

产 品 规 格 书
PRODUCT APPROVAL SHEET

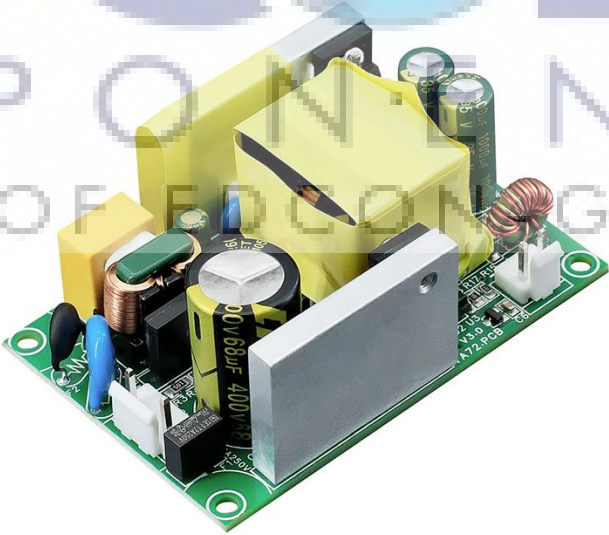
❖ CUSTOMER （客 户）：

❖ Model （品种名称） TA72-15V4.5A

❖ DESCRIPTION （描述）： 单组电源

❖ REVISION (版 本): 1.0

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1.0 Description 概述

This is a suitable power supply for household appliances and industrial equipment, with a rated output power of 65W

这是一款适用家用电器及工业设备供电电源，额定输出功率为 65W。

2.0 Electrical 电性规格

2.1 Input Electrical Characteristics 输入特性

Input voltage range 输入电压	90Vac to 264Vac
Normal voltage range 标称输入	100Vac to 240Vac
Frequency range 频率范围	50Hz/60Hz±5%
Max input ac current 最大输入电流	0.9A max at full load and 110Vac input
Inrush current (cold start) 冷启浪涌电流	25A (TYP Peak) at 120Vac; 45A(TYP Peak) at 220Vac
Efficiency(full load) 效率	88% min at 110Vac or 240v input and full load
Leakage Current 泄漏电流	Less Than 0.5mA,240Vac input
Standby Power Consumption 待机功耗	240Vac/50Hz input and 15V output ≤0.21W
Input Fuse 输入保险	T2A/250Vac

2.2 Output Electrical Characteristics 输出特性

2.2.1 Output Voltage & Current Regulation. 输出电压电流调整率

Output Channel 输出通道	Output Voltage 输出电压	Voltage Regulation 电压 调整率	Min. current 最小电流	Rated current 额定电流	Peak current 峰值电流
1	+15.0V	±5%	0A	4.5A	5.0A

Note: * The peak current should be test at other of dc output at rated current, And the peak current pulse width within 100mS.

注意：最大电流测试是在其它输出额定电流时测试，且脉宽小于 100 毫秒。

2.2.2 . DC Output Ripple & Noise. 直流输出纹波和噪音

Output Voltage 输出电压	HF Ripple & Noise (Max.)纹波和高频噪声
+15.0V	< 120mV（小于 120 毫伏）

Note: 注意：1) Measurements shall be made with an oscilloscope@ 20MHz bandwidth.

- 1) 用示波器测量，并将其带宽调到 20 MHz
- Outputs shall be bypassed at the connector with a 0.1uF ceramic capacitor and a 10uF electrolytic capacitor to simulate system loading.
- 2) 为了模仿系统负载，在输出端连接一个 0.1uF 瓷片电容和一个 10uF的电解电容。

2.2.3. Dynamic Response Of Output. 输出动态响应

Output Channel	Output Rated Voltage	Slew Rate 速率	Frequency Rang	Load Change 负载变法范围	
				Min. to 50% load and 50% to Max load 负载最小到 50%和 50%到最大	Min. load to Max load 负载最小到最大
1	+15.0V	0.2A/us	50Hz-100 Hz	± 10%	± 10%

2.3 DC Output Overshoot At Turn On & Turn Off 输出电压超调

Output Channel 输出通道	Output (V) 输出电压	Over shoot 正向超调	Undershoot 负向超调
		Turn on 开机	Turn off 关机
1	+15.0V	--	--

Note: All of dc output current from Min. to Max 注意: 所有的直流输出电流要从最小值到最大值。

2.4 DC output voltage rise time 直流输出电压上升时间

Output Voltage 输出电压	100Vac input & Full Load 交流 100V 输入和满载	240Vac input & Full Load 交流 240V 输入和满载
+15.0V	≤100mS	≤100mS

Note: The output voltages shall rise from 10% to 90% of their output voltage .output voltage rise shall be kept in between 1mS and 100mS from 10% to 95% of the normal regulation with capacitive load 1000uF at each output.

注意: 在每组输出并联一个 1000 微法的电容时输出电压上升时间必须保持在 1 毫秒到 100 毫秒之间(一般按输出电压的 10%到 95%计算)

2.5 Hold up time 输出电压保持时间

Output Voltage 输出电压	100Vac input & Full Load 交流 100V 输入和满载	240Vac input & Full Load 交流 240V 输入和满载
+15.0V	≥10mS	≥10mS

Note: When AC drop to 0V , The output voltage hold up to 90% of the rate voltage must be ≥10mS.
备注: 交流电压掉到 0V 时, 输出电压掉到额定定压 90%的时间要≥10ms。

2.6 Output voltage Timing 输出电压时序

2.7 Remote On/Off Control 遥控开/关控制

2.7.1. PS-ON 开关控制

This model of product has no PS / on function and does not consider the standby energy consumption. After AC is powered on, the normal output voltage is15.0V
该型号产品无 PS/ON 功能，不考虑待机能耗，交流上电后正常输出15. 0V 。

2.8 Protection 保护

2.8.1 DC output Over Voltage Protection 直流输出过压保护

Output Voltage	Over Voltage	comments	The test method
+15.0V	≤200%	Hiccup 尝试重复启动	短路光耦

2.8.2 DC Output Over current Protection 直流输出过流保护

Output Voltage	Over Current	comments
+15.0V	≥6. 0A	Hiccup 尝试重复启动

Note: Test the current load flow, other load with rated current
测试当前负载时，其它负载需带额定电流

2.8.3 DC Output Short Circuit Protection. 直流输出短路保护

Output Voltage	comments
+15.0V	Hiccup 尝试重复启动

Note: The Short Circuit protection should be test at other of dc output at Rated load
短路保护测试是在其它各路额定负载时测试

2.8.4 Reset after Shutdown 保护功能复位

Recycle the AC input, the power supply will restart after the fault removed.
故障去除后，关掉交流输入再打开，电源即可恢复。

2.8.5 Fuse Protection(保险丝保护)

To protect the power module, the Fuse will be disconnected to cut off the power supply when AC input current exceeds the rated current of fuse.
当输入交流电流超过保险丝的额定工作电流，电源保险丝将断开，关闭电源供应保护电源模块。
CAUTION:FOR CONTINUED AGAINST RISK OF FIRE,REPLACE ONLY WITH SAME TYPE AND RATING OF FUSE!
注意：为防止火灾风险，只能更换相同类型和等级的保险丝！

3.0 Environmental Requirement 工作环境

3.1.1 Temperature 环境温度

* Operating 工作温度: -20°C to $+70^{\circ}\text{C}$ (请参考降额图表1)

* Storage 存储温度: -20°C to $+85^{\circ}\text{C}$

3.1.2 Humidity 环境湿度

* Operating 工作: From 10% to 90% relative humidity (non-condensing).

* Storage 存储: From 5% to 95% relative humidity (non-condensing).

3.1.3 Altitude 海拔高度

* Operating: Less than 5000m (适用在海拔低于 5000 米条件下使用)

* Storage: Less than 5000m (适用在海拔低于 5000 米条件下储存)

3.1.4 Cooling Method 冷却方式

* Ventilation cooling . 风道自然冷却

3.1.5 Climates 气候要求

* For tropical climates 适用于热带气候

4.0 Safety & EMC requirement 安规和 EMC (注: 安规及EMC项为参考项, 以下参数是我司根据经验设计及测试评估得出, 请客户装产品整机测试数据为准.)

4.1 安规标准 Standards

GB8898-2011;

GB4943

GB9254

IEC/EN 60065:2014(Eight Edition);

4.2. Isolation 绝缘性能

4.2.1 Table 10 绝缘阻抗

Input to Output DC500V 10M Ω min (at room temperature)

4.2.2 Table 11 绝缘耐压

Input to Output 3000Vac 50Hz 1minute $\leq 3.5\text{mA}$

4.3 EMC 电磁兼容性

4.3.1 EMI 电磁干扰

The power supply shall comply with the following criterion:

电源电磁干扰满足下列标准:

1) Conduction Emission : 传导干扰度

*EN55013/EN55022, CLASS B

*GB13837-2003, CLASS B

*CISPR13:2001/FCC PART15 CLASS B

2) Radiated Emission : 辐射干扰度

*EN55013/EN55022, CLASS B

*GB13837-2003, CLASS B

*CISPR13:2001/FCC PART15 CLASS B

Note: The power board should be assembled in customer product to test for

passing the above criterion.需配合客人整机通过上述标准。

4.3.2 EMS 电磁抗扰

The power supply shall comply with the following criterion:

电源电磁抗扰满足下列标准:

1) ESD 静电抗扰度

*GB17626.2-1998/IEC61000-4-2 Lever 3

2) EFT 脉冲群抗扰度

*GB17626.4-1998/IEC61000-4-4 Lever 3 3KV

3) SURGE 雷击浪涌

*GB17626.5-1998/IEC61000-4-5 Lever 3 1.5KV / 3KV

4 DIP 电压跌落

*GB17626.11-1998/IEC61000-4-11 Class B/C

5.0 Reliability 可靠性

5.1 MTBF.平均无故障

30000H Poh at 40 deg C or 100000Hrs at 25 deg C.

在 40 摄氏度下, 平均无故障为 30000 小时;在 25 摄氏度下, 平均无故障为 100000 小时.

100% Burn - In at full loading and 2 hours at least (at 40 deg C)

在满载的情况下, 至少要老化工作 2 个小时。

5.2 Vibration Test.振动试验

5.2.1 Non-operation vibration with shipping container shall be 2G's peak, 5 ~ 60Hz,, 4G's peak,

50 ~ 500Hz,, no abnormally to be noted after test.

非工作状态测试时, 使用出货的外箱包装, 用 2G/5~60HZ 以及 4G/50~500HZ 条件测试, 测试完毕, 产品不应该有不良。

5.2.2 Operation vibration shall be 0.5g peak, 10 ~ 60Hz, 3 planes, no abnormal to be noted after test.

工作状态测试时, 条件为 0.5G/10~60Hz、分三个方位测试, 测试完毕, 产品不应该有不良

And the detailed test method & condition Please refer to GB2423.10 "Test Fc"

详细的测试方法和测试条件参见 GB2423.10 "试验 Fc" 之说明

5.3 Drop test.跌落试验

5.3.1 Drop Test 跌落试验

Test height 76cm, after drop test no function abnormal to be noted. And the detailed test method

& condition please refer to GB4857.5 Item 3.5.2 a

测试高度为 76cm, 测试完毕电源性能无损坏, 详细的测试方法和测试条件参见 GB4857.5 中 3.5.2 条 a 的之说明

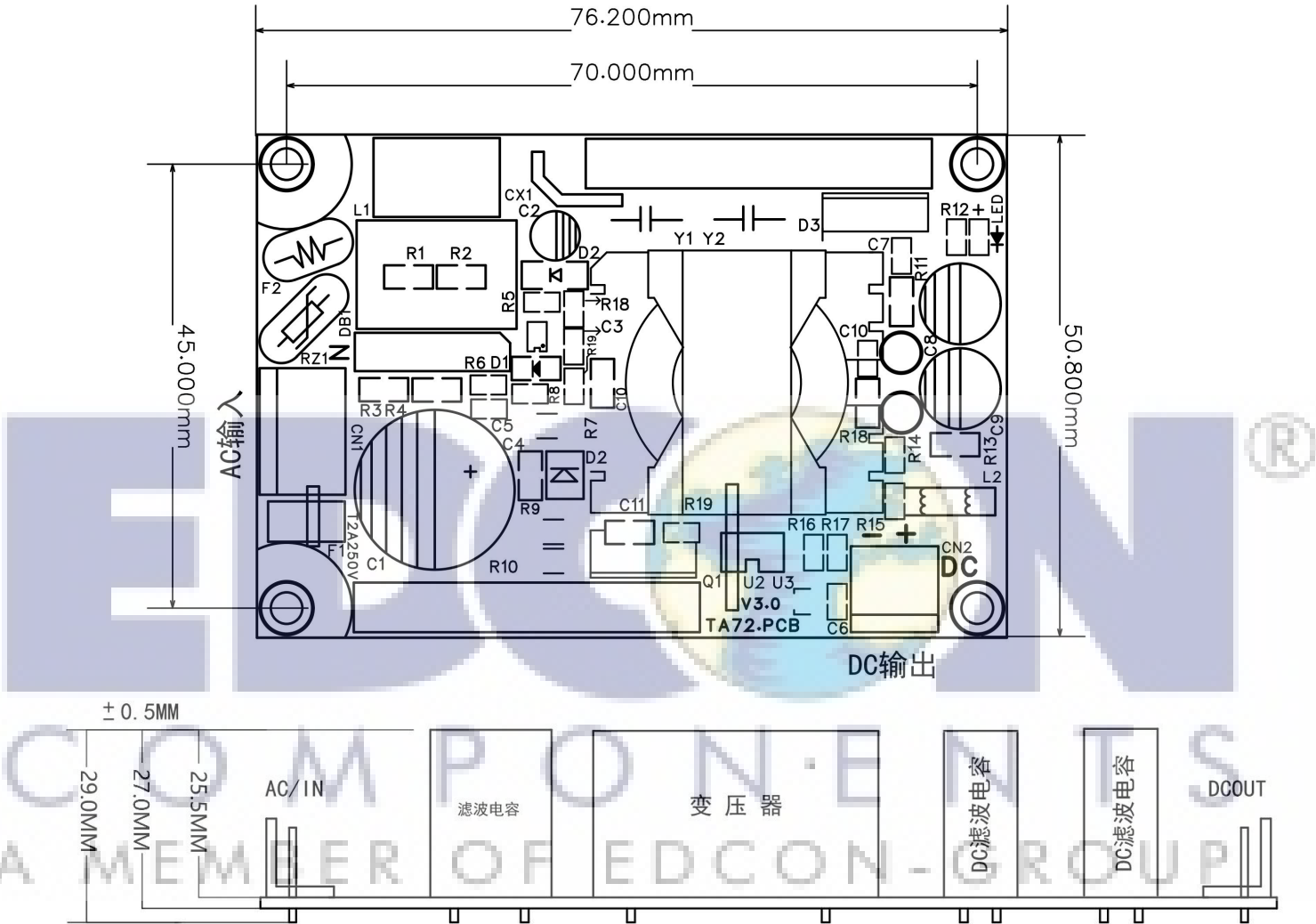
After all the test from item 5.1 to 5.3, The product must be meet all the requirements on this Specification

通过上述 5.1 至 5.3 项的所有测试后, 本品仍应符合本规格书中规定的各项电性与机械强度要求。

6.0 Mechanical 结构

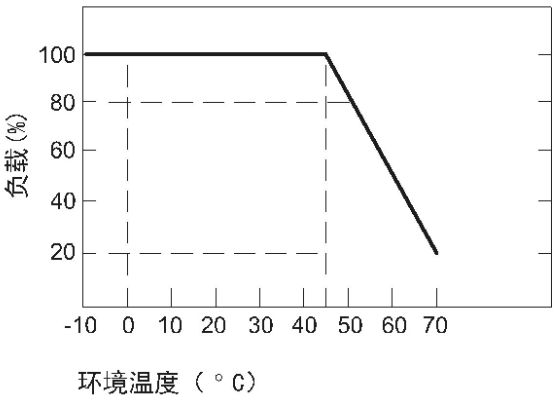
6.1 Physical Size 外形尺寸

76.2mm (L) x 50.8mm (W) x 27mm (H) (H为PCB板表面元件高度)

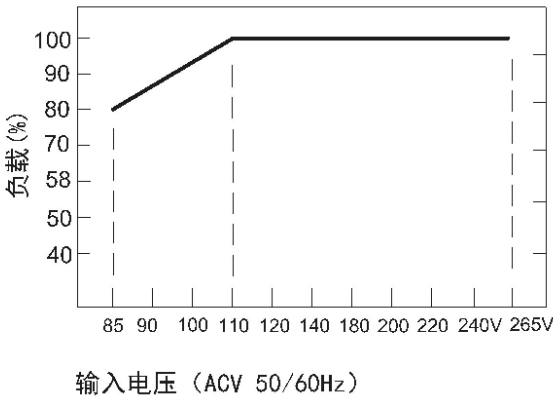


降额图表1:

减额曲线:



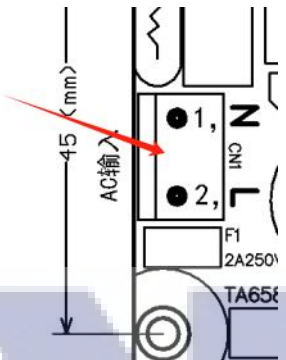
静态特性曲线:



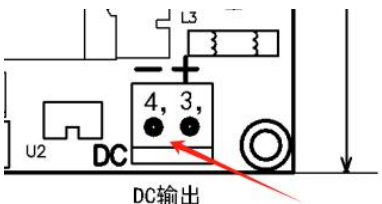
6.2 Weight 重量
TBD

6.3 Pin Connection 连接器脚位定义

6.3.1 AC Input 交流输入端子
CON1 / Pitch3.96mm 3pin2 针 卧式

No.(引脚号)	Symbol(符号)	Function(功能)	Picture
1	AC-N	AC INPUT NEUTRAL(交流零线)	
2	AC-L	AC INPUT LINE(交流火线)	

6.3.2 DC IN OUTPUT 直流输出端子
CON2 / Pitch3.96mm 4pin 立式

No.(引脚号)	Symbol(符号)	Function(功能)	Picture
3	V+	+15V OUTPUT(+15V 输出)	
4	V-	GROUND(输出负极)	

6.4 Mylar 绝缘麦拉片

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7.0 Package 包装
As the actual packaging (按实际出货包装)

