



Datasheet for Power Supply

規格承認書

僅供參考

CLIENT 客戶	:	SEMTECH
ITEM 產品名稱	:	Switching Mode Power Supply
OUR MODEL NO. 本廠型號	:	SND1901350P2
CLIENT'S MODEL NO. 客戶型號	:	
GREEN STANDARD 環保標準		RoHS <input checked="" type="checkbox"/> REACH <input type="checkbox"/> PAHS <input type="checkbox"/> : CPSIA <input type="checkbox"/> EN71-3 <input type="checkbox"/>

Latest Edition 新版	Date 日期	Prepared by 制作者	Checked by 審核人	Checked by 審核人	Checked by 審核人	Audited by 覆核人	Approved by 確認人
0	28 Oct 16	Dong Hui Qing 	Yu Jin Shan 	Zhao Xue Zhi 	Jiang Lu Tang 	Dong Ke Rong	Billy Chow

IMPORTANT NOTE 重要通知

- According to our ISO-9000 & MRP system, we cannot process your P.O before you approve this specification by signing, stamping and returning the "Declaration of approval" section of this specification.
 為符合我司 ISO-9000 及 MRP 管理系統要求，我方必需於收到貴司簽核本規格書後才能處理貴司訂單，請盡快蓋章簽署此規格書的(簽認聲明)回傳我司，以免延誤貴司訂單的生產計劃。
- This specification is prepared for the internal use of **SEMTECH** only. Disclosure or distribution of part or whole of this specification without the written permission of Helms-Man Transformers Co., Ltd. is strictly prohibited. All rights are reserved by Helms-Man Transformers Co.,Ltd.
 這規格承認書祇供 **SEMTECH** 公司內部使用。 本規格書版權全屬興茂電源有限公司所擁有。

Declaration of Approval : We approve and accept every clause listed in this specification. 簽認聲明： 我司認可及接受本規格書所列出的所有條款。	Approved by 確認人簽名蓋章
	Name and Position 確認人名稱及職稱
	Approval date 確認日期

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EDITION RECORD 版本記錄

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Edition 版本號	Date 日期	Revision Items 修改項目
0	28-10-2016	Initial release 初版

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Important Notes (重要事項) :

(I) Unless otherwise specified , all above-listed items of tests are carried out by Electronic Load.

除非有例外說明,以上各項測試,皆使用電子負載執行.

(II) Unless otherwise specified , all tests are governed by the relevant clauses of the safety standards under which this model is designed and certified (Specification Contents item 4).

除非有例外說明,所有測試,皆按照此型號所屬的安規標準內的相關測試條款執行(規格書內容第四項).

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僅供參考

1. ELECTRICAL CHARACTERISTICS 電氣特性

Parameter 參數	Min 最低	Typical 額定	Max 最高	Unit 單位
INPUT VOLTAGE 輸入電壓	90	100-240	264	VAC
INPUT FREQUENCY 輸入頻率	-----	50-60	-----	Hz
INPUT CURRENT 輸入電流	-----	-----	2500	mA
UNLOAD OUTPUT VOLTAGE 空載輸出電壓	-----	-----	19.95	VDC
OUTPUT VOLTAGE 輸出電壓	18.05	19	19.95	VDC
OUTPUT CURRENT 輸出電流	-----	1350	-----	mA
OUTPUT RIPPLE 輸出紋波*	-----	-----	150	mV
AMBIENT TEMPERATURE 環境溫度	0	-----	40	°C
RELATIVE HUMIDITY 相對濕度	40	-----	93	%

*Output ripple is measured peak to peak with a 10µF E-cap and 0.1µF ceramic cap in parallel on the output.

*輸出紋波測試時在輸出端加 10µF 電解電容和 0.1µF 陶瓷電容。

2. PROTECTIONS 保護特性

2.1 Over Voltage Protection 過壓保護

The power supply shall provide OVP such that under any single component failure.

當有單一零件損壞時，這電源供應器有過壓保護。

2.2 Over Current Protection 電流過載保護

The power supply shall be protected when any output operating in overload condition.

當輸出有過載時，這電源供應器有過載保護。

2.3 Short Circuit Protection 短路保護

The power supply shall be protected and no damage occur when any output operating in a short circuit condition. 當輸出短路時，這電源供應器有短路保護及無危險現象。

3. ENERGY EFFICIENCY STANDARDS 能效標準

1. Energy Efficiency Marking 能效標: V
 2. No Load Power 空載功率 (Input 115V 60Hz/230V 50Hz): 0.3W or less 以下
 3. Minimum Average Efficiency in Active Mode (Input 115V 60Hz/230V 50Hz): 82.51% or above (Rated output DC19V,1350mA 25.65VA)
 工作模式下最低平均能效 (輸入 115V 60Hz/230V 50Hz 時): 82.51%或以上 (額定輸出 DC19V,1350mA 25.65VA)
 (Remarks: This power supply shall be operated at 100% of the rated output current for 30 minutes, the above energy test data will be measured at the warm-up period.)
 (注: 這電源須先按額定輸出電流負載 30 分鐘, 在加熱情況下測量上述能效數據.)
- 歐洲 ErP requirement 標準
 - 澳洲 MEPS requirement 標準
 - 美國/加拿大 DOE / CEC / NRCan requirement 標準

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4. SAFETY STANDARDS 安規標準

僅供參考

The power supply is designed to meet the following safety standards at 25°C ambient temperature: 在室溫 25°C 下這電源供應器設計合符以下安規標準:

Safety Standard 安規標準
IEC/EN60950-1 <input checked="" type="checkbox"/> UL/CSA 60950-1 <input checked="" type="checkbox"/> AS/NZS60950-1 <input checked="" type="checkbox"/> J60950-1 <input type="checkbox"/> K60950-1 <input type="checkbox"/> GB4943.1 <input type="checkbox"/>
IEC/EN60065 <input type="checkbox"/> UL/CSA 60065 <input type="checkbox"/> AS/NZS60065 <input type="checkbox"/> GB8898 <input type="checkbox"/>
IEC/EN61558-1+IEC/EN61558-2-7 <input type="checkbox"/> IEC/EN61558-1+IEC/EN61558-2-16 <input type="checkbox"/> GB19212.1 <input type="checkbox"/>
IEC/EN61558-1+IEC/EN61558-2-17 <input type="checkbox"/> AS/NZS61558-2-16 <input type="checkbox"/>
IEC/EN61347-1+IEC/EN61347-2-13 <input type="checkbox"/> J61347-2-13 <input type="checkbox"/>
IEC/EN61347-1+IEC/EN61347-2-2 <input type="checkbox"/>
UL1310 <input type="checkbox"/> CSA-C22.2 No. 223 <input type="checkbox"/> UL697 <input type="checkbox"/> CSA-C22.2 No. 173 <input type="checkbox"/>

5. EMC STANDARDS 電磁兼容標準

Refer to related safety standards. 參考相關安全標準

UL/CSA 60950-1, UL/CSA 60065, UL1310, UL697, CSA-C22.2 No. 223, CSA-C22.2 No.173, UL8750	FCC Part 15 subpart B, ICES-003
IEC/EN60950-1, AS/NZS60950-1	EN55022, EN55024, EN61000-3-2/3
IEC/EN60065, AS/NZS60065	EN55013 EN55020, EN61000-3-2/3
IEC/EN61558-1+IEC/EN61558-2-7 IEC/EN61558-2-16, IEC/EN61558-2-17 AS/NZS61558-2-16, AS/NZS61558-2-17	EN61204-3, EN61000-3-2/3
IEC/EN60335-1, AS/NZS60335-1	EN55014-1. EN55014-2, EN61000-3-2/3
IEC/EN61347-2-2, AS/NZS61347-2-2, IEC/EN61347-2-13, AS/NZS61347-2-13	EN55015, EN61547, EN61000-3-2/3

6. HI-POT 耐高壓測試

Input to output 輸入對輸出 3000VAC at 1 sec (秒)
 Cutoff current 截止電流 10mA

7. MAX TOUCH CURRENT (MAX EARTH LEAKAGE CURRENT)

最大接觸電流(最大漏電電流測試)
 250µA max. at 250Vrms

8. MTBF STANDARD 平均無故障時間標準

Minimum 50,000 hours MTBF at max rated load & 25°C ambient temperature.
 在室溫 25°C 下及最大額定負載下，平均無故障時間為最少 50,000 小時。

9. INSULATION RESISTANCE 絕緣阻抗

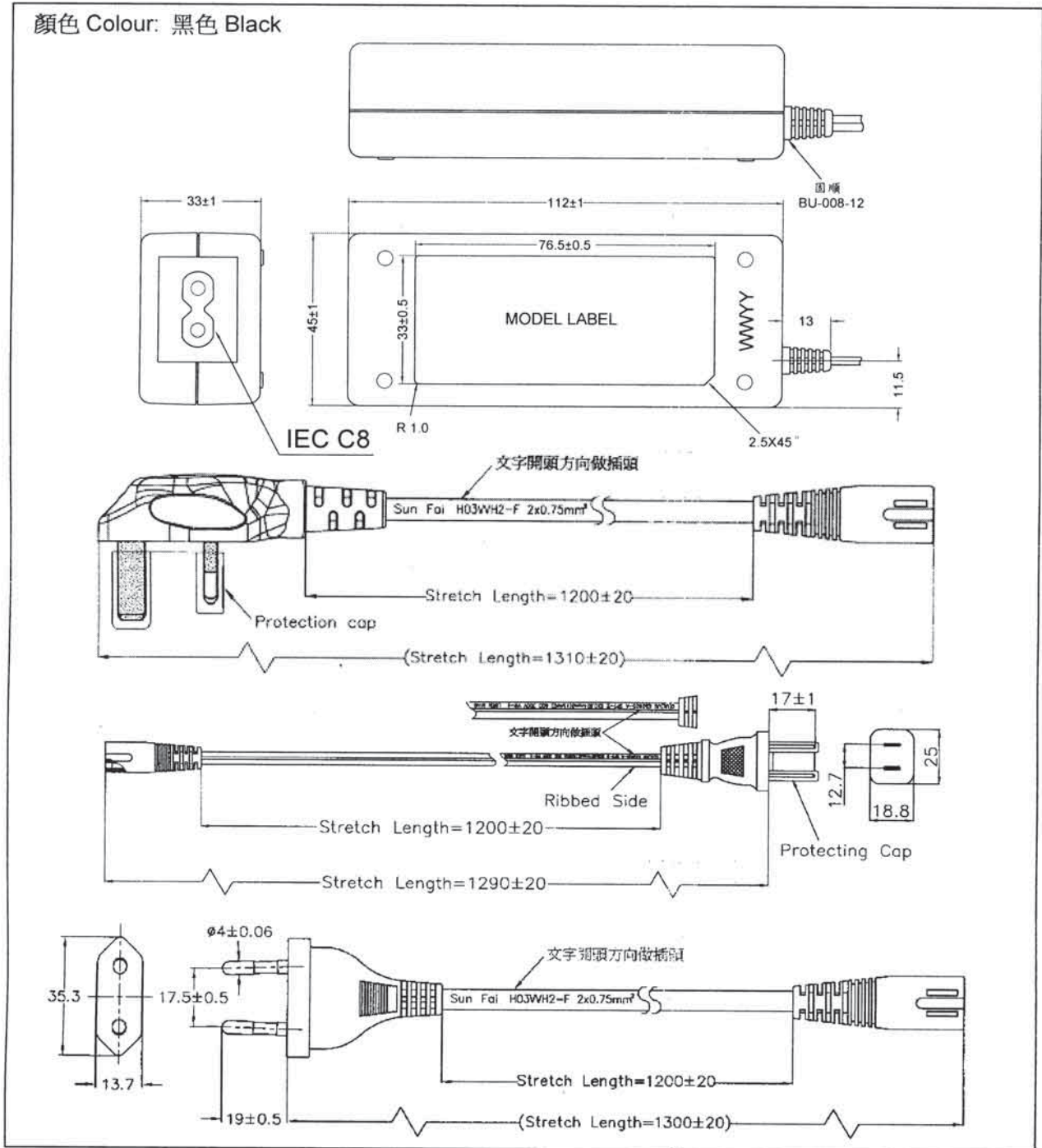
Input to Enclosure / Output (初對殼 / 次): ≥7M ohm (DC 500V , 1 minute)

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10. MECHANICAL CHARACTERISTIC 機械規格

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10.1 Mechanical Dimensions 外形尺寸(for Ref. only 參考用)



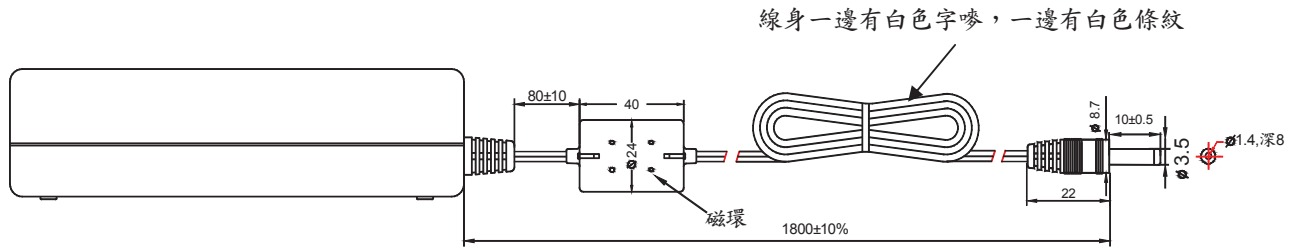
Date Code = WVYY
 WV-Week
 YY-Year

單位
 Unit: mm

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DC output cable & plug & polarity: 輸出電線連插頭及輸出極性

僅供參考

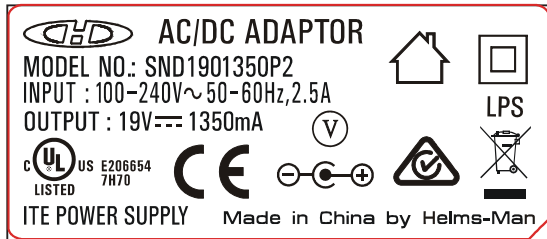


Polarity 極性



次級引線 UL2468 2/AWG#20 連母插 PS-351410/031
 φ3.5×φ1.4×10 mm 1800mm±10%黑色.
 Secondary cord UL2468 2/AWG#20 with Female plug
 PS-351410/031 φ3.5×φ1.4×10mm 1800mm±10% black colour.

10.2 Model Labels 產品標籤



嘜頭表達方法: 蝕字嘜
 Marking method: Molded marking

注: 1:1 嘜頭 長 x 寬: 33x76.5mm
 1:1 scale 33x76.5mm (LxW)

11. PACKING 包裝規格

包裝規格: 標準紙格包裝
 Packing Spec.: Standard packing with card tray

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INSTRUCTION:

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Remark: Below instructions should be printed on the instruction manual of the end product use with power supply.

附注: 以下的句子, 可印在最終客戶產品的說明書上.

1. **This unit is intended for using with audio/video apparatus.**
2. **Avoid use under direct sunlight or abnormal heating or moisture surroundings.**
3. **The output power taken from the power supply must not exceed the rating marked on the adaptor.**
4. **This power supply is not intended to be repaired by service personnel in case of failure or component defect.**
5. **Maximum ambient temperature around power supply unit must not exceed 25°C.**
6. **This power supply is not equipped with a power cord. A safety agency approved power cord and plug, with appropriate wire gauge for the rated input current, must be provided by the end product manufacturer.**
7. **This power supply shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.**
8. **This product is manufactured by: Helms-Man (Hui Yang) Electric Ltd.
Xin Xu, Hui Yang, Guang Dong, China.**

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