



Specification For Approval

承认书

Customer Name 客户名称: N00FY2	
Type of product 产品: AC ADAPTER	Product No.产品编号: SH00219
Model No.型号: NBS05B050100VU	Customer P/N 客户编号:
Input输入: 100-240Vac 50/60Hz 0.2A	Output输出: 5V 1A
Sample No.样品编号: M1600219	REV版本: 1.0
Unit Color 颜色: BLACK (PAHS+REACH+ROHS)	

Approval Signature / 客户签名			
Company Chop 公司签章	Approval 承认	Check 检验	Test 测试

Environmental Protection Requirements / 环保要求	
REACH <input checked="" type="checkbox"/> PHTHALATE(3P) <input type="checkbox"/> PHTHALATE(6P) <input type="checkbox"/> PHTHALATE(7P) <input type="checkbox"/> PHTHALATE(16P) <input type="checkbox"/>	
PAHs <input checked="" type="checkbox"/> CPSIA <input type="checkbox"/> CP65(3P) <input type="checkbox"/> CP65(5P) <input type="checkbox"/> NP <input type="checkbox"/> Other: * _____	
Note: The basic requirement for products is RoHS, please take a tick before your other requirements.	

Manufacture Signature / 制造商签名			
Sales / 业务	QA / 品管	Engineer / 设计	Sample / 制样
吴磊	高水瑛	王丛奎	廖根芽

Shenzhen Mass Power Electronic Limited 深圳市迈思普电子有限公司
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深圳市迈思普电子有限公司

Declaration of EU RoHS 2.0 Conformity (欧盟 RoHS 2.0 符合性声明)

We Shenzhen Mass Power Electronic Limited, Ltd here by declare that our products indicated below were in full conformity with EU Directive 2011/65/EU, with respect to the following substances:

我公司, 深圳市迈思普电子有限公司在此声明:

我公司生产的以下产品中各项有害物质的含量完全符合欧盟指令 2011/65/EU:

- 1) Lead(Pb)铅<1000ppm
- 2) Mercury(Hg)汞<1000ppm
- 3) Cadmium(Cd)镉<100ppm
- 4) Hexavalent chromium(Cr6+)六价铬<1000ppm
- 5) Polybrominated biphenyls(PBB) 多溴联苯<1000ppm
- 6) Polybrominated diphenylethers (PBDE) 多溴二苯醚<1000ppm

Company Name and Stamp / 公司名称及盖章:

Signature / 公司负责人签名:



Date / 日期: 2015.01.27

2 Electrical Specification

2.1. Input requirement

Item	Minimum	Nominal	Maximum	Unit	Remark
Rated Input Voltage		100 / 240		Vac	
Input Voltage Range	90	/	264	Vac	
Rated Frequency		50 / 60		Hz	
Frequency Range	47	/	63	Hz	
Input Current		/	0.2	A	at100Vac/ 60Hz- at240Vac/ 50Hz
Input Inrush Current		/	60	A	Cool Start 230Vac
Power Consumption		/	0.1	W	No Load

2.2. Output requirement

2.2.1 Output voltage and current

Rated output voltage (V)	Voltage range (V)	No load (A)	Min.load (A)	Rated load(A)	Max. load (A)	Rated output power(W)	Note
5	4.75 ~ 5.25	0	0	1	*	5	

The power supply output voltage must stay within the limits specified in table 2 when operating at steady state.

2.2.2 Ripple and Noise

Ripple and Noise are tested by dc loading side parallel with a 47uF/E-CAP and 0.1uF/ C-CAP and with 20MHZ Band-Width,the result must be less than [180mV](#)

2.2.3 Average Efficiency

The average efficiency is larger than [73.62%](#) which is at 115Vac/60Hz and 230Vac/50Hz with 100%,75%,50%,25% rated load.and the efficiency is larger than ,which is at 10% rated load .This result comply with the [DOE VI](#)

2.2.4 Line regulation

The line regulation of rated output voltage is less than [±5%](#) while measuring at rated load and +/-10% of input voltage changing.

2.2.5 Load regulation

The load regulation of rated output voltage is less than [±5%](#) at measured output load from 10% to 100% rated load .

2.2.6 Turn on delay time

At nominal input AC voltage and full load, it must less than [3.5S](#)

2.2.7 Rise time

The Supply shall have a start-up rise time of less than [30mS](#) within regulation limits for all DC outputs.

2.2.8 Hold up time

At nominal input AC voltage and full load, it must larger than [10mS](#)

2.2.9 Overshoot and undershoot

The output voltage over/undershoot upon the application or removal of the input voltage, under the input conditions specified in Section 2.1, shall be less than [±10%](#) ,above the nominalvoltage. No voltage of opposite polarity shall be present on output during turn-on or turn-off.

2.2.10 Dynamic response

The output voltage must between [±5%](#) 50% to 100% load and back to 50% with a 0.15A/msec slew rate.

2.3 Protection Characteristics

2.3.1 Over current protection

The output shall be protected against the over current conditions. A power cycle shall be required to restore normal operation. The output current is less than [1.5A](#) at 90Vac.

2.3.2 Over voltage protection

The output voltage shall be clamped by [/](#) at full load and no load with rated input voltage.



2.3.3 Short circuit protection

The power supply shall have self-limiting protection. This protection can withstand a continuous output short without damaged, and auto-recovery operation after the short is removed.

2.4. Environmental Condition

2.4.1 Temperature

Operating Temperature: [-0+40°C](#)

Storage Temperature: [-40+80°C](#)

2.4.2 Humidity

Operating Humidity [20%+ 98%](#)

Storage Humidity [20%+98%](#)

2.4.3 Altitude

Operating Altitude: [5,000ft \(Max\)](#)

Storage Altitude: [20,000ft \(Max\)](#)

2.4.4 Vibration

The power supply shall be subjected to a vibration test consisting of a 10 to 300Hz sweep at a constant acceleration of 2G for a duration of one 1hour for each of the perpendicular axes X,Y and Z. The power supply shall not incur physical damage or degradation of any characteristics below the performance specifications

2.5 Safety Standards

The power supply shall be certified by following international regulatory standards.

Item	Country	Status	Safety standard
CE	Europe	---	EN60950-1
GS	Germany	---	EN60950-1
UL/cUL	America / Canada	---	UL 60950-1 / CSA C22.2
DOFT	Australia/New Zealand	---	AS/NZS60950-1
CCC	China	---	GB8898
TUV Mark	United Kingdom	---	BS EN60950-1
PSE	Japan	Meet	J60950
KCC	Korea	---	K60950
CB	Global	---	IEC60950-1

2.6 Electromagnetic Compatibility

2.6.1 Electrostatic discharge immunity (ESD)

IEC61000-4-2:2008

Air Discharge: [±8KV](#)

Contact Discharge: [±4KV](#)

Discharge Impedance : 330ohm / 150pF

Polarity: Positive and Negative

Performance: Criteria A

2.6.2 Radiation electromagnetic Field immunity (RF)

IEC61000-4-3: 2006+A1:2007+A2:2010

Range : 80MHz-1000MHz

Field Strength : [3V/m/80%AM\(1 KHz\)](#)

Distance Antenna-EUT : 3m

Polarity of Antenna : Horizontal and Vertical

Performance: Criteria A



2.6.3 Electromagnetic Fast transient immunity (EFT)

IEC61000-4-4:2004

Techniques - Electrical fast transient/burst immunity test

Pulse Amplitude-AC Power Port: [1KV](#)

Burst Frequency: 5.0kHz

Polarity of Antenna : Positive and Negative

Performance: Criteria A

2.6.4 Surge immunity

IEC61000-4-5:2005

1.2/50 usec Open Circuit voltage

8/20 usec Short Circuit current

Power line: [1KV](#)

Performance: Criteria A

2.6.5 Conducted disturbances immunity

IEC61000-4-6:2008

Range: 0.15MHz-80MHz

Voltage Level: 3V

Step: ≤ 0.015 decades / sec

Performance: Criteria A

2.6.6 Voltage Dips, Interruption & Variations

IEC61000-4-11:2004

[100Vac](#) and [240Vac](#)

500mS at 30% of Vnom

10mS >95% of Vnom

Duration of Interruption(>0.95*Vnom): 5S

Performance: Criteria B

2.6.7 FCC

FCC Part 15, Class B

2.6.8 C-Tick

CISPR 22

2.7 Reliability

2.7.1 Burn-in

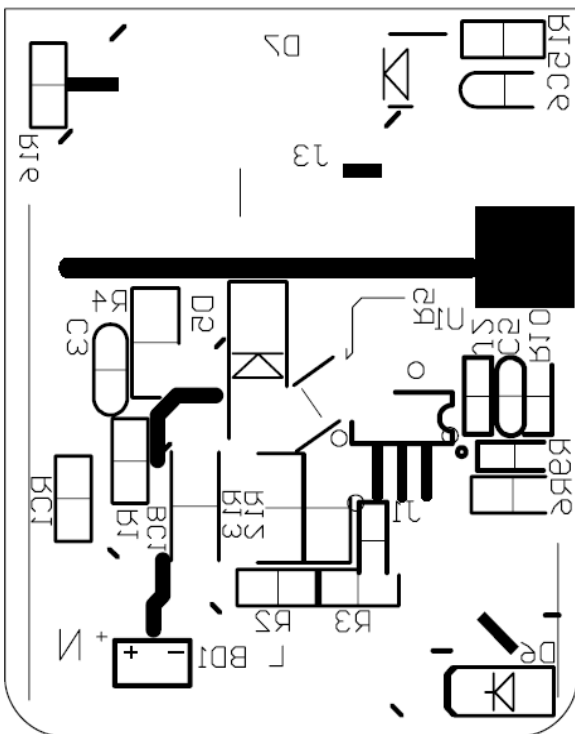
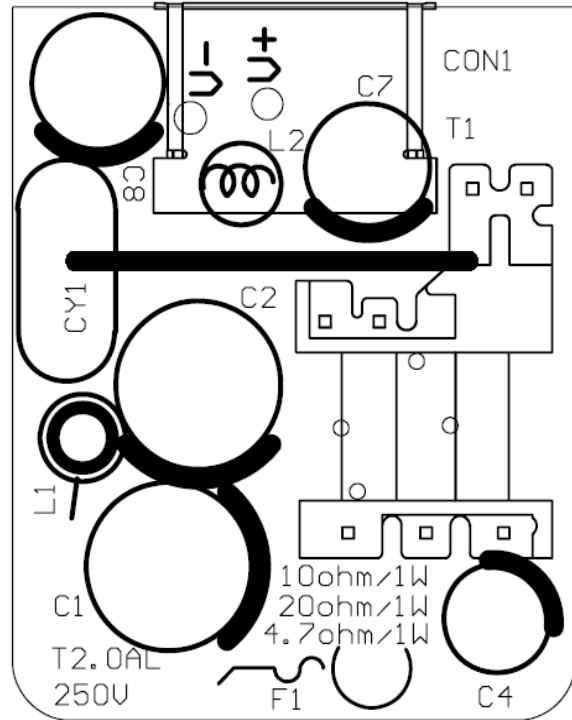
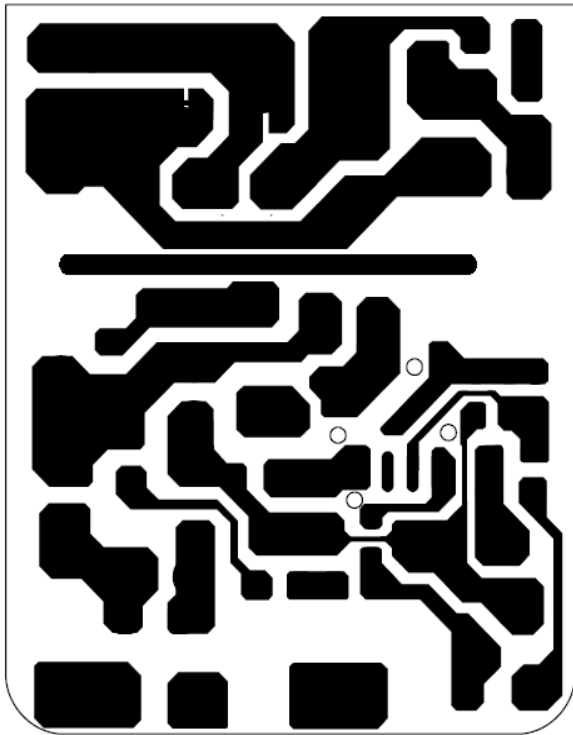
4hours at 40°C ($\pm 5^\circ\text{C}$) , Nominal input voltage, 80% of rated load

2.7.2 Mean Time Between Failure (MTBF)

The power supply shall be designed and produced to have a mean time between failures (MTBF) of

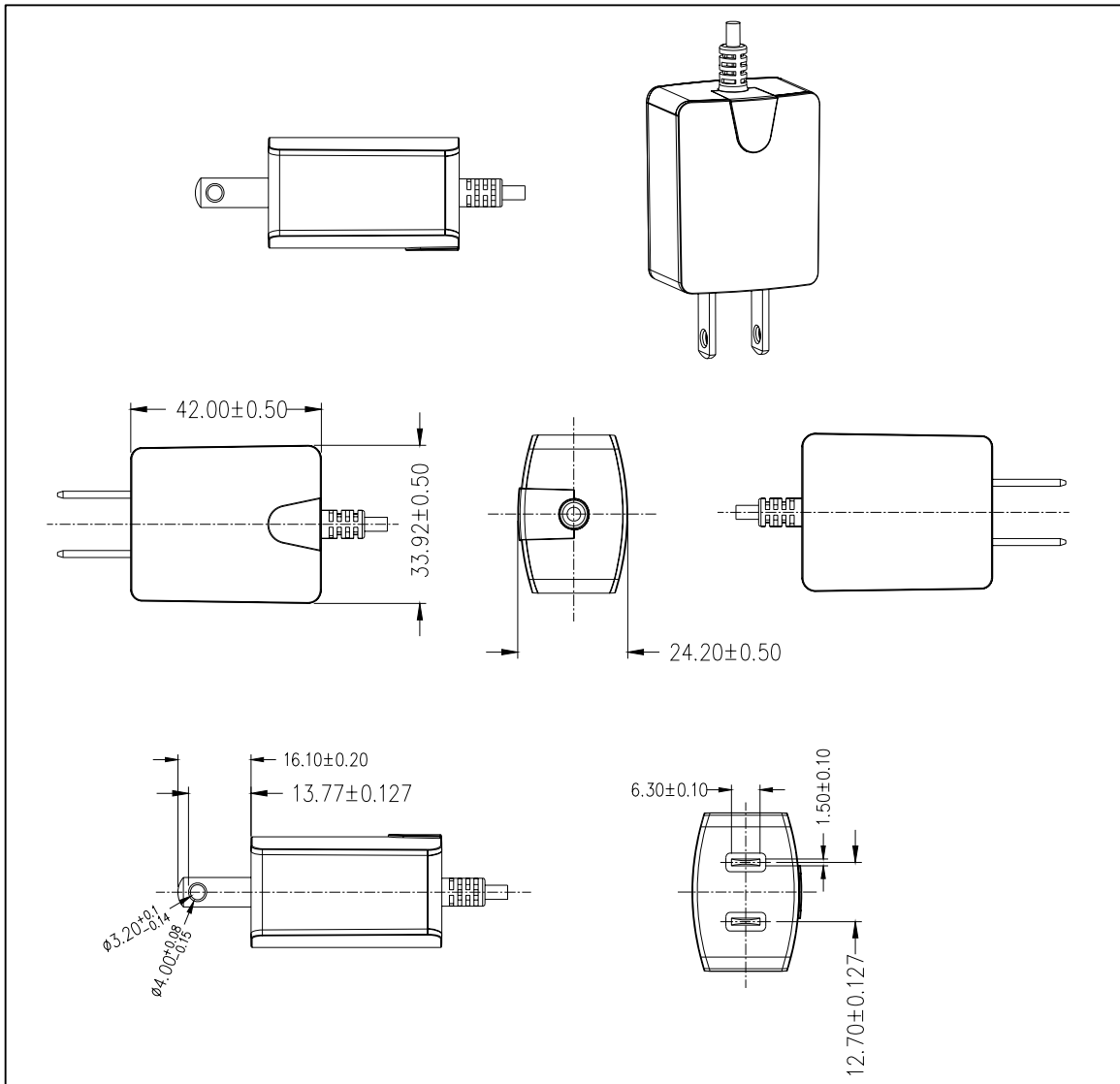
[50,000](#) hours, at [25°C](#) [120Vac & 230Vac](#) according to [BELLCORE SR-332 issue3](#)

4 PCB Layout



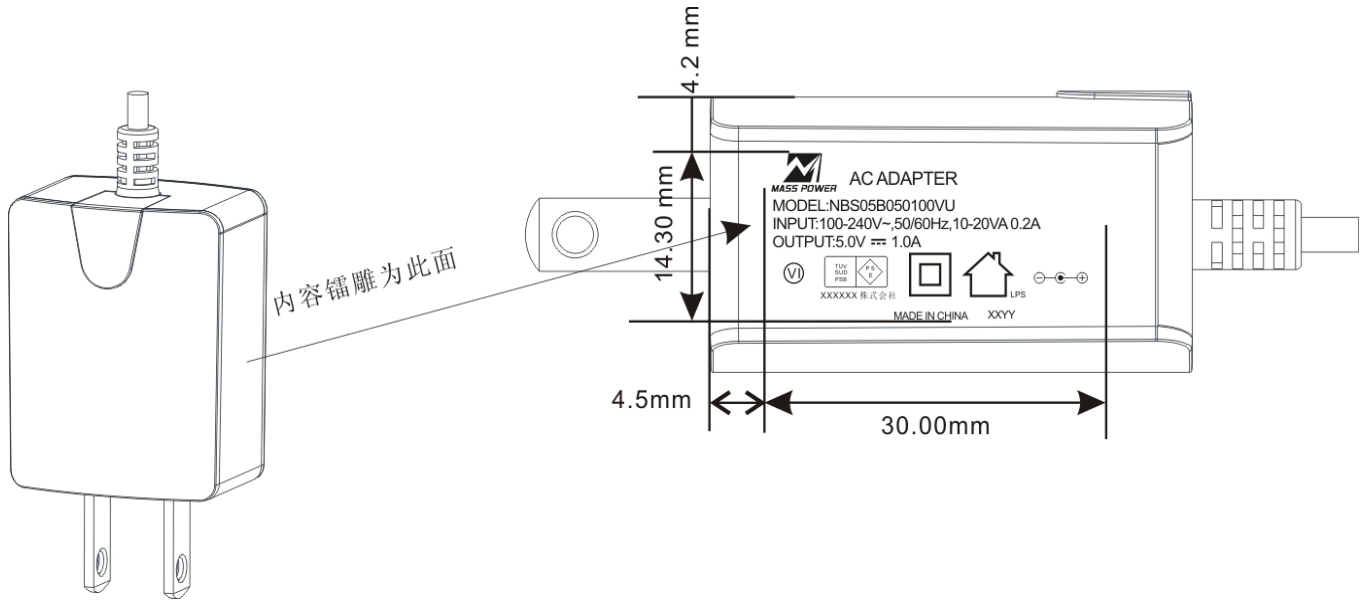
5 Mechanical

5.1 Enclosure drawing



- 1, Physical size: $42.00 \pm 0.5 \text{mm(L)}^*$ $33.92 \pm 0.5 \text{mm(W)}^*$ $24.20 \pm 0.5 \text{mm(H)}$
- 2, Material: PC, UL94V-0
- 3, Color: BLACK (PAHS+REACH+ROHS)
- 4, AC Input Plug: JP
- 5, Weight: Approx. 50.00 g (Max.)

5.2 Label Drawing



■ Laser (镭雕)

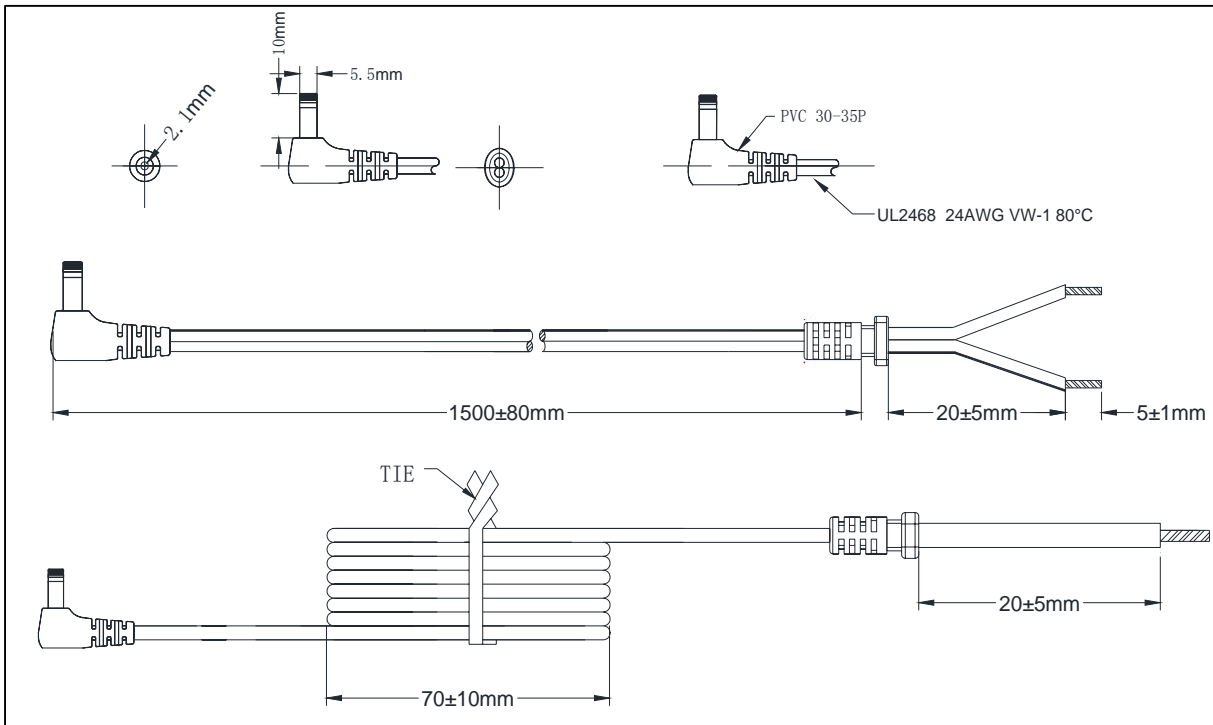
Remark:

The date code will be showed on the nameplate , the number is XXYY

XX = Year

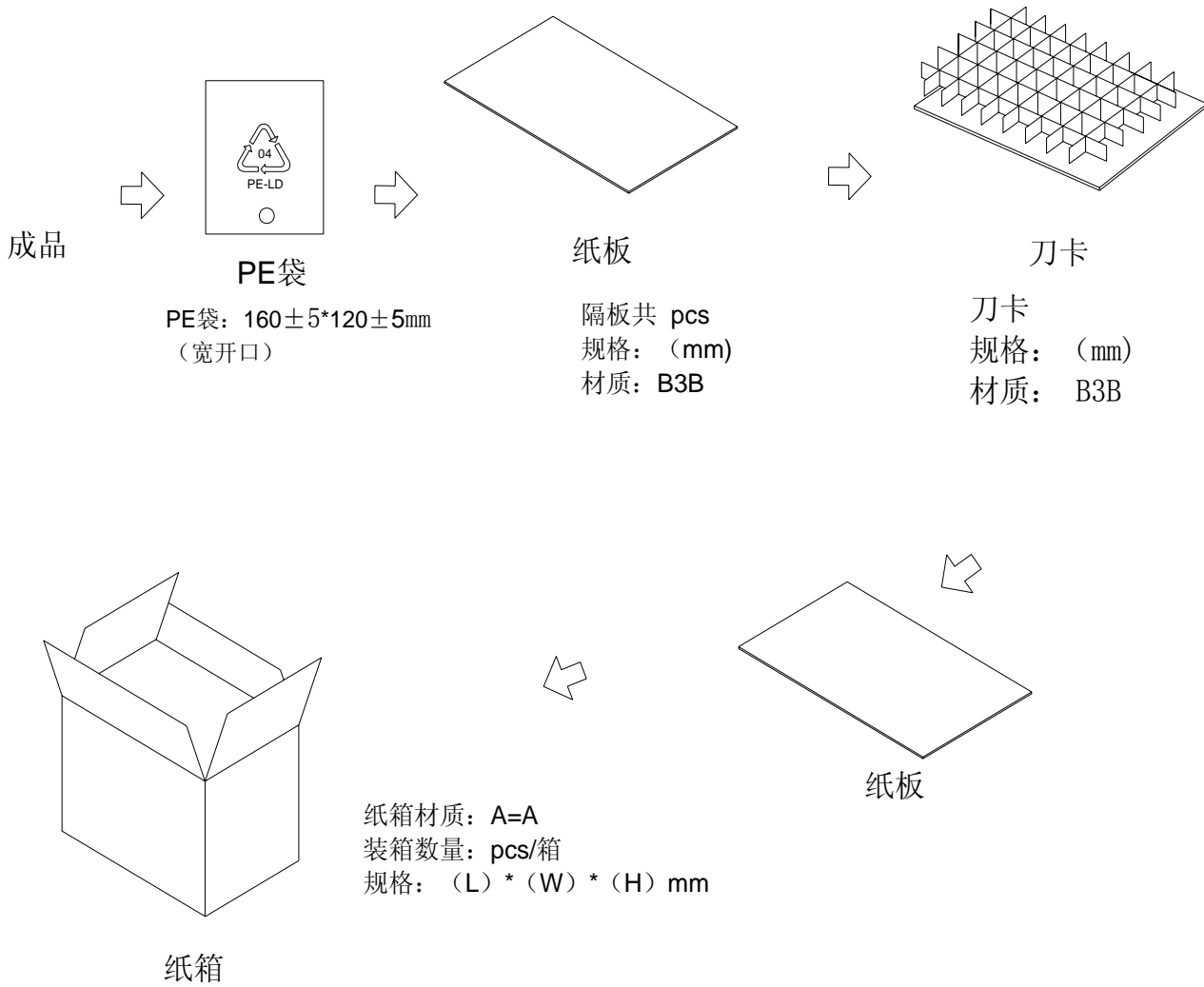
YY = Month

5.3 DC Cable & Plug



- 1 DC Plug: $5.5 \pm 0.05\text{mm}$ * $2.1 \pm 0.05\text{mm}$ * $10 \pm 0.5\text{mm}$ * $\ominus \text{---} \oplus$
- 2 Wire: UL2468 80°C 300V 24 AW 1.5m
- 3 Polarity: BLACK and WHITE----Positive, BLACK----Negative
- 4 DC Jack: PVC

6 Packing Information





PSB Singapore

適合性同等検査合格書(国際証明書)

Statement of Conformity Assessment (International certificate)

電気用品安全法第8条第1項に規定する技術基準及び法第9条第2項の経済産業省令で定める基準（法第9条第1項第2号に係る検査に係るものに限る）に適合していることを証明します
I hereby certify that the product mentioned below complies with the technical requirements stipulated in Paragraph 1 of Article 8 of Electrical Appliance and Material Safety Law (hereunder referred to as the Law) and the requirements defined by the ordinance of the Ministry of Economy, Trade and Industry based on Paragraph 2 of Article 9 of the Law (limited to Item 2 of Paragraph 1 of Article 9 for Inspection of the Law).

- 合格書番号 : JP-1240
Statement Number
- 発行年月日 : 平成 27 年 04 月 28 日
Date of Issue April 28 2015
- 有効年月日 : 平成 32 年 04 月 27 日
Date of Validity April 27, 2020
- 申込者名 : (Applicant)
住所 : 10/F, Tower A, Billion Centre 1 Wang Kwong Road, Kowloon Bay, Kowloon, Hong Kong
氏名又は名称 : Mass Power Electronic Limited
Name
- 特定電気用品名 : 直流電源装置
Name of Product DC power supply units
- 型式の区分 : 別紙のとおり
Type Classification See attached "Type Classification"
- 製造工場名 : (Manufacturer)
住所 : 437#, Hedong Village, Hengkeng Community, Guanlan Street, Bao'an District, 518110 Shenzhen, People's Republic of China
氏名又は名称 : Shenzhen Mass Power Electronic Limited
Name
- 適用試験規格 : J60950-1(H22) and J55022(H22)
Applied Standard for Testing
- 適合性検査の方法 : (Testing Method for Conformity Assessment)

- 試験用の特定電気用品については、電気用品の技術上の基準を定める省令に定める方法
With respect to testing for Category A products, the testing method is based on the technical requirements of the Electrical Appliance and Material stipulated in the METI Ordinance.
- 当該特定電気用品に係る届出事業者又は事業場における検査設備については、電気用品安全法施行規則別表第四の検査設備の欄に掲げる検査設備ごとにそれぞれ同表の技術上の基準の欄に掲げる方法
With respect to inspection facilities required for Category A products at the factory, Testing Method described in the column of the technical requirements for each inspection facilities in the column of inspection facilities is shown in the Appendix 4 of Enforcement Regulations of the Law.

以下の適合性検査を行う者の名前) は、新たな時代における経済上の連携に関する日本国とシンガポール共和国との間の協定第53条1の規定により登録を受けている適合性評価機関です。
TÜV SÜD PSB Pte Ltd has been registered as a conformity assessment body under Article 53, paragraph 1 of the Agreement between Japan and the Republic of Singapore for a new-age economic partnership.

Name of registered CAB: TÜV SÜD PSB Pte Ltd
Representative's name: Desmond Soh
Address of registered CAB: 1 Science Park Drive, Singapore 118221

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国際適合性評価書類別紙

International Statement of Conformity Assessment Annex



PSB Singapore

型式の区分

Type Classification

要素 Factor	区分 Classification
定格入力電圧 Rated Input voltage	125V以下のもの 125V or less
	125Vを超えるもの Exceeding 125V
入力側の定格容量 Rated capacity on input side	10VAを超え20VA以下のもの Exceeding 10VA, and less than or equal to 20VA
定格周波数(変圧器を有するものの場合に限る) Rated frequency (limited to those with transformers)	50Hzのもの 50Hz
	60Hzのもの 60Hz
交流用端子 Alternating Current terminal	ないもの Without A.C. terminal
直流定格電圧 Rated direct current voltage	15V以下のもの 15V or less
変圧器 Transformer	あるもの With transformer
変圧器の巻線の絶縁の種類 Transformer winding insulation class	B種のもの Class B
直流電圧の調整装置 D.C. voltage adjusting mechanism	ないもの Without adjusting mechanism
回路の保護機構 Circuit protection device	あるもの With circuit protection device
器体スイッチ Body switch	ないもの Without body switch
外殻の材料 Outer case material	合成樹脂のもの Plastic
用途 Application	電池充電用のもの For battery charger
	その他のもの Other
電源電線と器体との接続の方法 Power supply connections	接続器利用のもの Coupling device
二重絶縁 Double insulation	施してあるもの With double insulation

書類番号 : JP-1240

ZERTIFIKAT ◆ CERTIFICATE ◆ 認 証 證 書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT