

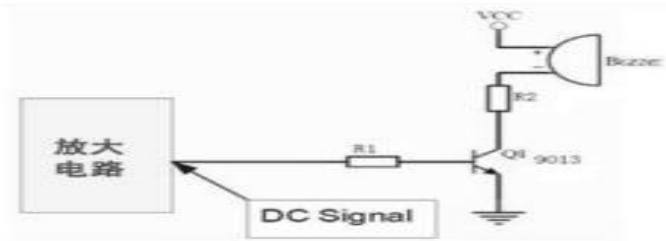
1.基本规格/General specification

项目/Item		规格/Spec	条件/Condition
1	额定电压 Rated voltage	12VDC	测试环境：标准状态，标准驱动电路， 额定电压 测试距离：0.1m Standard State,Standard Drive Circuit. Rated voltage,Distance at 0.1m
2	工作电压 Operation voltage	8-16VDC	
3	声压 Sound Pressure Level=SPL	Min 88dB	
4	电流 current	Max30mA	
5	振荡频率 Oscillation frequency	2500±200Hz	
6	工作温度范围 Operating Temperature	-20~+75℃	
7	保存温度范围 Storage temperature	-30~+80℃	
8	外部尺寸 Externals size （mm）	Φ12*H9.5	参阅附图 Refer to the attached drawing
9	重量 Mass	1.8g	
10	材质 Housing Material	PBT	

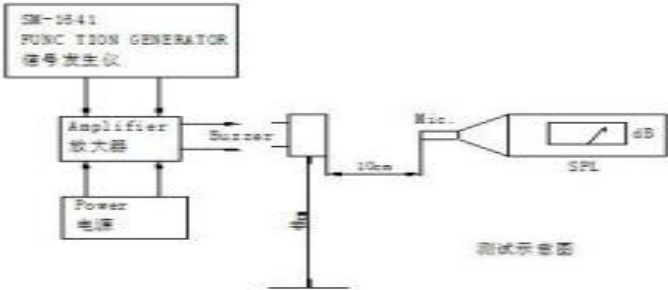
2.电气和声学测试条件/Electrical And Acoustical Measuring Condition

驱动电路/Recommended Driving Circuit


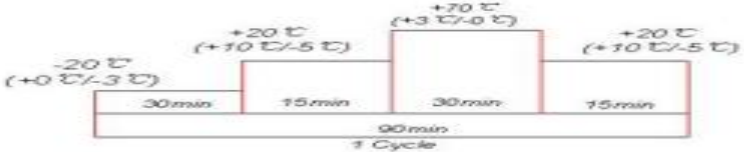
Resonant frequency, 1/2 duty cycle. Square wave.  
Signal amplitude should be large enough to saturate the transistor.



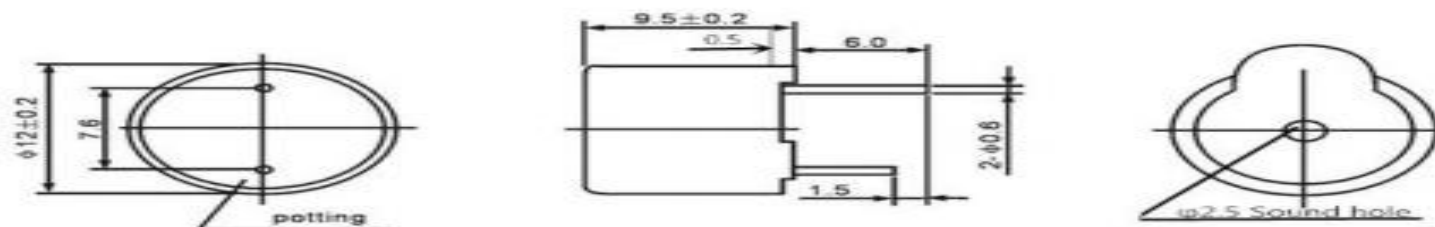
设置Recommended Setting



### 3.可靠性测试/Reliability Test

	项目ITEM	测试方法TEST
1	高温试验 High Temperature Test	在+80℃±2℃储存温度下存放96小时，恢复2小时后测试 After being placed in a chamber with +80±2℃ for 96 hours and then being placed in normal condition for 2 hours
2	低温试验 Low Temperature Test	在-20℃±2℃储存温度下存放96小时，恢复2小时后测试 After being placed in a chamber with -20±2℃ for 96 hours and then being placed in normal condition for 2 hours
3	恒定湿热试验 Humidity Test	
4	温度变化试验 Temperature Cycle Test	
6	跌落试验 Drop Test	70cm高自由掉落到40mm 的木板上，每个方向三次 Drop on a hard wood board of 40mm thick, any directions, three times, at the height of 70cm
7	插针的抗拉强度试验 Terminal Strength Pulling Test	插针承受1.0kg拉力，负荷时间5s The force 5 seconds of 1.0kg is applied to each terminal.
8	可焊性试验 Solder ability Test	焊锡温度255±5℃，浸润时间为3±0.5s，试验后目测产品情况 Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of 255±5℃ for 3±0.5 seconds.
9	回流焊测试 Soldering Test	Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of +300 ±5℃ for 3 ±1 seconds. 90% min. lead terminals shall be wet with solder (Except the edge of terminals).

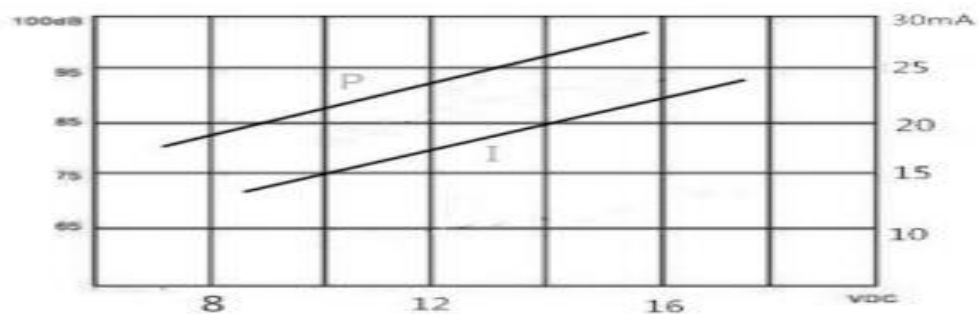
#### 4. 尺寸图 Dimension



\*Unit: mm; Tolerance:  $\pm 0.3\text{mm}$  Except Specified

\*Housing Material: Black PBT

#### 5. 频率响应/Frequency Response



12Vo-p 50% duty Square wave, 10cm

## 1、描述/ DESCRIPTION:

本规格书适应于 DZ018CHL120150K 型号的开关电源.

The purpose of the document is to specify the functional requirements of a DZ018CHL120150K switching power supply.

Input AC plug Type/输入 AC 插头类型:

DISK TOP IEC320 TYPE C8/桌上型 8 字尾类型 Class II	---	
DISK TOP IEC320 TYPE 3 PIN C14/桌上型 3PIN 类型 C14 Class I	---	
DISK TOP IEC320 TYPE 3 PIN C6/桌上型 3PIN 类型 C6 Class I	---	
WALL MOUNT CHINA/插墙型中规	---	
WALL MOUNT US/UL/插墙型美规	---	
WALL MOUNT EUROPE/CE/插墙型欧规	---	
WALL MOUNT UK/插墙型英规	-	
WALL MOUNT JAPAN/插墙型日规	---	
WALL MOUNT BRAZIL/插墙型巴西规	---	
WALL MOUNT KOREA/插墙型韩规	YES	
WALL MOUNT AUSTRALIA/插墙型澳规	---	

## 2、输入特性/INPUT CHARACTERISTICS:

### 2. 1. 输入电压/Input Voltage:

额定电压/Rated Voltage:100~240Vac

调整范围/Variation Range:90-264Vac

### 2. 2. 输入频率/Input Frequency:

额定频率/ Rated Frequency: 50/60Hz.

调整频率/Variation Frequency:47-63Hz

### 2. 3. 输入电流/Input Current:

当输入交流电压为额定值的下限电压负载满载时,最大输入交流电流 0.5 A.

0.5 Amps max At any input voltage and rated, DC output rated load.



## 2. 4. 浪涌电流/Inrush Current:

当输出为额定负载, 环境温度为 25℃, 输入 220Vac 冷态起机时的最大浪涌电流小于为 60A.

60 Amps Max. Cold start at 220Vac input, rated output load and 25℃ ambient.

## 2.5. AC 漏电流/Ac Leakage Current:

当输入电压 240Vac 时, 最大漏电流为 0.25mA.

0.25mA Max. At 240Vac input.

## 3、输出特性/OUTPUT CHARACTERISTICS

### ☒ 3.1. 恒压负载特性/Constant voltage load characteristics

输出 Output	输出负载范围 Output Current Rated (A)		输出电压范围/Output Voltage Rated (V) DC 接头或 USB 端		额定输出功率 Output Power
	Min Load	Max Load	Min Load	Max Load	Max Power.
12V dc	0.0A	1.5A	11.4~12.6V	11.4~12.6V	18.0W

### 3. 3. 负载特性, 调整率/Combined Load/Line Regulation

当额定输入电压 $\pm 10\%$ 内变化, 带额定负载, 线性调整小于 $\pm 3\%$

The line regulation is less than  $\pm 3\%$  while measuring at rated load an  $\pm 10\%$  of input voltage changing.

当额定输入电压固定, 当输出负载变化, 输出负载调整率小于 $\pm 5\%$ .

When the rated input voltage is fixed, when the output load changes, the output load adjustment rate is less than  $\pm 5\%$ .

### 3. 4. 纹波和噪音 Ripple and Noise

测试条件: 在输入 115/230Vac 和输出最小及最大负载时, 使用示波器带宽为 20MHz 连接到适配器的输出端, 同时输出端并联一个 47 $\mu$ F 的电解电容和一个 0.1 $\mu$ F 的瓷片电容.

At 115/230Vac input and output Min and Max. Load, the ripple and noise are as follows when measure with Max. Bandwidth of 20MHz and Parallel 47 $\mu$ F/0.1 $\mu$ F, crossed connected at testing point.

Output/输出	12V/1.5A		
最大纹波/最大噪音 Ripple and Noise(Max)	200mVp-p		

### 3. 5. 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 4S.

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4Seconds Max.at 115Vac input and output Max.load.

3.6. 上升时间/Rise time:

当输入 115Vac 和输出最大负载时最大时间为 100 mS.  
100 mS Max.at 115Vac input and output Max load.

3.7. 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 10 mS .  
10 mS Min.at 115Vac input and output Max.Load.

3.8. 效率/Efficiency:

当 115/230Vac 输入电压时, 1/4, 1/2, 3/4 和满载计算平均效率, 最小 80.4%。  
80.4%Min, At 115/230Vac input voltage, 1/4, 1/2, 3/4 and full load calculation  
average efficiency.  
适配器满足能效 V。能效为热机 30 分钟后测试。  
Adapter meet efficiency lever V。Energy efficiency test for the heat machine  
after 30 minutes.

3.9. 待机功耗/Standby power consumption:

在输入 230Vac 条件下, 空载功耗≤0.3W  
≤0.3W@Input 230ac & NO load

4、保护功能/PROTECTION FUNCTION:

4.1. 短路测试/Short circuit test:

该电源供给器在短路解除时能恢复正常工作。  
The power supply will be auto recovered when short circuit faults remove.

4.2. 过流保护/Over current Protection:

过电流保护应按下表要求进行, 电源将保护, 故障排除后能恢复正常工作。  
Max over current protection shall be follow below requirement.will be auto  
recovered when over current faults remove.

Output/输出	12V/1.5A		
OCP Range/OCP 范围	1.65~3.0A		

4.3. 过压保护/Over Voltage Protection:

当输出电压超过额定电压的 150%~180%时, 电源将保护, 故障排除后能恢复正常工作。  
The power supply will auto recovered when faults remove 150%~180%.

4.4 过冲/Overshoot:

在电源开启或关闭的时候, 输出过冲电压不能超过上限电压的 15%.

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During either Turn-On or Turn-Off, the output overshoot voltage shall not exceed upper limit voltage 15%

4.5 过温度保护/Over Temperature Protection:

当温度超过电源内部控制芯片的最高温度时,控制芯片自动停止工作.待芯片温度恢复正常工作温度时,电源自动恢复工作.

When the temperature exceeds the maximum temperature of the internal control chip of the power supply, the control chip automatically stops working. When the temperature of the chip returns to normal temperature, the power supply automatically resumes operation.

5、环境要求/ENVIRONMENTAL REQUIREMET:

5.1. 工作温度/Operating Temperature:

-10℃-40℃, 满载, 正常工作.

-10℃to 40℃ ,Full load, Normal operation.

5.2. 工作湿度/Relative Humidity:

10%~90%, 满载, 正常工作.

10%~90%RH, Full load, Normal operating.

5.3. 储藏温度/Storage Temperature:-40℃ to 70℃

带外壳/With package

5.4. 储藏环境相对湿度:5% 至 95%/Storage Ambient Relative Humidity:5% to 95%

带外壳/With package

5.5. 低温工作实验/Operation at the low temperature:

环境温度  $-10\pm 2^{\circ}\text{C}$ , 在输入端施加额定电压 100VAC ~240Vac 输出端空载与满载状态下工作 2 小时, 试验后常温放置 2 小时, 无特性异常.

Within the input voltage from 100VAC to 240VAC and the output with rated load and no load for 2 hours at the temperature of  $-10\pm 2^{\circ}\text{C}$ , after 2 hours at ambient temperature, the adapter shall be without abnormal performance.

5.6. 高温工作实验/Operation at the high temperature:

环境温度  $40\pm 2^{\circ}\text{C}$ , 在输入端施加额定电压 100VAC ~240Vac 输出端空载与满载状态下工作 2 小时, 试验后常温放置 2 小时, 无特性异常

Within the input voltage from 100VAC to 240VAC and the output with rated load and no load for 2 hours at the temperature of  $40\pm 2^{\circ}\text{C}$ , after 2 hours at ambient temperature, the adapter shall be without abnormal performance.

5.7. 低温存储/Storage at the low temperature:

在 $-40\pm 2^{\circ}\text{C}$ 非工作状态下进行试验 48 小时, 试验后常温放置 2 小时后测试无异常。  
At  $-40\pm 2^{\circ}\text{C}$ , test of non-operated 48 hours, No abnormality in electric and mechanical characteristic after 2 hours recovery at the room temperature.

5. 8. 高温存储/Storage at the higher temperature:

在  $70\pm 2^{\circ}\text{C}$  非工作状态下进行试验 48 小时, 试验后常温放置 2 小时后测试无异常。  
At  $70\pm 2^{\circ}\text{C}$ , test of non-operated 48 hours, No abnormality in electric and mechanical characteristic after 2 hours recovery at the room temperature.

5. 9. 振动/Vibration:

1). 测试标准: 国际电工电子委员会

Operating: IEC 721-3-3 3M3

5~9Hz, A=1.5mm

加速度 (9~200Hz, Acceleration 5m/S<sup>2</sup>)

2). 运输/Transportation:

IEC 721-3-2 2M2

5-9Hz, A=3.5mm

9~200Hz, 加速度 Acceleration=5m/S<sup>2</sup>

200~500Hz, 加速度 Acceleration=15m/S<sup>2</sup>



3). 轴向振动/Axes,10 cycles per axis.

在测试过程中不能出现永久性的损坏.

No permanent damage may occur during testing.

在电源开启和关闭后,样机能够恢复到最初条件.

The SAMPLE has to restore to its original situation after power off/on.

5. 10. 跌落试验/Dropping Packed:

插墙式跌落高度为 1000mm、桌面式跌落高度为 760mm: 共 3 次,测试完成后产品无安全损坏.

1000mm for wall mount type and 760mm for desktop type as above described.

A total of times, There is no safety damage after the test.

测试台面是厚 13mm 的夹木板,离地面高 19-20mm

The horizontal surface consists of hardwood at least 13mm thick, mounted on two layers of plywood each 19mm to 20mm thick,all supported on a concrete or equivalent non-resilient floor.

6、安全及 EMI 要求/SAFETY AND EMI REQUIREMENT:

6. 1. 安全/ Safety:符合标准 / accord with

☒ IEC 60950-1    ☐ IEC 60065    ☐ IEC 60335    ☐ IEC 61558    ☐ IEC 61347  
☐ IEC 62368    ☐ UL 60950-1    ☐ UL 1310    ☐ UL 62368    ☐ GB 4706  
☐ GB 4943    ☐ GB 8898    ☐ GB 19510

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<input type="checkbox"/> IRAM	阿根廷/Argentina	<input type="checkbox"/> GOST R	俄罗斯/Russia

6. 2. 高压/DIELECTRIC STRENGTH Hi-Pot:

初级对次级/Primary to secondary:

3000Vac,10mA 或者 4242Vdc,5mA,标准测试 1 分钟,量产测试 3750Vac,5mA, 3 秒钟

3000Vac,10mA or 4242Vdc/5mA , 1minute for type test. 3750Vac,5mA for 3 seconds for product.

6. 3. 绝缘抗阻/ Insulation resistance:

初级对次级/Primary to secondary:20MΩ min at 500V DC.

#### 6. 4. EMI 标准/EMI STANDARD

Meets the Limits of/测试符合

<1> Radiation emissions test 电磁辐射干扰测试

Test criteria (测试标准): GB9254/EN55032/ CISPR 22, class B/FCC Part 15.

<2> Conducted emissions test 电磁传导干扰测试

Test criteria (测试标准): GB9254/EN55032//CISPR 22, class B/FCC Part 15.

<3> EFT test EFT 测试

EN 55024:2015, EN 61000-4-4:2012

Power line: 1.0kV

Performance Criteria B

<4> Lightning test 雷击测试

EN 55024:2015, EN 61000-4-5:2014

Differential mode standard(差模标准):  $\pm 1.0kV$

Common mode standard(共模标准):  $\pm 2.0kV$

Performance Criteria B

<5> ESD test 静电测试

EN 55024:2015, EN 61000-4-2:2009

Contact Discharge(接触放电):  $\pm 4kV$

Air Discharge(空气放电):  $\pm 8kV$

Performance Criteria B

#### 7. 可靠性要求/RELIABILITY REQUIREMENT

##### 7.1 煲机/Burn-in

环境温度:  $40 \pm 2^{\circ}C$ , 标准的输入电压, 输出满载, 开发阶段老化时间 24 小时, 量产老化时间 2H。

Typical input voltage and typical load current,  $40 \pm 2^{\circ}C$ , development phase aging time 24H, production aging time 2H.

##### 7.2 Temperature rise/温升

环境温度:  $25^{\circ}C$ , 标准的输入电压, 输出满载, 外壳温度符合安规要求。

Test at surface of the case with typical, typical input voltage and typical load,  $25^{\circ}C$ , Temperature rise meet safety approval at the surface of case.

##### 7.3 平均无故障运行时间/MTBF

常温在  $25^{\circ}C$  环境下, 电源工作在规格范围下, 平均无故障时间至少 20000 hours. 参考标准: MIL-HDBK-217F

When the power supply is operating within the limits of this specification the MTBF shall be at least 20000 hours at  $25^{\circ}C$ . Reference standard: MIL-HDBK-217F

## 结构参数/MECHANICAL REQUIREMENT:

### 1.外壳/Enclosure:

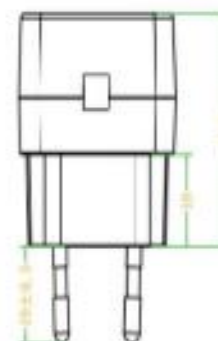
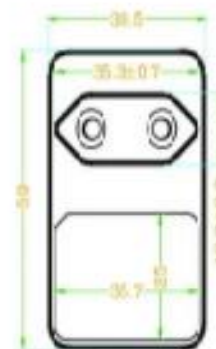
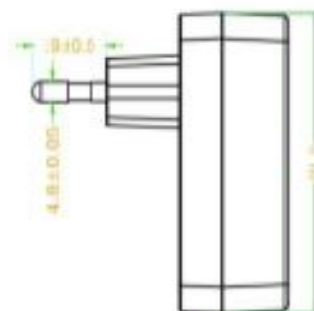
外壳尺寸: L59.5\*W39.5\*H45.8mm;

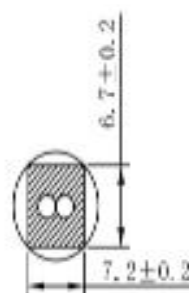
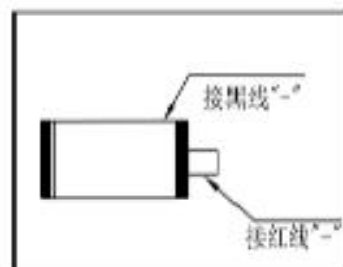
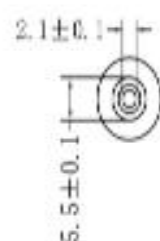
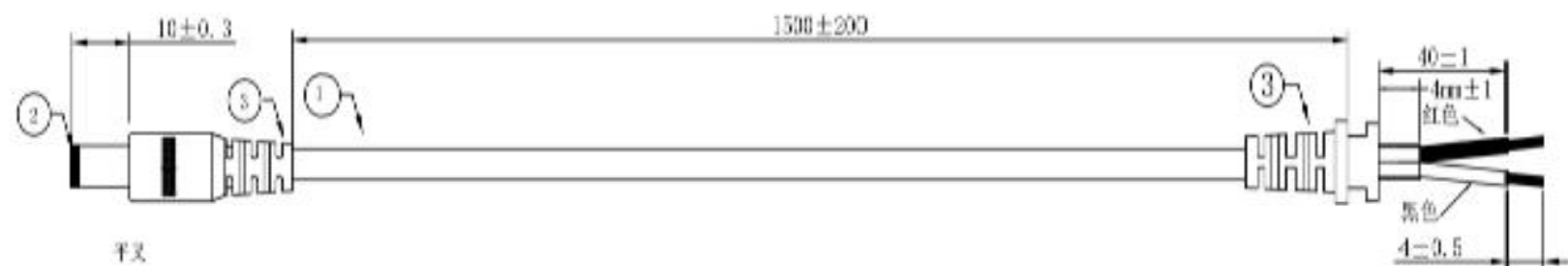
The power supply size:L59.5\*W39.5\*H45.8mm;

### 2.输入线/Input Connector;

2Cu pin US插脚/Two Cu pin input plug of US

序号	名称	描述
01	材质	PC-11(N), PC-631(L), 940(F1), ML1655R(F1), C-6410.
02	防火等级	V-0 120 °C
03	安规号	UL E45329, UL E59070, UL E20778C.
04	误差值	

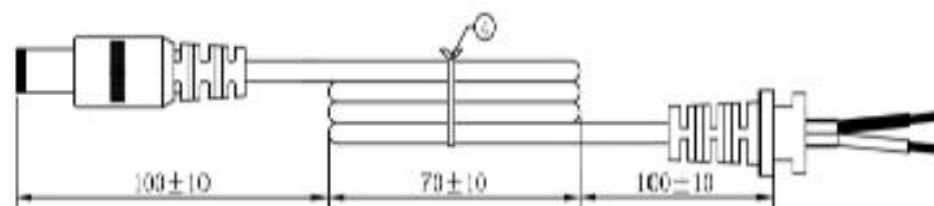




SR尺寸图

## 扎线图

备注：SR的尺寸只做参考，  
实际需匹配机壳确实松紧



- 注：1. 成品须做电气导通测试，不能有断路、短路、错位、间歇性断路等接触不良现象。  
2. 导通测试：标准线号#17/e \* 线材实际长度=导通距离D \* 90%。  
3. 所有线材需符合“RoHS”要求。  
4. SR拉力测试：吊重1250g 10秒，SR无刺伤等不良。  
5. 弯曲测试：吊重200g 45次/分，左右65度内，达100次以上为合格。  
6. 红色线须与插头的头连接，并且接点须端正。

NO.	ITEM	Q'TY	DESCRIPTION
01	CABLE	1PC	012454 22AWG/2C 80℃/300V L=1500MM
02	PLUG	1PC	DC PLUG: φ5.5*2.1*10 平叉直头
03	PVC料	8.2g	PVC料:45P 黑色 OD:3.5mm
04	TIE	1PC	TIE: BLACK L=100MM 有芯扎带



# KEERDA

직류전원장치

모델명:DZ018CHL120150K

정격입력:100-240V~50/60Hz 0.5A

정격출력:12.0V  $\equiv$  1.5A 18.0W

제조사명:GUANGDONG KEERDA

ELECTRONICS CO.,LTD

제조국:CHINA

세소년월:YYWW

SU10578-20002

R-R-GKD-DZ018CHL090200

A/S No:XXXX-XXXX



比例: 4:1

#### NOTE:

- 1.颜色/Color: 银底黑字哑膜/  
Silver ground black character;
- 2.材质/Material: PET+雾面/fog  
surface;
- 3.厚度/Thickness:0.2mmT;
- 4.误差/Tolerance:+0/-0.2mm;
- 5.环保/RoHS;
- 6.YYWW, YY--代表年份,  
WW--代表周期。
- 7.注: CE最小尺寸 5mm,  
回收筒最小高度 7mm.  
周期码随生产时期变动而改变  
XXX为客户提供信息。
- 8.标贴可贴纸或镭雕。



比例: 1:1