

1、这是一款适用于以下国家地区的 4.2V2A 电源适配器充电器。This is a 4.2V2A power adapter charger for the following countries.

#### 1.1、安规标准/ SAFETY STANDARD:

本电源应符合下列的标准：The green mode power supply shall be certified by the following international regulatory standards:

| 地区/Area      | 认证<br>Certificate | 标准/Standard                                    |
|--------------|-------------------|------------------------------------------------|
| 中国<br>/CHINA | CCC               | GB 17625.1-2022;GB4943.1-2022;GB/T 9254.1-2021 |
|              |                   |                                                |

#### 电磁兼容性标准/EMC STANDARDS:

##### 1.2 EMI 标准/EMI STANDARDS:

本电源供应器符合辐射及传导要求，满足 GB/T9254-2021，GB17625.1-2022

The power supply met the radiated and conducted emission requirements for GB/T9254-2021，GB17625.1-2022

##### 1.3 EMS 标准/EMS STANDARDS:

本电源供应器满足 EMS 标准:GB4943.1-2022

The power supply meets EMS standards: GB4943.1-2022

## 2、INPUT CHARACTERIST / 输入特性:

2.1 输入电压范围可以从 90Vac 到 264Vac. INPUT VOLTAGE RANGE: 90Vac to 264Vac.

2.2 额定输入电压从 100Vac 到 240Vac. RATED INPUT VOLTAGE: 100Vac to 240Vac.

2.3 输入频率范围从 47Hz 到 63Hz. INPUT FREQUENCY RANGE: 47Hz to 63Hz.

2.4 额定输入频率从 50Hz 到 60Hz. INPUT FREQUENCY RANGE: 50Hz to 60Hz.

2.5 最大输入电流不超过 0.5A (输入条件 100-240Vac) INPUT CURRENT: 0.5Amax.  
(I/P100-240Vac).

2.6 在标准开机条件下, 最大浪涌电流不超过 30A (输入条件 100-240Vac).

INRUSH CURRENT: 30A max. (at 100-240Vac input for a cold start at 25°C.)

## 3、Output Characteristics / 输出特性

| 测试项目<br>Test Item    | 指示灯<br>LED | 电压范围Voltage<br>Range | 电流范围<br>currentRange | 峰值电流<br>peak current | 转灯电流<br>Turnlamp<br>current |
|----------------------|------------|----------------------|----------------------|----------------------|-----------------------------|
| 空载测试<br>No-load test | 绿灯/G       | 4.2-4.5V             | 0-300mA              | N/A                  | N/A                         |
| 负载测试<br>Load test    | 红灯/R       | 2-4.2V               | 150-2000mA           | ≤2200mA              | 150-300mA                   |

### 3.1 纹波和噪音 Ripple and Noise:

测试条件:在额定电压及额定负载条件下,使用示波器带宽为 20MHz 连接到充电器的输出端,同时输出端并联一个 47uF 的电解电容和一个 0.1uF 的瓷片电容.Under nominal voltage and nominal load,the ripple and noise are as follows when measure with Max.Bandwidth of 20MHz and Parallel 47uF/0.1uF,crossed connected at testing point.

| 电压 / Voltage | 最大纹波/最大噪音 / Ripple and Noise(Max.) |
|--------------|------------------------------------|
| 2-4.5VDC     | ≤150mV p-p                         |

### 3.2 启动延迟时间/Turn on delay time:

当输入 115Vac 和输出最大负载时,最大启动时间为 3S.

3Second Max.at 115Vac input and output Max.load.

### 3.3 保持时间/Hold up time:

当输入 115Vac 和输出最大负载时,最小保持时间为 5 mS .

5 mS Min.at 115Vac input and output Max.Load.

### 3.4 绝缘介电强度 (耐压) / ELECTRIC WITHSTANDING STRENGTH(HI-POT)

一次侧对二次侧: AC3000V/5mA 标准测试 1 分钟, 量产测试 3 秒钟

Primary toSecondary AC3000V/5mA ,1minute for type test.3second for production.

### 3.5 过冲/Overshoot:

在电源开启或关闭的时候,最大 10%. ; 10% Max. When power supply at turn or turn off.

## 4、保护特性/PROTECTION FEATURE:

### 4.1 过电流保护 / OVER—CURRENT PROTECTION:

在任何时候任何输入条件, 当输出操作在超载条件最大电源的 (5~10%) 时, 电源供应器将进入打嗝模式, 当故障被移走后, 电源要能自动恢复到正常。

The green mode power supply shall be hiccupped when any output operating in overload condition(set@ Max load5~10%) under any line condition for an indefinite period of time. The power supply shall be self — recovery when the fault condition is removed.

### 4.2 输出短路保护/ SHORT CIRCUIT PROTECTION:

在任何时候, 任何输入条件下, 当输出操作在短路情况下, 电源供应器将进入打嗝模式, 当故障消失后, 电源要能自动恢复正常。The power supply shall be hiccupped and no damage shall occur when any output operating in a short circuit condition under any line condition for an indefinite period of time. The power supply shall be self—recovery when the fault condition is removed.

## 5、环境条件/ENVIRONMENTAL CONDITIONS:

5.1 操作条件/ OPERATING: 在下列环境条件下, 电源供应器要能够连续操作在各种模式, 且不能造成性能的退化。The power supply shall be capable of operating continuously in any mode without performance deterioration in the following environmental conditions.

5.1.1 环境温度:  $-10^{\circ}\text{C}\sim 35^{\circ}\text{C}$ 。Ambient Temperature:  $-10^{\circ}\text{C}\sim 35^{\circ}\text{C}$

5.1.2 相对湿度: 10%~80%Relative Humidity: 10%~80%

### 5.2 振动/Vibration

测试标准: 国际电工电子委员会

Operating: IEC 721-3-3 3M35~9Hz, A=1.5mm 加速度: (9~200Hz, Acceleration 5m/S<sup>2</sup>)

5.3 冷却/Cooling: 电源供应器将操作在自然对流冷却的环境下, 即使将通风口阻塞电源也不允许有任何损伤发生。The power supply will operate with convection cooling .Blocking of vents must not cause damage to The power supply.

6、储存条件/Storage conditions: 电源供应器要能够长期的经受下列的环境条件, 且不允许有电气级机械方面的损伤和并发的操作的缺失。The power supply shall be capable of withstanding the following environmental conditions extended periods of time, without sustaining electrical or mechanical damage and subsequent operational deficiencies:

6.1.1 储存温度:  $-10^{\circ}\text{C}\sim 35^{\circ}\text{C}$ 。Storage Temperature:  $-10^{\circ}\text{C}\sim 35^{\circ}\text{C}$

6.1.2 相对湿度: 10%~80%。Relative Humidity: 10%~80%

6.2.3 振动和冲击/Vibration and Shock: 电源供应器装配及出货的包装设计, 均要能承受正常运输的振动, 并符合 MIL-STD-810D 方法 514 和程序 X。The power supply shall be designed to withstand normal transportation vibration per MIL-STD-810D, method 514 and procedures X, as it s mounted in the chassis assembly and packed for shipping.

## 7、可靠性及质量控制/RELIABILITY AND QUALITY CONTROL:

7.1 MTBF 平均无故障时间：在 25℃条件下，平均无故障时间 20000 小时。

20,000 hour Power on at 25 °C

7.2 老化/BURN-IN

电源应在 35℃±5℃ 和满载条件下老化 2-4 小时。The power supply shall undergo a minimum of 2-4 hours Burn-In test under full load at 35℃±5℃

7.3 组件温度要求/COMPONENT DERATING：半导体结温不允许超过其制造商要求的最大温度值。The temperature of the semiconductor junction is not allowed to exceed the maximum temperature required by its manufacturer.

8、符合节能 6 级以上标准，待机功耗  $\leq 0.1W$ ，测试标准如下/ Energy Saving (Level VI) :Meet the energy saving level 6 or above, standby power consumption  $\leq 0.1W$ , the test standards are as follows:

平均效率高于 82.96% (输入 100-240Vac, 输出 (25%, 50%, 75%&100%负载)); Higher than 82.96% at 100-240Vac (Input and output (25%, 50%, 75%&100% load.)

8.1 CEC Test Report (CEC Table U-2 Standards for Power Supplies Effective July 1, 2008)

8.2 EUP Test Report (COMMISSION REGULATION (EC) No 278/2009)

8.3 MEPS (AS/NZS 4665.2-2005)

9、绝缘阻抗/INSULATION RESISTANCE:

输入对输出 100 兆 欧姆 (500VDC) Input to output: 100M Ohm(500VDC)

10、漏电流/LEAKAGE CURRENT：当电源供应器操作在最大输入及最大负载情况下，其漏电流应小于 0.25mA，满足 Class II 等级。The leakage current shall be less than 0.25mA for Class II when power supply is operated maximum input voltage and maximum load.

11、主要测量设备 /MAJOR MEASURE EQUIPMENT:

| 序号 | 设备名称                        | 型号         | 本次使用 |
|----|-----------------------------|------------|------|
| 1  | AC SOURCE / 交流输入电源          | AFC - 500W | √    |
| 2  | POWER METER / 电源功率计         | JK-8731    | √    |
| 3  | ELECTRONIC LOAD / 电子负载仪     | JT6111     | √    |
| 4  | OSCILLOSCOPE / 存储示波器        | DS2072A    | √    |
| 5  | DIGITAL MULTIMETER / 数字式万用表 | Fluke 15B  | √    |
| 6  | HI - POT TESTER / 耐压测试仪     | RK2670A    | √    |

## 产品外观尺寸 / PRODUCT OUTLINE DIMENSION

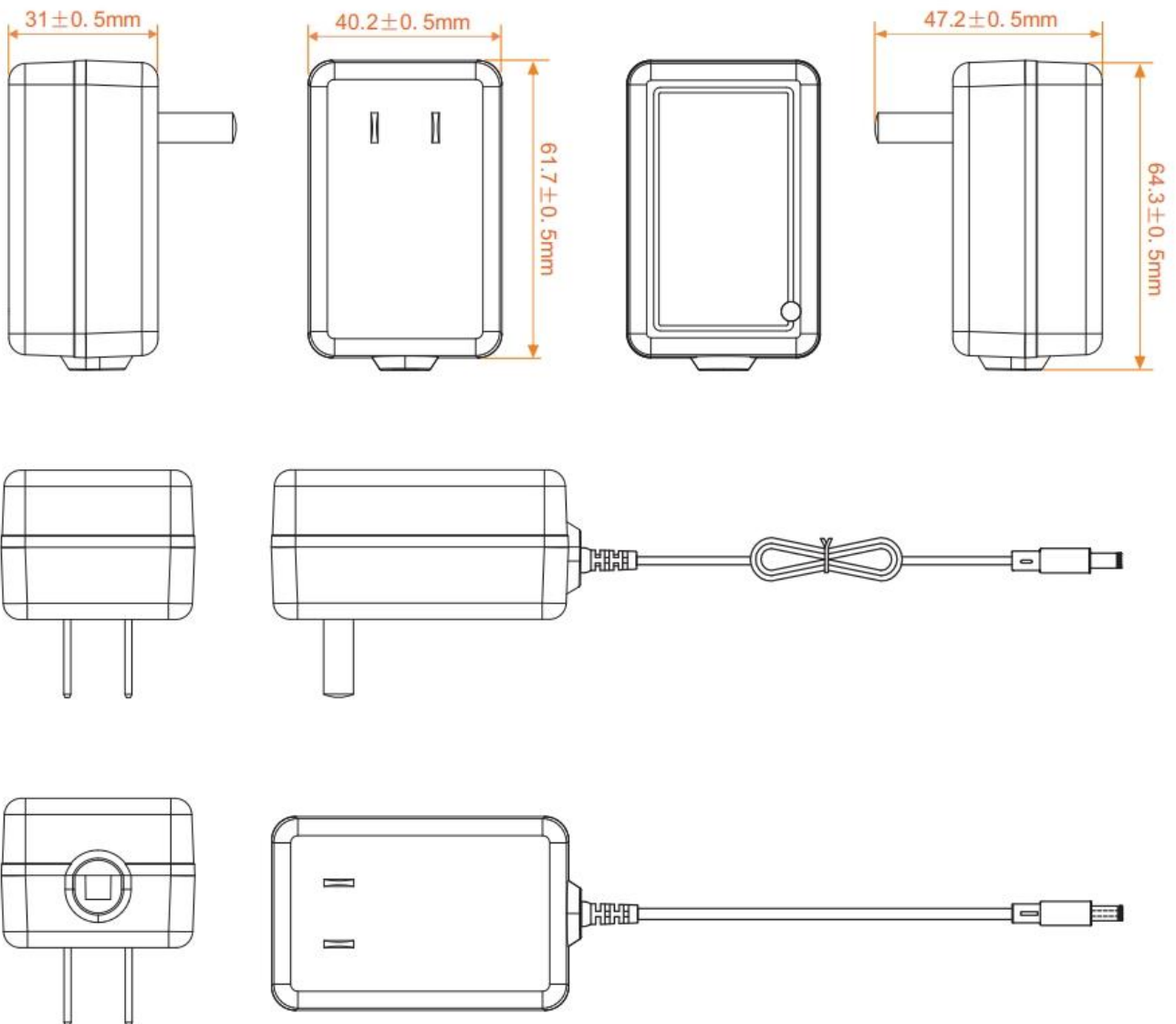
结构参数 / MECHANICAL REQUIREMENT:

外型尺寸: L64.3\*W40.2\*H47.2mm

The power supply size: L64.3\*W40.2\*H47.2mm

颜色 COLOUR: 黑色 BLACK ✓

白色 WHITE



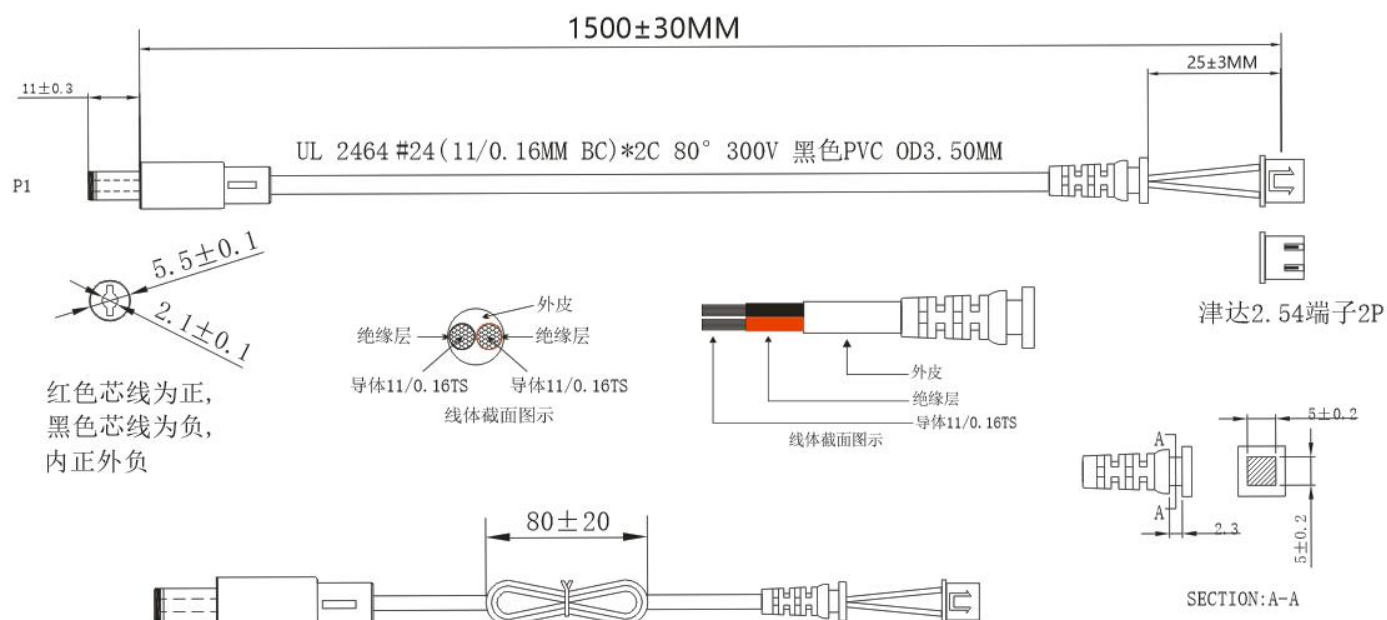
Unit / 单位: mm (误差  $\pm 0.5 \text{ mm}$ )

重量/ WEIGHT: 电源的净重大约为 78g

The net weight of the power supply is about 78g

## DC CORD / 线 材

单位 UNIT: mm



注:

1. 摇摆测试: 负重200G,  $\pm 60$ 度, 60次/分钟, 摇摆至少1000次无断芯线。
2. 100%短路和错位测试。
3. 导通阻抗: 5欧姆 Max。
4. 绝缘阻抗: 2兆欧姆 DC300V/0.01S Min。
5. 所需材料符合ROHS标准。

## Package Drawing/包装示意图

