



厦门讯亨电子科技有限公司

XIAMEN XUNHENG ELECTRONICS TECH CO., LTD.

产 品 承 认 书/SPECIFICATION FOR APPROVAL

客户/CUSTOMER : \_\_\_\_\_

产品型号/MODEL NO. : XH1200-1500

内部型号/Internal model : \_\_\_\_\_

产品规格/PART SPEC : 12.0V1.5A 裸板

日 期/DATE : 2023-08-08

版本号/VERSION : REV1.0

生产商/Manufacturer:

| 制 作     | 审 核        | 批 准         |
|---------|------------|-------------|
| MADE BY | CHECKED BY | APPROVED BY |
|         |            |             |

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客户承认签字/签章 (CUSTOMER' S APPROVAL SIGNATURE):

日期/DATE:

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## 变更履历表/E.C.LIST

[illegible]

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1、概述/Scope

该文件详细阐述了该开关电源的电子、机械和环境的规范/This document details the electronic, mechanical and environmental specifications of the switching power supply.

1.1 类型/Description

- ☐ 插墙式/Wall Mount
- ☐ 桌面式/Desk-Top
- ☒ 裸板/PCBA
- ☐ 其它/Others

2、输入特性/INPUT REQUIREMENTS

2.1 输入电压和频率/Input Voltage&Frequency

| 项目/Item                      | 最小值/Min | 最大值/Max |
|------------------------------|---------|---------|
| 输入电压/Input Voltage           | 90Vac   | 264Vac  |
| 额定输入电压/Rated Input Voltage   | 100Vac  | 240Vac  |
| 额定输入频率/Input Frequency Range | 47Hz    | 63Hz    |
| 输入电流/Input Current           | -       | 0.5A    |

2.2 能效等级/EFFICIENCY LEVEL

| 项目/Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 规格说明/Spec.Limit                                                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 输入空载损耗/NO-Load Input Power Dissipation                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <input type="checkbox"/> 0.3W <input type="checkbox"/> 0.21W <input type="checkbox"/> 0.1W <input checked="" type="checkbox"/> 其它/Other 无要求 |
| 平均效率/Average Efficiency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | / Min                                                                                                                                       |
| 能效等级/EFFICIENCY LEVEL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <input type="checkbox"/> VI <input type="checkbox"/> V <input type="checkbox"/> IV <input checked="" type="checkbox"/> 其它/Other 无要求         |
| 试验条件说明/Description of test conditions:<br>1、输入空载损耗/NO-Load Input Power Dissipation: 输入 115Vac 和 230Vac 且输出不带载/Input 115Vac&230Vac and the output is no load;<br>2、平均效率/Average Efficiency: 输入 115Vac 和 230Vac, 输出负载 100% 75% 50% 25%的平均值（根据能效标准, 产品老化半小时且输出端直接连接测试设备）<br>Input 115VAC and 230VAC, and output the average value of 100% 75% 50% 25% of the load(according to the energy efficiency standard, the product is aged for half an hour and the output end is directly connected to the test equipment) |                                                                                                                                             |

3、输出特性/OUTPUT REQUIREMENTS

3.1 输出参数/Output Parameters

| 3.1.1 | 输出数据/<br>Output Data    | 规格说明/Spec.Limit |                |             | 测试条件<br>Test Condition                                                         |
|-------|-------------------------|-----------------|----------------|-------------|--------------------------------------------------------------------------------|
|       |                         | 最小值<br>/Min     | 正常值<br>/Normal | 最大值<br>/Max |                                                                                |
| 3.1.2 | 输出电压<br>OutputVoltage   | 11.4V           | 12.0V          | 12.6V       | CC=1.5A                                                                        |
| 3.1.3 | 纹波噪声<br>Rippleand Noise | -               | -              | 200mVp-p    | 20MHz 带宽探头连接 22UF 电解电容和 0.1uF 瓷片/20MHz Bandwidth 22uF Elec. Cap&0.1uF Cer. Cap |
| 3.1.4 | 过流保护/OCP                | -               |                | -           | 100Vac Input                                                                   |
| 3.1.5 | 过流保护/OCP                | -               |                | -           | 240Vac Input                                                                   |

### 3.2 启动延迟时间/Startup Delay time

输入 120Vac/230Vac 和最大负载条件下开机延迟时间最大 5s/ Input 120Vac/230Vac and the maximum startup delay time under the maximum load condition is 5S.

### 3.3 关机保持时间/Hold-up time

输入 120Vac/230Vac, 最大负载同时在最差情况下关机, 最小 10ms./10mS Min. @max Load&120Vac/230Vac input turn off at worst case.

### 3.4 上升时间/Rise time

输出电压从 10%上升至 90%、额定负载条件下最大 30ms。30mS max. @rated. load, output Voltage from 10% to 90%.

### 3.5 线性/负载调整率/Line/Load Regulation

| 输出/Output | 负载条件/Load Condition |                | 负载调整率/Load Regulation |
|-----------|---------------------|----------------|-----------------------|
| 额定/Rate   | 最小负载/min. load      | 最大负载/max. load |                       |
| 12.0V     | 0A                  | 1.5A           | ±5%                   |

## 4、机械特性/MECHANICAL CHARACTERISTICS

### 4.1 PCB 尺寸图/Dimension drawing of case

PCB 尺寸图详见附录 A。/The dimension drawing of PCB is drawn on APPENDIX A.

### 4.2 包装图/Drawing of Package

包装图详见附录 B。/Drawing of Package please see APPENDIX B.

### 4.3 MOUNTING CONNECTORS (外部接口)

4.31 AC Input Connector (输入接口)

L, N

4.32 DC Output Cable (输出端接口)

V+, V-

### 4.4 MECHANICAL FEATURES (结构特性) :

4.41 Dimension(Size) (尺寸)

Length (长) : 56.5mm

Width (宽) : 34mm

## 5、保护要求/Protection Requirement

### 5.1 短路保护/Short Circuit Protection

输出端短路, 输出进入保护模式, 故障解除后, 电源恢复正常输出。/If short circuit occurs, Output enters protection mode. After the fault is removed, the adapter auto recovers.

### 5.2 过流保护/Over Current Protection

当过流时输出进入保护模式, 过流解除后, 电源恢复正常输出。/In case of over current, the output enters the protection mode. After the over current is removed, the power supply returns to normal.

## 6、环境条件/ENVIRONMENTAL CONDITIONS

| 项目/ITEM                            | 环境条件         |
|------------------------------------|--------------|
| 存储温度/Storage temperature           | -20℃ to +60℃ |
| 存储湿度/Storage humidity              | ≤95%         |
| 工作温度/Operating temperature         | 0℃ to +25℃   |
| 工作海拔高度/ Operating Ambient Altitude | 0-2000M      |

## 7、安规标准/SAFETY STANDARD

### 7.1 安规标准/Regulations and Standards

| NO. | Type/安规  | 国家/Country            | Standard/标准                                                                                                                             |
|-----|----------|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 1   | CCC      | 中国/China              | <input type="checkbox"/> GB4943.1 <input type="checkbox"/> GB4706.1 <input type="checkbox"/> GB8898 <input type="checkbox"/> 其他         |
| 2   | CE/GS    | 欧洲/Europe             | <input type="checkbox"/> EN61558 <input type="checkbox"/> EN60335 <input type="checkbox"/> EN62368 <input type="checkbox"/> 其他          |
| 3   | cULuc    | 美国/加拿大<br>/USA/Canada | <input type="checkbox"/> UL60950 <input type="checkbox"/> UL62368 <input type="checkbox"/> UL1310 <input type="checkbox"/> 其他           |
| 4   | UKCA     | 英国/Britain            | <input type="checkbox"/> BS EN61558 <input type="checkbox"/> BS EN60335 <input type="checkbox"/> BS EN62368 <input type="checkbox"/> 其他 |
| 5   | PSE      | 日本/Japan              | <input type="checkbox"/> J61558 <input type="checkbox"/> J60335 <input type="checkbox"/> 其他                                             |
| 6   | KC       | 韩国/Korea              | <input type="checkbox"/> K60950 <input type="checkbox"/> 其他                                                                             |
| 7   | SAA      | 澳洲/Australia          | <input type="checkbox"/> AS/NZS 61558 <input type="checkbox"/> AS/NZS 60335 <input type="checkbox"/> 其他                                 |
| 8   | 其他/other |                       |                                                                                                                                         |

### 7.2 绝缘阻抗/ Insulation Resistance

初次级绝缘阻抗: 100MΩ min at 500VDC。/Primary to secondary: 100MΩ min at 500VDC.

### 7.3 介电耐压强度/DIELECTRIC STRENGTH (Hi-Pot)

初级对次级 3750Vac/5mA Max. /60 秒 (生产测试时间 3 秒)。/Primary to secondary: 3750VAC / 5mA max. / 60s (production test time: 3S).

### 7.4 泄露电流/Leakage Current

240Vac/50Hz 输入时最大 0.25mA。/0.25mA max. at 240Vac/50Hz.

### 7.5 电磁干扰/Electromagnetic Interference

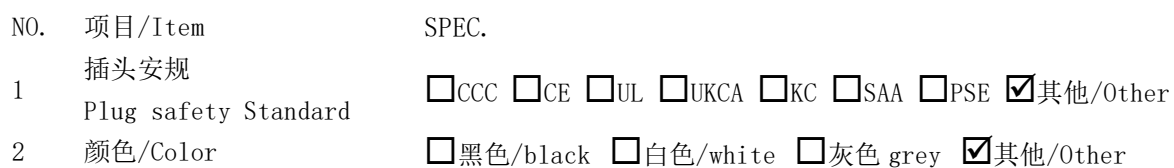
| 项目/Item                                  | 标准                                                                                                                            |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| 浪涌冲击抗扰度<br>/Input Line Surge Immunity    | <input checked="" type="checkbox"/> 1KV <input type="checkbox"/> 2KV <input type="checkbox"/> 4KV <input type="checkbox"/> 其他 |
| 快速瞬变脉冲群抗扰度<br>/Electrical Fast Transient | <input checked="" type="checkbox"/> 1KV <input type="checkbox"/> 2KV <input type="checkbox"/> 4KV <input type="checkbox"/> 其他 |

## 8、老化测试/Burn-in

产品在 25° C-40° C 室温满载下应经受至少 2 小时的老化试验, 试验后产品正常工作。The product shall undergo aging test for at least 2 hours under full load at temperature of 25 ° C-40 ° C. after the test, the product works normally.

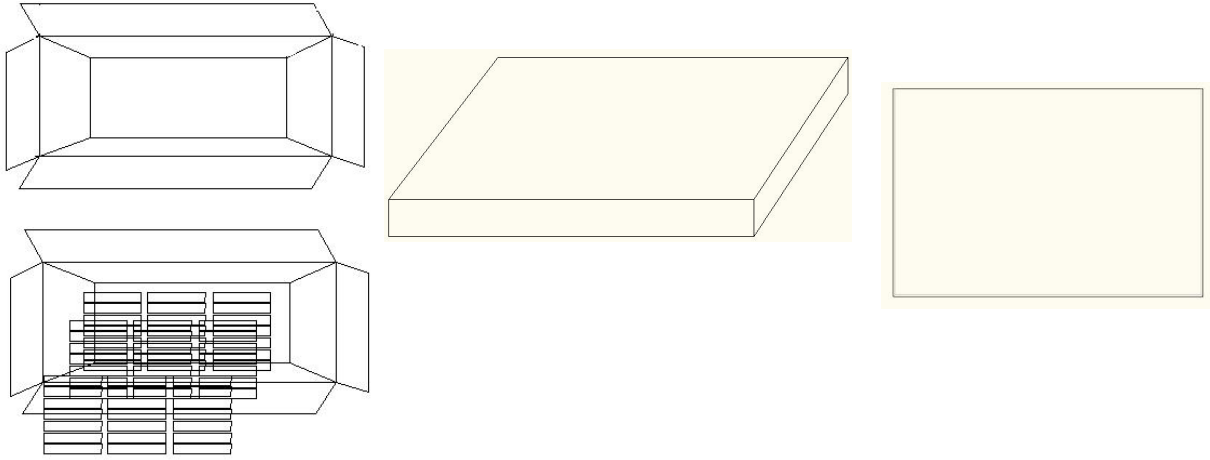
| 9、测试数据/Test Data                |                                                      |                        |                         |                    |    |    |
|---------------------------------|------------------------------------------------------|------------------------|-------------------------|--------------------|----|----|
|                                 | 测试项目<br>Test Item                                    | 测试条件<br>Test Condition | 额定范围<br>The rated range | Room Temperture 常温 |    |    |
|                                 |                                                      |                        |                         | 1#                 | 2# | 3# |
| 输入参数<br>INPUT<br>PARAMCTIC      | 满载功率/Full<br>Load Power                              | Vin. 100               | <24W                    |                    |    |    |
|                                 |                                                      | Vin. 240               |                         |                    |    |    |
|                                 | 空耗 No Load<br>Power                                  | Vin. 230               | <0. 3W                  |                    |    |    |
|                                 | 输入电流<br>Input Current                                | Vin. 100               | <500mA                  |                    |    |    |
| 输出参数<br>OUTPUT<br>PARAMETIC     | Output Voltage<br>@Input<br>Voltage 100V<br>(输入100V) | 空载/NO LOAD             | 11.4-12.6V              |                    |    |    |
|                                 |                                                      | 满载/CC=1. 5A            | 11.4-12.6V              |                    |    |    |
|                                 | Output Voltage<br>@Input<br>Voltage 240V<br>(输入240V) | 空载/NO LOAD             | 11.4-12.6V              |                    |    |    |
|                                 |                                                      | 满载/CC=1. 5A            | 11.4-12.6V              |                    |    |    |
|                                 | Ripple<br>纹波                                         | 空载/NO LOAD             | <200mV                  |                    |    |    |
|                                 |                                                      | 满载/CC=1. 5A            | <200mV                  |                    |    |    |
|                                 | 短路保护<br>Short protect                                | 100V/240V              | 跳变/≤3W                  |                    |    |    |
|                                 | 绝缘阻抗<br>Insulation R.                                | 500Vdc                 | >100MΩ                  |                    |    |    |
|                                 | 耐压/Hi-Pot                                            | 3750Vac                | ≤5mA                    |                    |    |    |
| 测试：           审核：           批准： |                                                      |                        |                         |                    |    |    |
|                                 |                                                      |                        |                         |                    |    |    |

**PCB 尺寸图/Dimension drawing of PCB:**





## 附录 B/APPENDIX B



### Remarks:

包装方式为: (纸箱) + (隔板) + (PE 袋)