

承 认 书

SPECIFICATION FOR APPROVAL

客 户:

CUSTOMER: _____

客户型号:

CUSTOMER P/N: _____

公司型号:

OUR MODEL NO: 12V0.5A(美规)

制定日期:

Date: 2021.2.4

客户承认(CUSTOMER APPROVE):

编 制 (PREPARED)	审 核 (CHECKED)	批 准 (APPROVAL)

DBK

批 准 (APPROVAL)	审 核 (CHECKED)	编 制 (PREPARED)

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1、SCOPE

The document detail the electrical, mechanical and environmental specifications of a adapter, the power supply provide 6W continuous output power.

资料详细描述了一款 6W (连续输出功率) 开关电源的电气性, 结构性及环境等要求.

1.1 Description/类型

☒ SMPS Adapter (Wall mount)/插墙式适配器

☐ SMPS Adapter (Desk-top)/桌面型适配器

☐ Open Frame/开放式结构

☐ SMPS Unit (With Case)/带铁壳型

☐ Others/其他

2、Input Characteristics/输入特性

2.1 Input Voltage & Frequency/输入电压与频率

The range of input voltage is from 90Vac to 264Vac single phase.

输入电压范围: 从 90Vac 到 264Vac, 单相输入.

Item/项目	Minimum/最小	Normal/额定值	Maximum/最大
Input Voltage/输入电压	90Vac	100Vac~240Vac	264Vac
Input Frequency/输入频率	47Hz	50Hz/60Hz	63Hz

2.2 Input AC Current/AC 输入电流

0.15Arms. @ 110Vac input & max. load/在 110Vac 输入和最大负载条件下最大 0.15A.

2.3 Inrush Current (Cold Start)/浪涌电流(冷启动)

≤60Amax. @ 110Vac input & max. load/在 110Vac 输入和最大负载条件下≤60A

2.4 Efficiency/效率

73.42% min. @ 110VAC input & max load (100%, 75%, 50%, 25%). (according to energy standard, First burn-in 0.5 hours)

在输入 110VAC 时, 输出负载的 100%/75%/50%/25% 四点平均效率不小于 73.42%

2.5 No-Load input power Dissipation/输入空载功率

While input 100vac-240vac and the output is no load, the input power loss must be less Than 0.3w/在输入 100Vac-240Vac 条件下, 输入空载功耗小于 0.3W

3、Output Characteristics/输出特性

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

Output	Load condition/负载条件		Peak load/ 峰值负载	Voltage range /电压范围	R+N/ 纹波与 噪声	Remark 备注
	Minimum Load	Maximum Load				
+12V	0.0A	0.5A	/	11.4V-12.6V	≤ 200mV	

Ripple & Noise: Measurement is done by 20MHz bandwidth oscilloscope and the output Paralleled a 0.1uF ceramic capacitor and a 10uF electrolysis capacitor(110Vac input)

纹波:量测时示波器选用 20 MHz 带宽限制,输出端要并联一颗 0.1uF 的陶瓷电容和一颗 10uF 的电解电容.(在 110Vac 输入条件下)

3.2. Line/Load Regulation/线性/负载调整率

Output/ 输入	Load Condition/负载条件		Load Regulation 负载调整率	Line Regulation 线性调整率	容性负载
Rate	Minimum Load	Maximum Load	±5%	±5%	
+12V	0.0A	0.5A			

3.3. Turn - on Delay Time/开机延迟时间

3S max @110Vac input & max. load/在 110Vac 输入和最大负载条件下最大 3S. 3Smax, @240vac input& max. load 在 240vac 输入和最大负载条件下最大 3S

3.4. Hold up Time/关机保持时间

10mS min @ max. load & 110vac/60HZ input turn off at worst case. 在 110Vac /60Hz 输入\最大负载同时在最差情况下关机, 最小 10mS

3.5. Rise Time/上升时间

40mS max @ max. load&100v-240av input 100v-240av 输入. 最大负载同时最大 40mS

3.6 Output Overshoot/Undershoot/输出过冲/欠冲

5% max. When the power on or off/当电源开/关机时

4、Protection Requirements/保护要求

4.1 Over Current Protection/过流保护

When the current is 1.1-2.0 times, the output will go into the hiccup mode., When the short circuit is removed, the product will automatically return to normal.

当过电流 1.1-2.0 倍时, 输出将进入打嗝模式, 当解除短路后, 产品将会自动恢复正常。

4.2 Short Circuit Protection/短路保护

The input power shall decrease when the output rail short, the power supply shall no damage, and shall be self-recovery when the fault condition is removed

当输出短路时,产品输入功率降低且不会损伤,当短路情况解除后,产品将会自动恢复正常。

5、Environment Requirements/环境要求

5.1 Operating Temperature and Relative Humidity/工作温度和湿度要求

-10°C to +40°C

10%RH to 90%RH

5.2 Storage Temperature and Relative Humidity/存储温度和湿度要求

-20°C to +80°C

5%RH to 95%RH non-condensing

5.3 此产品仅适用于海拔 5000 米及以下.

This product is only suitable for altitudes of 5000 meters and below.

5.4 Vibration/振动

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

扫描频率 10 to300HZ,加速 1.0G (移位: 3.5MM),X,Y,Z 三垂直坐标轴向各振动 1 小时。

5.5 Drop in/跌落

Height is 1 m, 20 cm hard wooden boards 1 times on

高度为 1 米, 跌落到 20CM 硬木板上 3 次。

6、Reliability Requirements/可靠性要求

6.1 Burn-in/老化

The power supply shall be burn-in for 4 Hours under nor ,input and 80% max. load

at 40℃±5℃./产品至少要在 40℃±5℃的环境, 额定输入及 80%最大负载条件下老化 4 小时。

6.2 MTBF Qualification/平均间隔故障时间估算

The MTBF shall be at least 20,000 hours at 25℃,max load and nor input condition.

平均间隔故障时间:至少 20,000 小时, 25℃环境及额定输入与最大负载条件下

7、EMI/EMS Standards/EMI/EMS 标准

7.1 EMI Standard/EMI 标准 (水泥电阻测试)

EN55013\ GB13837\ CISPR13

EN55022\ GB9254\ CISP22

7.2 EMS Standards/EMS 标准

EN61000-3-2	Harmonic current emissions
EN61000-3-3	Voltage fluctuations & flicker
EN61000-4-2	Electrostatic discharge(ESD):10kV air discharge,6kV contact discharge
EN61000-4-3	Radio-Frequency Electromagnetic Field Susceptibility Test-RS 3V/m
EN61000-4-4	Electrical Fast Transient/Burst-EFT2KV
EN61000-4-5	Surge Immunity Test AC Power Line: line to line1kV,.
EN61000-4-6	Conducted radio frequency disturbances test-cs 3v/m
EN61000-4-8	Power Frequency Magnetic Field Test
EN61000-4-11	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: 3000Vac 5mA Max / 60 seconds(3 seconds for production)

初级对次级: 3000Vac 5mA Max / 60 秒(生产时高压测试时间: 3 秒)

8.2 Leakage current/漏电流

0.25MA max. At110vac/60HZ.

在 110vac/60HZ 输入时最大 0.25mA.

8.3. Insulation Resistance/绝缘阻抗

100M Ω min. at primary to secondary add 500Vdc/60seconds Test voltage

在初级与次级间加 500VDC/60 秒进行测试，最小 100M Ω 。

8.4. Regulatory Standards/安规标准

Type/安规	Country/国家	Standard/标准	Type/安规	Country/国家	Standard/标准
☐ TUV	Europe	EN62368	☐ PSB	Singapore	IEc62368-1
☒ UL/CUL	USA	UL60950	☐ PSE	japan	J60950
☐ CCC	china	GB4943	☐ NOM	Mexico	Nom-001
☐ CCC	china	GB8898	☐ GOST	Russia	MEK60950

8.5 浪涌测试/Surge Immunity Test

Differential mode: L to N 1kV, Common mode: L to GND, L to GND

(浪涌测试：差模 L 线对 N 线 1KV,共模 L 对地 N 对地 1KV)

9、Special requirements/特殊要求

9.1 odor requirements/气味要求

Can not produce odor and the smell harmful to health./不能产生异味和有害健康的气味。

9.2 Environmental requirements/环保要求

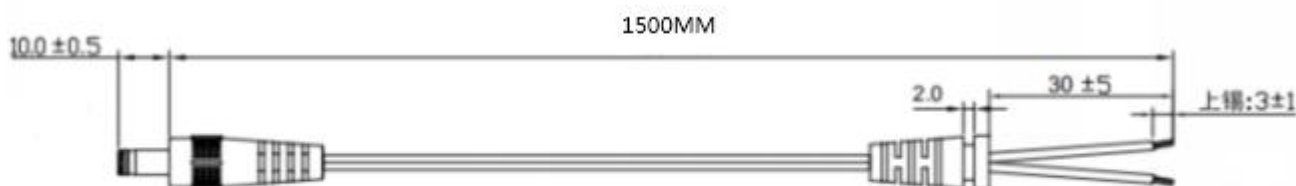
Meet ROHS directive(2002/95/EC)and REACH Regulation(1907/2006/EC)requirements./符合 ROHS 指令（2002/95/EC）和 REACH 法规(1907/2006/EC)要求

9.3 packaging requirements/包装物要求

Packaging can be recycled./包装物须能回收。

10.Rating Label Drawing /标贴图(以实际要求为准)

11. DC/ Cord Drawing/线材图



	深圳市迪比科电子科技有限公司 SHENZHEN DBK ELECTRONICS CO.,LTD	PAGE 页码	8 of 8	REV 版本 A

DC cable: 1500MM DC PLUG: 5.5x2.1x10MM

12、**Packing Drawing**/包装示意图（以实际出货为准）