

承认书



SPECIFICATION FOR APPROVAL

Switching power Supply/开关电源

客 户:

CUSTOMER: Sparkfun

产品描述:

DESCRIPTION: Input:100~240V AC 50/60Hz Output: 5VDC4A

机种型号:

OUR MODEL NO: YNQX30D050400DL

样品编号:

日期:

SAMPLE NO: QX201900381DATE: 2019-04-10

产品颜色:

SAMPLE COLOR:Black White 符合环保项: RoHS REACH PAHS 17P 加州 65

| APPROVAL SIGNATURE/客户确认 | | |
|-------------------------|----------------|----------------|
| 核准/APPROVED BY | 审核/CHECKED BY | 检测/TESTED BY |
| | | |
| Manufacturer/制造商 | | |
| 业务/SALES | 核准/APPROVED BY | 设计/DESIGNED BY |
| Nick | | |

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SHEN ZHEN QI XIN ELECTRONICS CO., LTD

型号/Our model: YNQX30D050400DL

客户/Customer: Sparkfun

日期/Date: 2019-04-10

样品编号/SAMPLE No: QX201900381

版本目录/Rev. List

| 版本/Rev. | 日期/Date | 描述/Description | 制订/Design |
|---------|------------|----------------|-----------|
| A0 | 2019-04-10 | 新版本/New Rev. | ZHY |
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1、描述/DESCRIPTION:

本规格书适用于 YNQX30D050400DL 型号的开关电源.

The purpose of the document is to specify the functional requirements of a 20W switching power supply.

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 1.0A.

1.0Amps 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 240Vac 冷态起机时无损坏.

No damage shall be occurred and the input fuse shall not be blown up, Cold start at 240Vac input, with rated 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.At240Vac input.

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3、输出特性/OUTPUT CHARACTERISTICS:

3.1 输出功率/Power output (AC:100~240V)

| 电压 Voltage | 最小负载 Min. Load | 额定负载 Rated. Load | 峰值功率 Peak | 输出功率 Output power |
|---------------|-------------------|---------------------|--------------|----------------------|
| 5VDC | 0.01A | 4A | | 20W |

3.2 负载特性,调整率/Combined Load/Line Regulation (AC:100~240V)

| 电压 Voltage | 最小负载 Min. Load | 额定负载 Rated. Load | 线性调整 Line Regulation | 空负载电压 Voltage I=0/I=R |
|---------------|-------------------|---------------------|-------------------------|--------------------------|
| 5VDC | 0.01A | 4A | ±2% | 4.6-5.4 V |

3.3 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 47uF 的电解电容和一个 0.1uF 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 47uF/0.1uF,crossed connected at testing point.

| | |
|---------------|-------------------------------------|
| 电压 Voltage | 最大纹波/最大噪音 Ripple and Noise(Max.) |
| +5VDC | 150mV p-p |

3.4 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.

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

3.5 上升时间/Rise time:

当输入 115Vac 和输出最大负载时最大时间为 40 mS.

40 mS Max.at 115Vac input and output Max load.

3.6 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 5mS.

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

3.7 待机功耗/Standby Power:

当输入 115Vac 60Hz 时 0.1W 最大 .

0.1W Max. at 115Vac 60Hz Io=0 input.

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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 83.08%

83.08%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 VI。

Adapter meet efficiency level VI.

3.9 过冲/Overshoot:

在电源开启或关闭的时候,最大 15%.

15% Max. When power supply at turn off/on.

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正常工作恢复.

The power supply will be auto recovered when short circuit faults remove.

4.2 过流保护/Over current Protection:

过流故障排除后,电源将自动恢复正常工作.

The power supply will be auto recovered when over current faults remove.

5、环境要求/ENVIRONMENTAL REQUIREMET:**5.1 工作温度/Operating Temperature:**

0°C-40°C,满载,正常工作.

0°C to 40°C, Full load, Normal operation.

5.2 储藏温度/Storage Temperature:-20°C to 60°C

带外壳/With package

5.3 工作湿度/Relative Humidity:

5%(0°C)~90%(40°C),72 小时,满载,正常工作.

5%(0°C)~90%(40°C)RH,72Hrs, Full load, Normal operating.

5.4 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/S²)

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2. 运输/Transportation:

IEC 721-3-2 2M2

5-9Hz,A=3.5mm

9~200Hz,加速度 Acceleration=5m/S²200~500Hz,加速度 Acceleration=15m/S²**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.

5.5 跌落试验/Dropping Packed:

跌落高度为 760mm;

Drop the height is 760mm.

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: 符合标准 : UL60950、EN60950**

Safety:accord with : UL60950、EN60950

6.2 高压/DIELECTRIC STRENGTH Hi-Pot:

初级对次级/Primary to secondary: 4242Vdc/5mA/60S for type test.

6.3 绝缘抗阻/Insulation resistance:初级对次级/Primary to secondary:20M Ω min at 500V DC.**6.4 EMI 标准/EMI STANDARD**

Meets the Limits of/测试符合

<1>.Fcc part15 class B rules

<2>.EN55032 class B rules

<3>. GB17625.1-2012

<4>.AS/NZS CISPR32:2015.

<5>.IEC61000-4-5

<6>.IEC61000-4-2

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7、 结构参数/MECHANICAL REQUIREMENT:

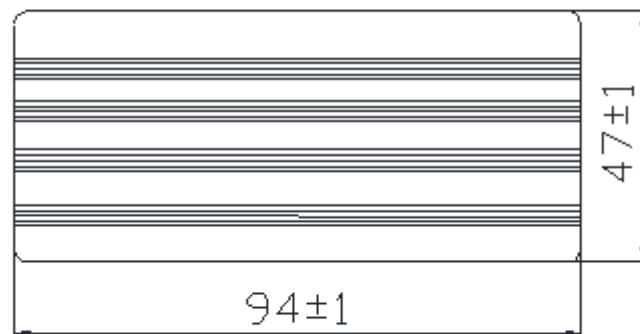
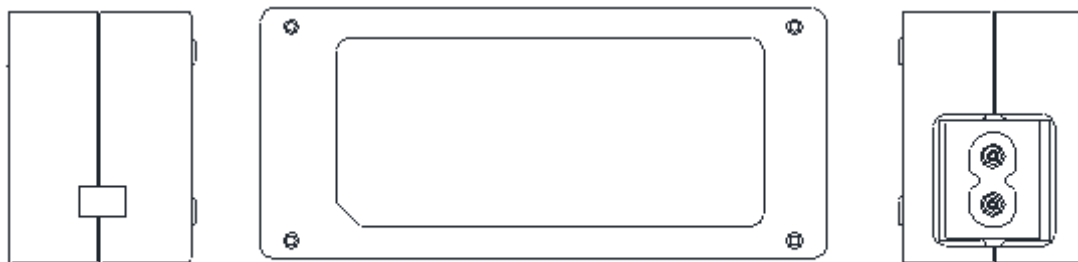
7.1 外壳/Enclosure:

The power supply size: L94x W47x H30mm;

外壳尺寸: L94x W47x H30mm;

7.2 输入线/Input Connector:

2PIN 插脚/Two pin input plug of 2PIN.



dimension(mm)



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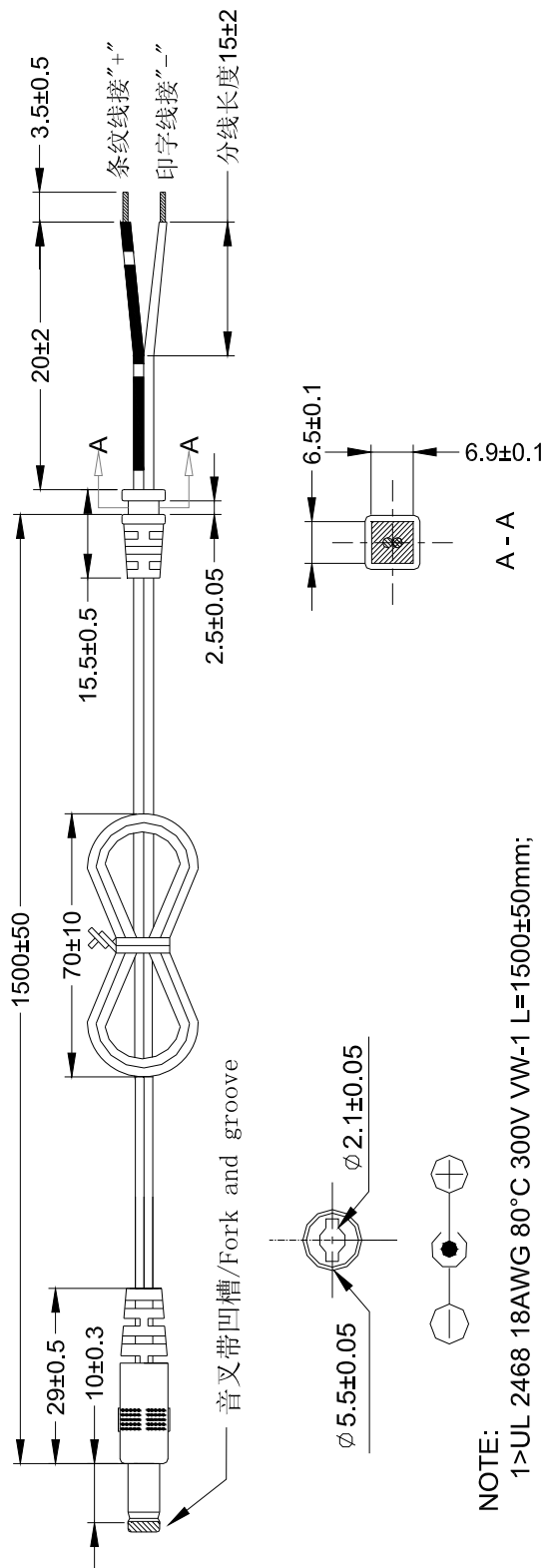
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8、线材/CORD:



NOTE:

1>UL 2468 18AWG 80°C 300V VW-1 L=1500±50mm;

2>PLUG:5.5*2.1*10mm, 直头音叉带槽, GV FK 180°, 内正外负, inside'+', outside'-';

3>Color:Black;

4>RoHS2.0REACH\PAHS\17P\加州65.

5>Material:线皮: PVC.线芯: 铜.

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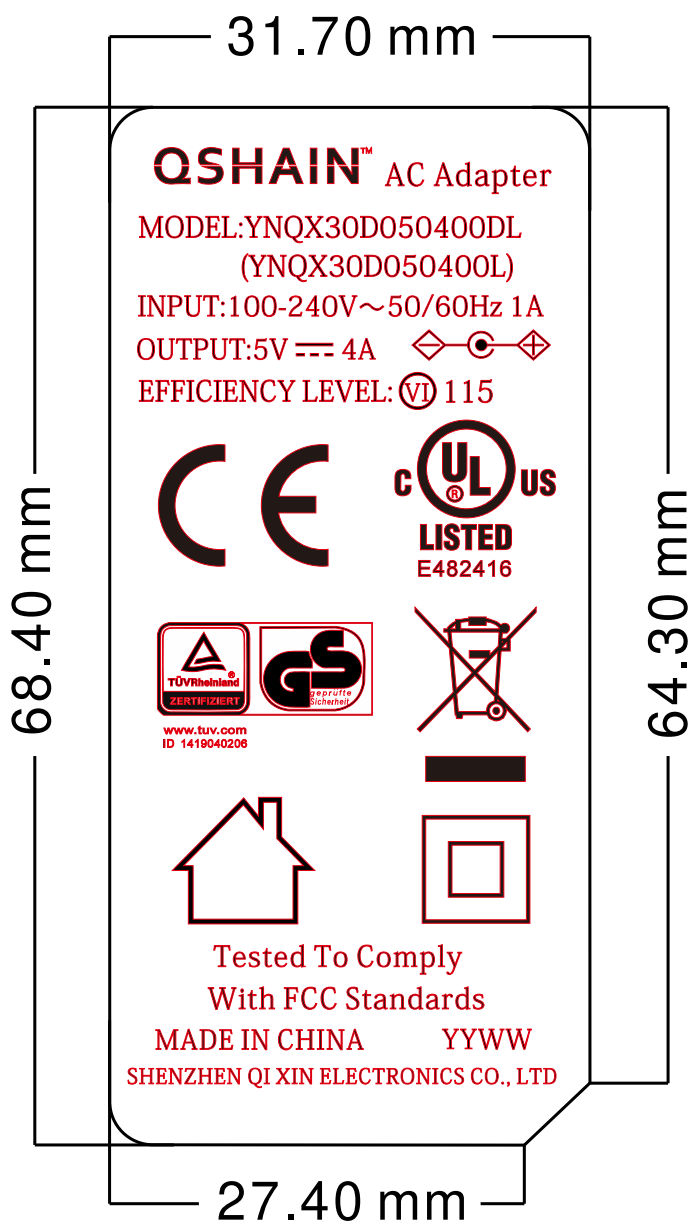
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9、铭牌/LABEL:



NOTES:

1. 激光丝印于外壳上
2. YYWW, YY 表示年份, WW 表示周数
3. 此铭牌是按业务要求制作



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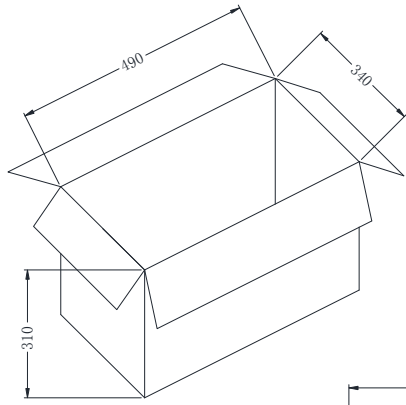
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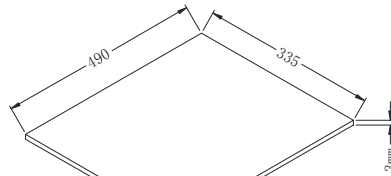
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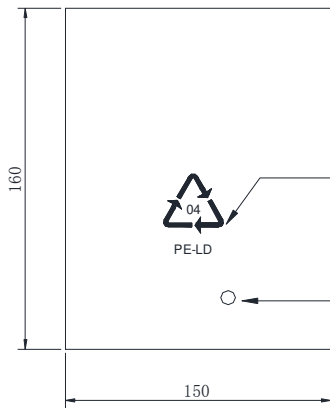
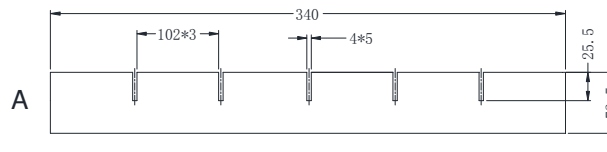
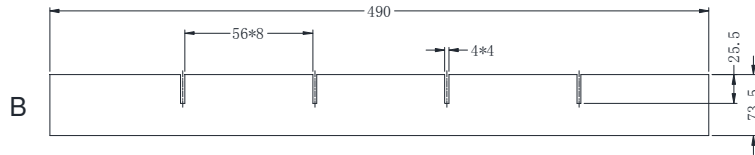
10、包装说明/PACKING:



外箱/Carton



平板/Slab



胶袋/Pe bag

绿色字体/
Green lettering

透气孔
Breathe freely os

包材/Packing:

A:L340*W73.5mm

B:L490*W73.5mm

外箱内尺寸/Carton inside size:L490*W340*H310mm

平板/Slab:L490*W335*T3mm

胶袋/Pe bag:L160*W150*T0.03mm

数量/Quantity:96PCS/CTN

备注：此包装材料仅供参考。

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11、测试报告/ELECTRICAL TEST REPORT:

| No 序号 | Test item 测试项目 | Test condition 测试条件 | Standard spec 标准规格 | Test data 测试数据 | | | | | Unit 单位 | Judge 判定 Pass/ Fail |
|--------------|-------------------------------|---|--|-------------------|-------|---|---|---|------------|------------------------------|
| | | | | 1 | 2 | 3 | 4 | 5 | | |
| 1 | Output Voltage 输出电压 | Vin100Vac 60Hz Io=0 输入 100Vac 空载 | 4.6-5.4 V | 5.25 | 5.26 | | | | V | Pass |
| 2 | Output Voltage 输出电压 | Vin100Vac 60HzIo=Rated Current 输入 100Vac 60Hz 负载 | 4.6-5.4 V | 4.65 | 4.65 | | | | V | Pass |
| 3 | Average Efficiency 平均效率 | Vin 115Vac 60Hz 输入 115Vac 60Hz | 83.08% | 83.28 | 83.29 | | | | % | Pass |
| 4 | Ripple&Noise mVp-p 纹波&杂讯 | Vin100Vac 60Hz Full load 输入 100Vac 60Hz 满载 | 150mVp-p | 92 | 94 | | | | mVp-p | Pass |
| 5 | Line Regulation 线性调整率 | Vin=100V~240V Io=Rated Current 额定电流 | ±2% | OK | OK | | | | | Pass |
| 6 | Standby Power 待机功耗 | Vin 115Vac 60Hz Io=0 输入 115Vac 60Hz | 0.1W max | 0.05 | 0.06 | | | | W | Pass |
| 7 | Short circuit test 短路测试 | Vin100Vac 60Hz 输入 100Vac 空载 | No odor smoke fire plastic deformation and excessive heat happen. 无冒烟,起火,外壳变 形及过热现象 | OK | OK | | | | | Pass |
| 8 | OCP 过电流保护 | Vin100Vac 60Hz 输入 100Vac | AMax | 6.02 | 6.04 | | | | A | |
| 9 | Output Voltage 输出电压 | Vin240Vac 50Hz Io=0 输入 240Vac 空载 | 4.6-5.4 V | 5.24 | 5.25 | | | | V | Pass |
| 10 | Output Voltage 输出电压 | Vin240Vac 50HzIo=Rated Current 输入 240Vac 60Hz 负载 | 4.6-5.4 V | 4.74 | 4.75 | | | | V | Pass |
| 11 | Average Efficiency 平均效率 | Vin230Vac 50Hz 输入 230Vac 50Hz | 83.08% | 83.12 | 83.14 | | | | % | Pass |
| 12 | Ripple & Noise mVp-p 纹波&杂讯 | Vin240Vac 50Hz Full load 输入 240Vac 50Hz 额定电流 | 150mVp-p | 96 | 98 | | | | mVp-p | Pass |
| 13 | Line Regulation 线性调整率 | Vin=100V~240V Io=Rated Current 输入 100V~240V | ±2% | OK | OK | | | | | Pass |
| 14 | Standby Power 待机功耗 | Vin230Vac 50Hz Io=0 输入 230Vac 50Hz | W max | | | | | | W | Pass |
| 15 | Short circuit test 短路测试 | Vin240Vac 50Hz 输入 240Vac 50Hz | No odor smoke fire plastic deformation and excessive heat happen. 无冒烟,起火,外壳变 形及过热现象 | OK | OK | | | | | Pass |
| 16 | OCP 过电流保护 | Vin230Vac 50Hz 输入 230Vac 50Hz | AMax | 6.26 | 6.27 | | | | A | |
| 17 | Hi-pot test 高压测试 | 高压/DIELECTRIC STRENGTH Hi-Pot: 初级对次级 /Primary to secondary:4242Vdc/5mA/60S for type test | | OK | OK | | | | | Pass |
| 18 | Burn in 老化 | Input:220Vac/50Hz Full Load 4hrs 输入 220Vac/50Hz 满载 4 小时 | | OK | OK | | | | | Pass |
| 19 | Drop test 跌落 | Heigh:1m Three*faces(once on each plane) 高 1 米,3 个面,每面 1 次. | | OK | OK | | | | | Pass |
| REMARK 备注 | | | | | | | | | | |

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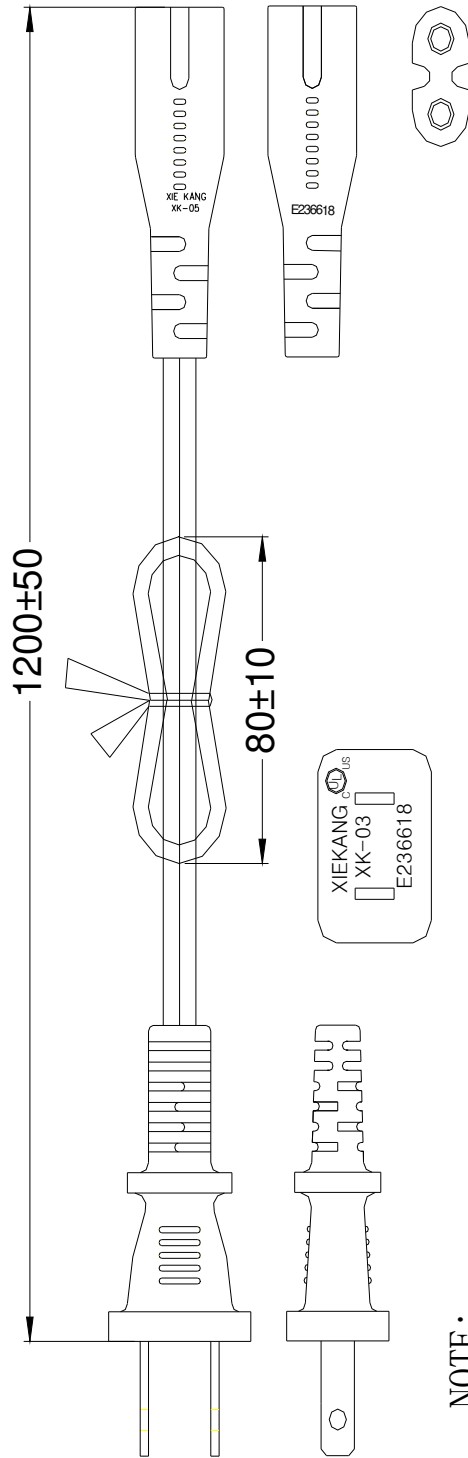
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12、线材/AC CORD:



NOTE:

- 1、 线材印字内容 (UL) E253760 BENDA SPT-1 18AWGX2C VW-1 300V 105C ROHS
- 2、 SPT-1 18# 41/0.16黑色过REACH环保
- 3、 所有材料过REACH环保

