

## 客户承认书

### SPECIFICATION FOR APPROVAL

CUSTOMER/客户: 日本海渡电子有限公司

FILE NO./认证号: \_\_\_\_\_

PART NO./物料号: \_\_\_\_\_

SAMPLE NO./样品编号: \_\_\_\_\_




MODEL NO./产品型号: RS-120150001

Description/产品描述: 12V1.5A日规(5.5\*2.1\*10MM弯头)

MARK 修改标记	REVISED CONTENT 修改内容	APPROVED & DATE 认可日期
REV0.1		2023.6.8

CUSTOMER AUTHORIZED SIGNATURE/客户承认签核		

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客户确认签字，盖章后请回传一份承认书给我司。

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DESIGN/拟制		CHECK/审核		APPROVAL/批准	



## ELECTRICAL PERFORMANCE/电气性能

### 1. SCOPE

The document detail the electrical, mechanical and environmental specifications of a SMPS, the power supply provide 18W continuous output power.

资料详细描述了一款18W（连续输出功率）开关电源的电气性，结构性及环境等要求。

### 2. INPUT FEATURE/输入特性:

2.1 RATED INPUT VOLTAGE: 100Vac to 240Vac. 额定输入电压范围从100Vac到240Vac.

INPUT VOLTAGE RANGE: 90Vac to 264Vac. 输入电压范围从90Vac到264Vac.

2.2 RATED INPUT FREQUENCY: 50/60Hz. 额定输入频率50/60Hz.

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

2.3 INPUT CURRENT: 0.6A max. at 100-240Vac. 最大输入电流0.6A(输入条件100-240Vac).

2.4 INRUSH CURRENT: 40A max. at 100-240Vac input for a cold start at 25°C.

在冷开机条件下,最大浪涌电流不超过40A(输入条件100-240Vac).

2.5 AVERAGE EFFICIENCY: More than 78% at 110/220Vac input and output full load.

平均效率高于78%(输入110/220Vac和输出满载条件).

2.6 Energy Consumption/空载功耗

在额定输入100-240V时, 空载功耗 $\leq$ 0.3W

### 3. OUTPUT FEATURE/输出特性:

#### 3.1 Static Output Characteristics<Vo&R+N>静态输出特性

Output	Rated Load/额定负载		Output Range	Ripple&Noise	Remark
Rate	Min. Load	Max. Load	输出电压范围	纹声与噪音	备注
+12V	0.0A	1.5A	11.4-12.6V	100mVpp	

R&N: Measurement is done by 20MHz bandwidth oscilloscope and the output paralleled a 0.1uF ceramic capacitor and a 47uF electrolysis capacitor. (test under the condition of rated input and rated output)

纹波与噪音: 量测时示波器选用20MHz带宽限制, 输出端要并联一颗0.1uF的陶瓷电容和一颗47uF的电解电容. (在额定输入及输出的条件下检测)

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### 3.2 Line/Load Regulation/线性/负载调整率

Output	Load Condition/负载条件		Combine Regulation
Rate	Min. Load	Type Load	综合调整率
+12V	0.0A	1.5A	± 5%

### 3.3 Turn-on Delay Time/开机延迟时间

3S max.at 100Vac to 240Vac input at Full load/满载

### 3.4 Hold-up Time 关机维持时间

10mS min.at Full load & 115Vac/60Hz input turn off at worst case/在最差情况关机

20mS min.at Full load & 230Vac/50Hz input turn off at worst case/在最差情况关机

### 3.5 Rise Time/上升时间

50mS max.at Rated load/额定负载

### 3.6 Fall Time/下降时间

20ms max.at Full load/满载

### 3.7 Output Overshoot/Undershoot/输出过冲/欠冲

10% max.When the power on or off/当电源开/关机时

### 3.8 Output Load Transient Response/输出负载瞬间响应

output voltage within 11.4-12.6V for load stdp from 20% to 80%,R/S: 0.5A/us,

frequency:100Hz duration and 8mS at 80%.

输出电压在11.4-12.6V之间, 负载变化: 从20%到80%, 斜率: 0.5A/us, 频率: 100Hz, 80%负载持续时间为8mS.

## 4. Protection Requirements/保护要求

### 4.1 Over Current Protection/过流保护

An over current from the output to return line will not damage the power supply.

来自输出的过电流不至于损坏电源供应器.

4.2 The power supply shall be protection (hiccupped & power reduced) 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.

在任何时候,任何输入条件下,当输出操作在短路情况下,电源供应器将进入保护(打嗝或功率下降)模式,

当短路故障消失后,电源要能自动恢复正常.

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### 4.3 Over Voltage Protection/过压保护

The output voltage < 15V when the output over voltage, the power supply shall damage  
当输出过压时，输出电压不超过15V，产品可能会损伤

### 5. Environment Requirements/环境要求

#### 5.1 Operating Temperature and Relative Humidity/操作温/湿度要求

Operating Temperature : 0°C to +40°C Relative Humidity: 10%RH to 90%RH

#### 5.2 Storage Temperature and Relative Humidity/存储温/湿度要求

-20°C to +80°C

5%RH to 95%RH non-condensing at sea level shall be low 10,000 feet/低于10,000英尺

#### 5.3 Vibration/振动

10 to 300Hz sweep at a constant acceleration of 1.0G (Breadth: 3.5mm) for 1Hour for each of the perpendicular axes X, Y, Z

扫描频率: 10 to 300Hz, 加速度: 1.0G (位移: 3.5mm), X, Y, Z三垂直坐标轴向各振动1小时

#### 5.4 Drop in/跌落

Height: 1m: the product should be fell off on the hardwood with the thickness of 20mm, and the hardwood should be put on the base of the cement or on the ground without flexibility. Apply two times on all surface.

跌落高度: 1米, 并跌落到厚度为20mm的硬木上, 且硬木应放在水泥基座或等同的无弹性地面上, 每面各2次

### 6. Reliability Requirements/可靠性要求

#### 6.1 BURN-IN/烘烤:

The power supply shall undergo a minimum of 4 hours Burn-In test under full load at 35 ~ 40°C. /电源应在35 ~ 40°C和满载条件下烘烤4小时.

#### 6.2 MTBF Qualification/平均间隔故障时间估算

The MTBF shall be at least 50,000hours at 25°C, Full load and nominal input condition

平均间隔时间: 至少50,000小时, 25°C环境及额定输入与满载条件下

### 7. EMI/EMS Standards/EMI/EMS标准

#### 7.1 EMI Standards/EMI 标准

EN 55022: 1998, +A1: 2000 +A2: 2003, Class B

EN 55024: 1998+A1: 2001+A2: 2003

CISPR 22: 2003, Class B

AS/NZS CISPR 22: 2004, Class B

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### 7.2 EMS Standards/EMS标准

EN 61000-3-2	Harmonic current emissions
EN 61000-3-3	Voltage fluctuations & flicker
EN 61000-4-2	Electrostatic Discharge (ESD): 8kV air discharge, 4kV contact discharge
EN 61000-4-3	Radio-Frequency Electromagnetic Field Susceptibility Test-RS
EN 61000-4-4	Electrical Fast Transient/Burst-EFT
EN 61000-4-5	Surge Immunity Test: AC Power Line: line to line 1kV, line to earth 2kV
EN 61000-4-6	Conducted Radio Frequency Disturbances Test-CS
EN 61000-4-8	Power Frequency Magnetic Field Test
EN 61000-4-11	Voltage Dips

### 8. Safety Standards/安规标准

#### 8.1 Dielectric Strength (Hi-pot) /介电耐压强度 (高压)

Primary to Secondary AC3000V, 5mA 1 minute for type test, 3 second for production.

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

#### 8.2 Leakage Current/漏电流

The leakage current shall be less than 0.25mA for Class II when power supply is operated maximum input voltage and maximum load.

当电源供应器操作在最大输入和最大负载的情况下, 其漏电流应小于 0.25mA, 满足Class II等级.

#### 8.3 Insulation Resistance/绝缘阻抗

7MΩ min. at primary to secondary add 500Vdc test voltage

在初级与次级间加500Vdc 进行测试

#### 8.4 SAFETY STANDARD/安规标准:

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

电源应符合下列的国际标准

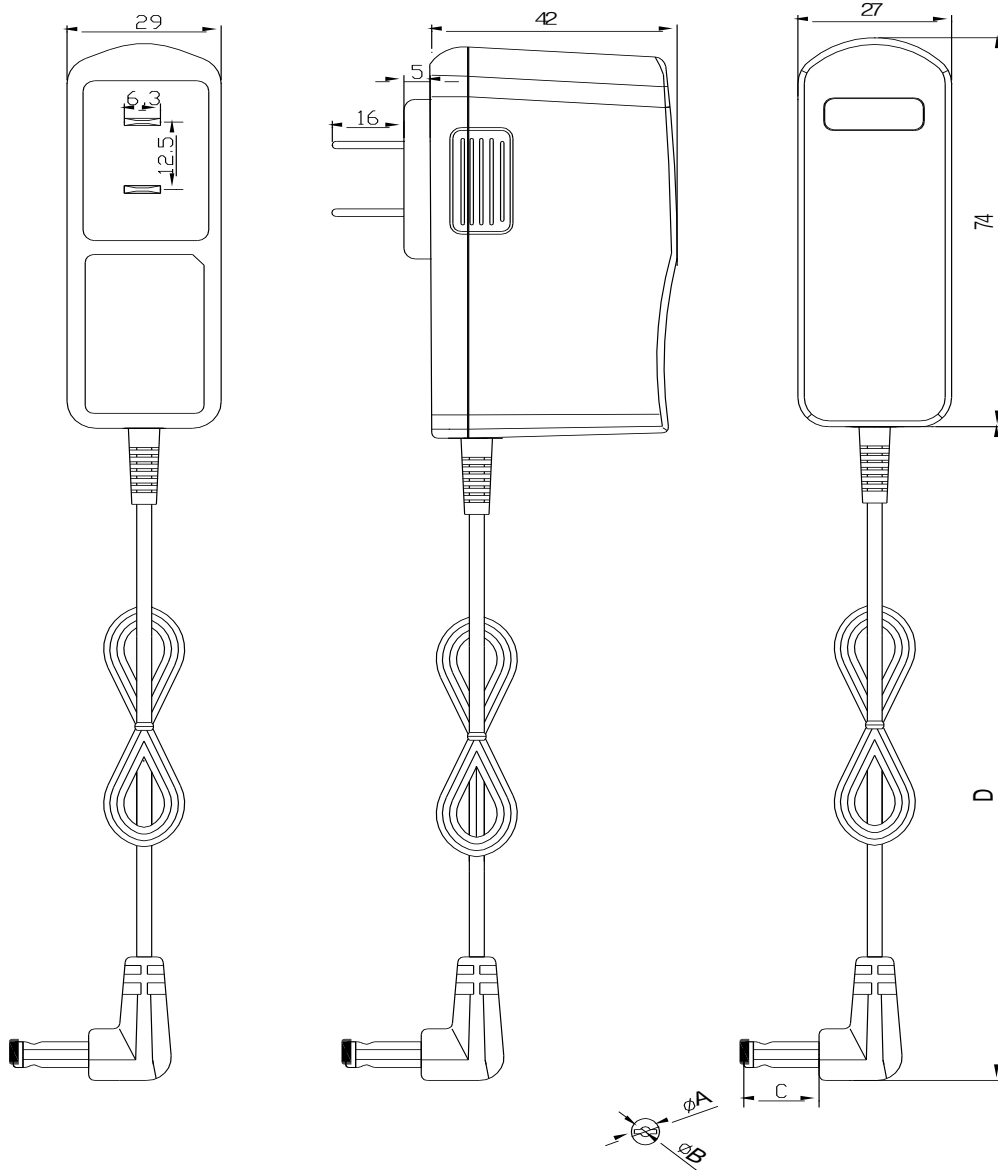
Type/安规	Country/国家	Standard/标准	Statued/状况	Mark/备注

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EXTERNAL VIEW/外观图

MECHANICAL DIMENSION (UNIT IN mm)

外形尺寸 (单位: mm)

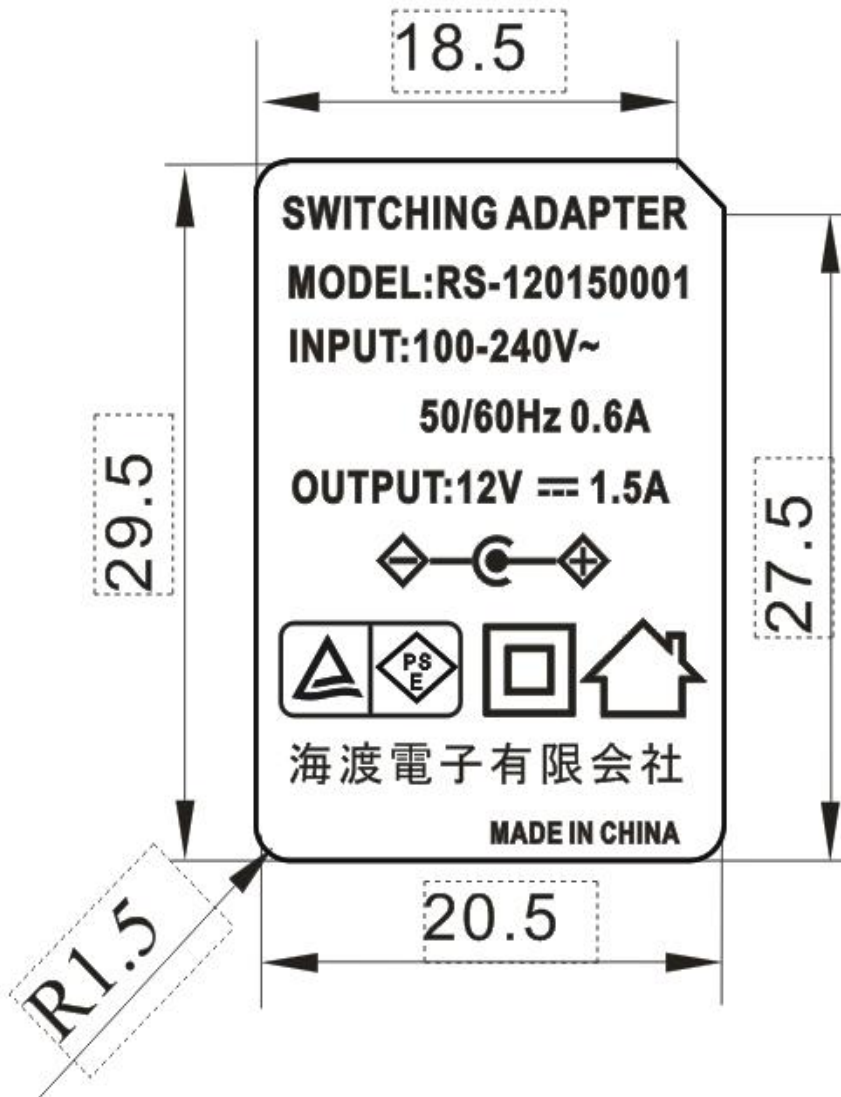


	$\Phi A$	$\Phi B$	C	D
DIMENSION/尺寸	5.5	2.1	10	1500
TOLERANCE/公差	$\pm 0.05$	$\pm 0.05$	$\pm 0.5$	+50/-50
NOTES	DC线2464 22AWG 1.5M 5.5*2.1*10MM 弯头带音叉带车沟			
LED indicator/LED指示	NO LED indicator/无LED指示			

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NAME PLATE/铭牌

NAME PLATE/铭牌:



UNIT/单位: mm

TOLERANCE/公差: +0/-0.2

Radium Carving Primary Color/镭雕原色

\* PLEASE ADVISE IF ANY COMMENT ON NAME PLATE INFORMATION. OTHERWISE, THIS INFORMATION IS REGARDED AS CUSTOMER APPROVAL AND APPLY IN PRODUCTION.

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