Gueishan Township,<br>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~~<br>Not applicable |
| 2. | Remark | : | Not applicable |

## List of Annexes

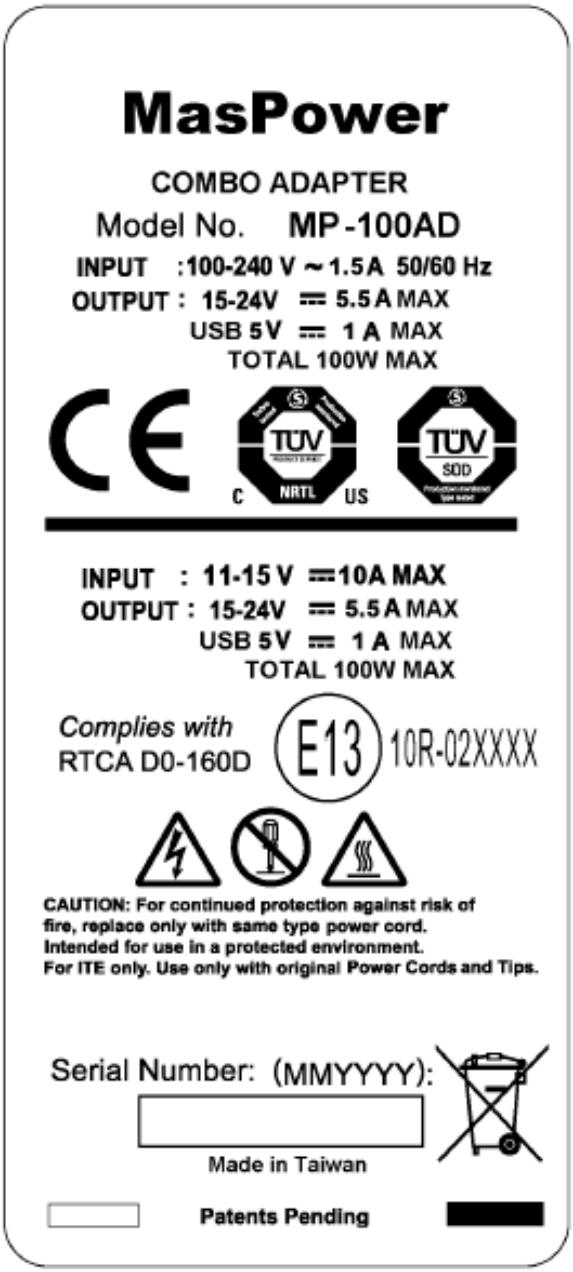

| | Annex | Page |
|---|---|---|
| A | Drawing or photo of the ESA | A1 ~ A3 |
| B | Specification | B1 |
| C | System layout and block diagram | C1 ~ C3 |

# ESA Photo

Power cord

Label Location

# Label

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| REV | DESCRIPTION | APPROVED | DATE |
|---|---|---|---|
| 02 | | | |

# Label

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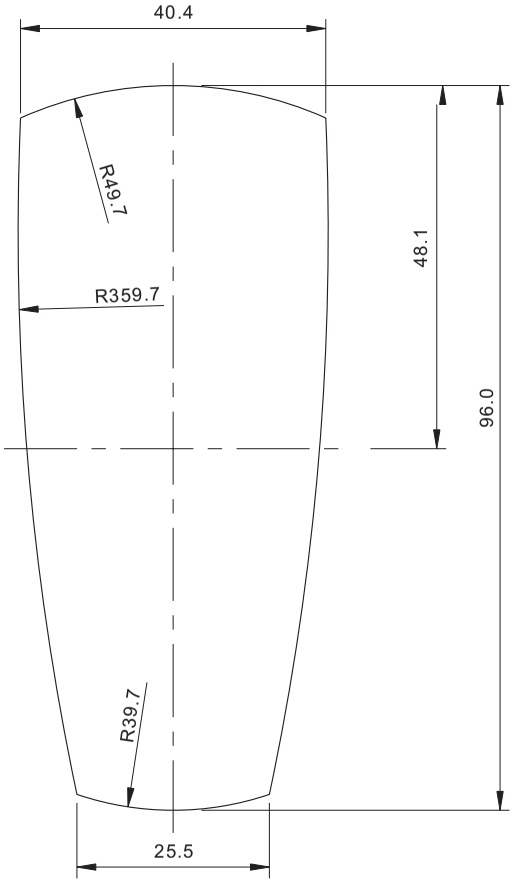
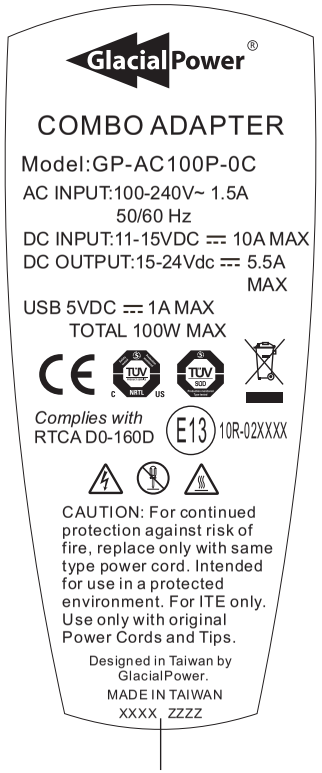
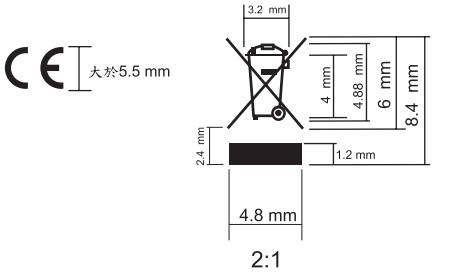



XXXX代表生產工廠的代號
ZZZZ代表印刷廠的安規代號



## NOTES:

1.材質：50u 白色特多龍(Polyester Film White Matt Label) or Equivalent，表面上霧膜
2.背膠：網狀膠
3.剝離力>1.4-1.7 KGF/25MM.
4.黑底白字
5.標籤系統需符合UL/CSA規範
6.被貼物材質：PC or PC/ABS
7.溫度測試：-40 To 100 Degree C Recommend: CENIC YUPO 80 um
8.公差：+0/-0.2 mm
9.參考索尼SS-00259環保標準生產

| TOLERANCES | MATERIAL: *SEE NOTES* | | GlacialPower® |
|---|---|---|---|
| .X = ±0.2 | PART NO. | | |
| .XX = ±0.1 | UNIT: mm | SCALE: 1/1 | TITLE: *GP-AC100P-0C LABEL 2* |
| .XXX = ±0.05 | DRAWN: *Fred* | *OCT,06,2008* | |
| THIRD ANGLE PROJECTION | CHECKED: | | DWG NO. *AC100P0CLB 2-2* |
| | APPROVED: | | SIZE: A4 / SHEET *1* OF *1* |

A3

E13*10R00*10R02*9837*00
Société Nationale de Certification et d'Homologation
L-5201 SANDWEILER (Luxembourg)
Organisme accrédité OLAS EN 45011
Accréditation N° 5/001 (Portée communiquée sur demande)

# Specification

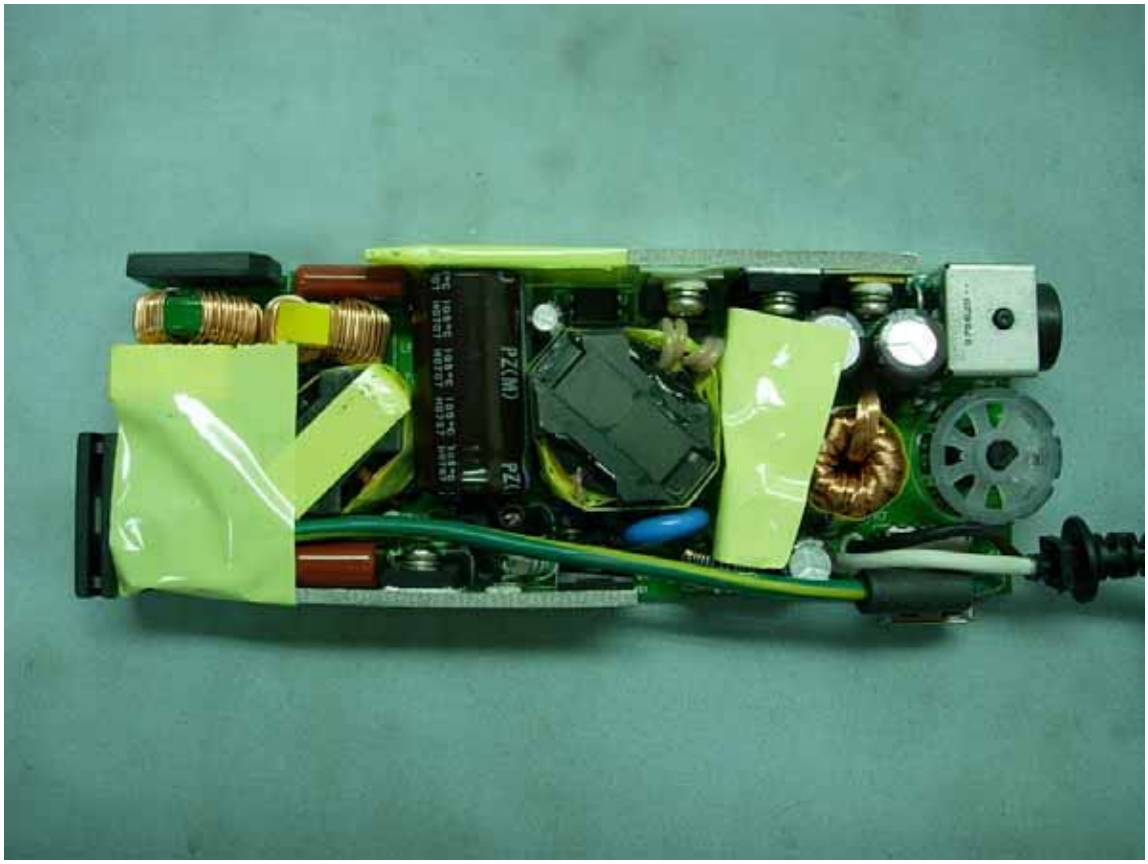
## MASPOWER

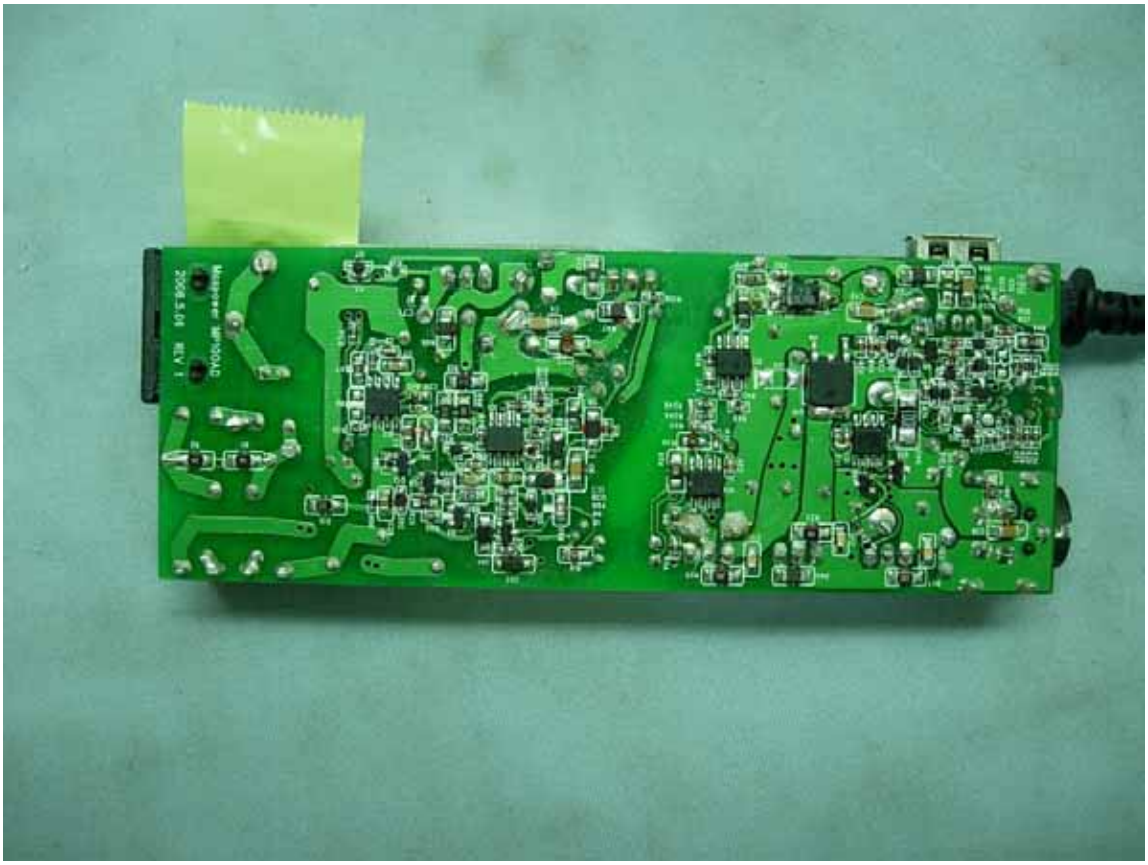
| MP-100AD | PRIMARY OUTPUT | | | | | | | | SECONDARY OUTPUT |
|---|---|---|---|---|---|---|---|---|---|
| OUTPUT | 15 | 16 | 18.5 | 19 | 19.5 | 20 | 20.5 | 24 | 5V |
| OUTPUT CURRENT | 5.5 | 5.5 | 5.15 | 5 | 4.9 | 4.75 | 4.65 | 4 | 1A |
| OUTPUT VOLTAGE | AC input 90-264 Vac DC input 11-15V | | | |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

## GLACIALPOWER

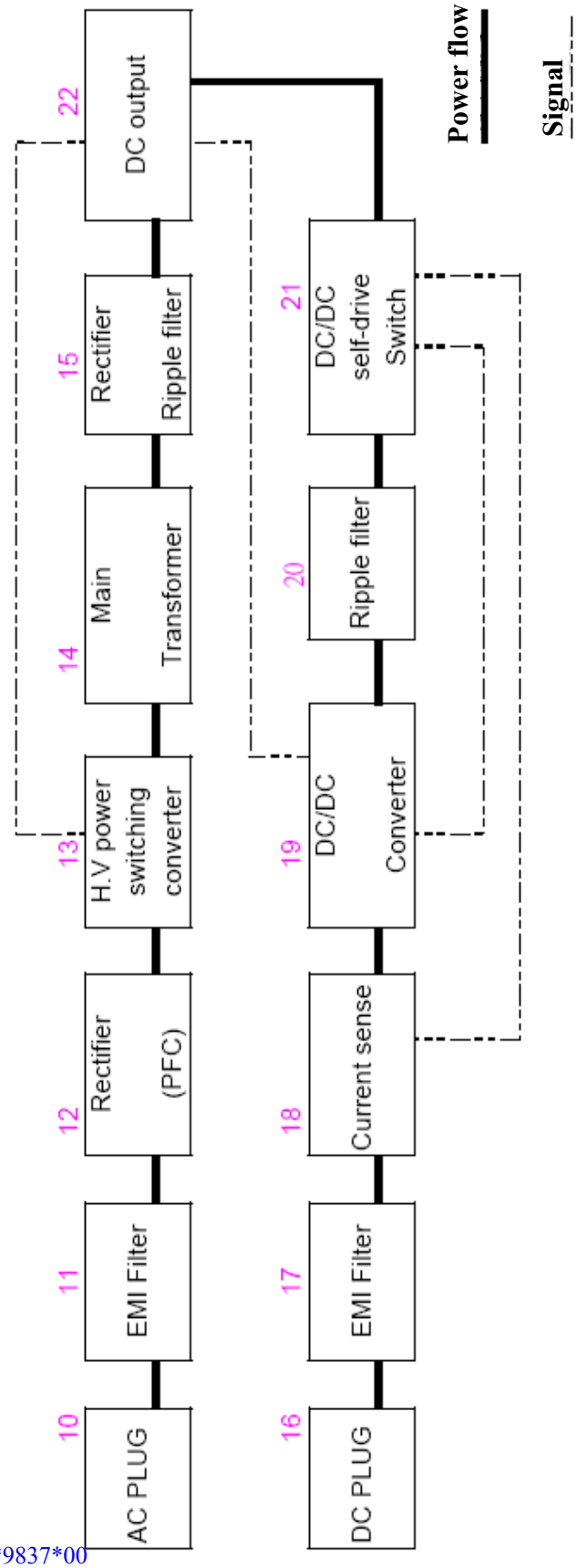
| GP-AC100P-0C | PRIMARY OUTPUT | | | | | | | | SECONDARY OUTPUT |
|---|---|---|---|---|---|---|---|---|---|
| OUTPUT | 15 | 16 | 18.5 | 19 | 19.5 | 20 | 20.5 | 24 | 5V |
| OUTPUT CURRENT | 5.5 | 5.5 | 5.15 | 5 | 4.9 | 4.75 | 4.65 | 4 | 1A |
| OUTPUT VOLTAGE | AC input 90-264 Vac DC input 11-15V | |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

**PCB Layout**





# Block Diagram

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L-5201 SANDWEILER (Luxembourg)
Organisme accrédité OLAS EN 45011
Accréditation N° 5/001 (Portée communiquée sur demande)