

# 承认书



## SPECIFICATION FOR APPROVAL

### Switching power Supply/开关电源

客户:

CUSTOMER: \_\_\_\_\_

产品描述:

DESCRIPTION: Input:100~240V AC 50/60Hz Output:5VDC2A

机种型号:

OUR MODEL NO: QX18W050200FU

样品编号:

日期:

SAMPLE NO: QX2014000803

DATE: 2014-07-16

产品颜色:

SAMPLE COLOR:Black

White

符合环保项: ROHS

PAH

PHTHALTES

REACH

| 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 |
|                         |                |                |

深圳市齐鑫电子有限公司

SHEN ZHEN QI XIN ELECTRONICS CO.,LTD

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深圳市齐鑫电子有限公司  
SHEN ZHEN QI XIN ELECTRONICS CO., LTD

型号/Our model: QX18W050200FU  
客户/Customer:  
日期/Date:2014-07-16  
样品编号/SAMPLE No:QX2014000803

版本目录/Rev. List

| 版本/Rev. | 日期/Date    | 描述/Description | 制订/Design |
|---------|------------|----------------|-----------|
| A0      | 2014-07-16 | 新版本/New Rev.   | XXJ       |
|         |            |                |           |
|         |            |                |           |
|         |            |                |           |
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## 1、描述/ DESCRIPTION:

本规格书适应于 QX18W050200FU 型号的开关电源.

The purpose of the document is to specify the functional requirements of a 10W 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 0.5A.

0.5Amps 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 冷态起机时将不会损坏.

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.

### 2.5AC 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

| 电压<br>Voltage | 最小负载<br>Min. Load | 额定负载<br>Rated. Load | 峰值功率<br>Peak | 输出功率<br>Output power |
|---------------|-------------------|---------------------|--------------|----------------------|
| 5Vdc          | 0.01A             | 2A                  |              | 10W                  |

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

| 电压<br>Voltage | 最小负载<br>Min. Load | 额定负载<br>Rated. Load | 线性调整<br>Line Regulation | 负载调整<br>Load Regulation |
|---------------|-------------------|---------------------|-------------------------|-------------------------|
| 5Vdc          | 0.01A             | 2A                  | ±2%                     | ±5%                     |

#### 3.3 纹波和噪音 Ripple and Noise:

测试条件:在输入 115/230Vac 25°C 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 25°C 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             | 最大纹波/最大噪音                     |
| <u>Voltage</u> | <u>Ripple and Noise(Max.)</u> |
| +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.

3Second 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 5 mS .

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

#### 3.7 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 73.37%.

73.37% 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.

Adapter meet efficiency lever V.

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### 3.8 过冲/Overshoot:

在电源开启或关闭的时候,最大 15%.

15% Max.When power supply at turn or turn off.

## 4、保护功能/PROTECTION FUNCTION:

### 4.1 短路电路保护/Short circuit protection:

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)

#### 2. 运输/Transportation:

IEC 721-3-2 2M2

5-9Hz,A=3.5mm

9~200Hz,加速度 Acceleration=5m/S2

200~500Hz,加速度 Acceleration=15m/S2

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**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 is760mm.

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 EMC 要求/SAFETY AND EMC REQUIREMENT:**

**6.1 安全:符合标准 :UL60065**

Safety:accord standard with: UL 60065

**6.2 高压/DIELECTRIC STRENGTH Hi-Pot:**

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

**6.3 绝缘阻抗/Insulation resistance:**

初级对次级/Primary to secondary:20M $\Omega$  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>.EN55022 class B rules

<3>.GB9254-1998,GB17625.1-2003

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7、结构参数/MECHANICAL REQUIREMENT:

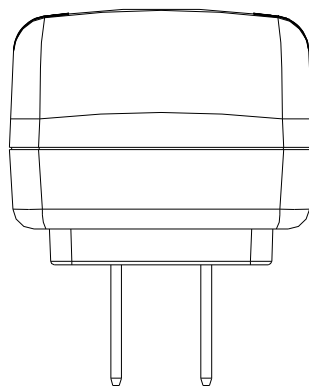
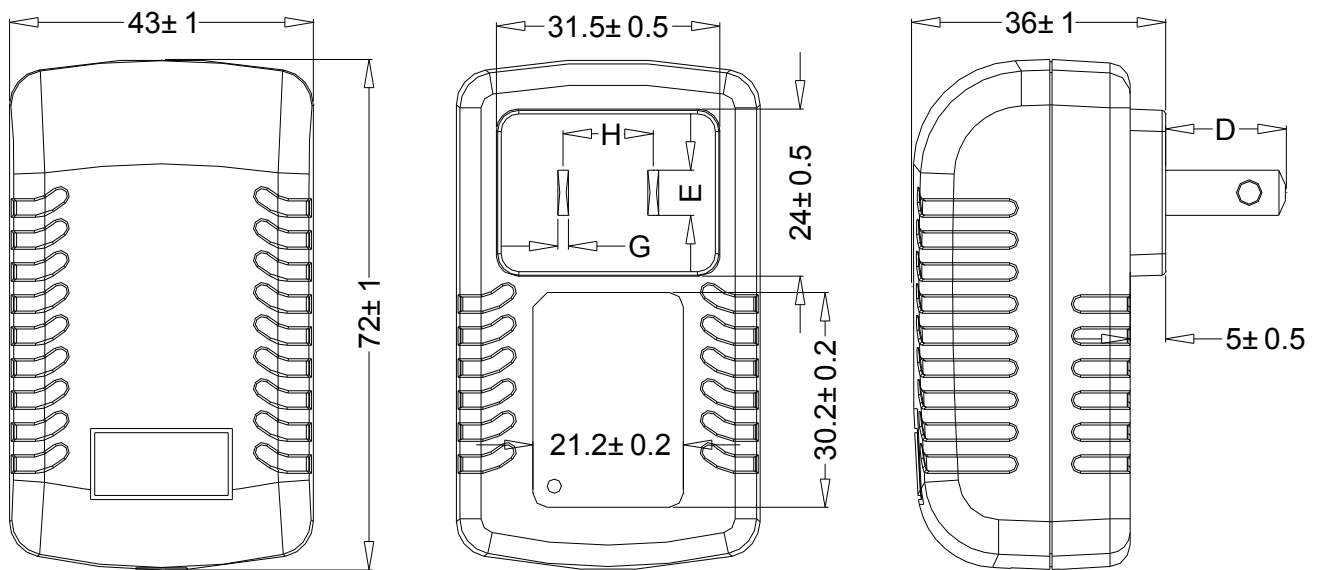
7.1 外壳/Enclosure:

外壳尺寸: L72 x W43 x H36mm;

The power supply size: L72 x W43 x H36mm;

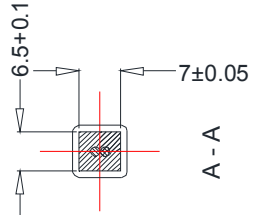
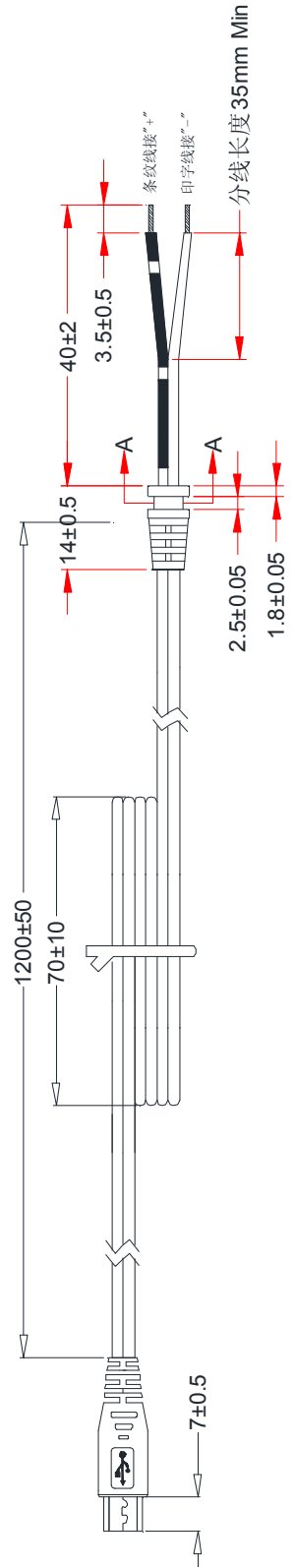
7.2 输入线/Input Connector:

2 Pin US 插脚/Two pin input plug of US.



| 符号/No. | 标准值/Standard datas(mm) |
|--------|------------------------|
| D      | 16-18(17)              |
| E      | 6.09-6.60(6.35)        |
| G      | 1.40-1.65(1.50)        |
| H      | 12.6-12.8(12.7)        |

8、线材/CORD:



- NOTE:
- 1>UL 2468 20AWG 80°C 300V VW-1 L=1200±50mm;
  - 2>PLUG:Micro 5Pin, 红色线接PIN1“+”, 黑色线接PIN5“-”
  - 3>Color:Black;
  - 4>RoHS.



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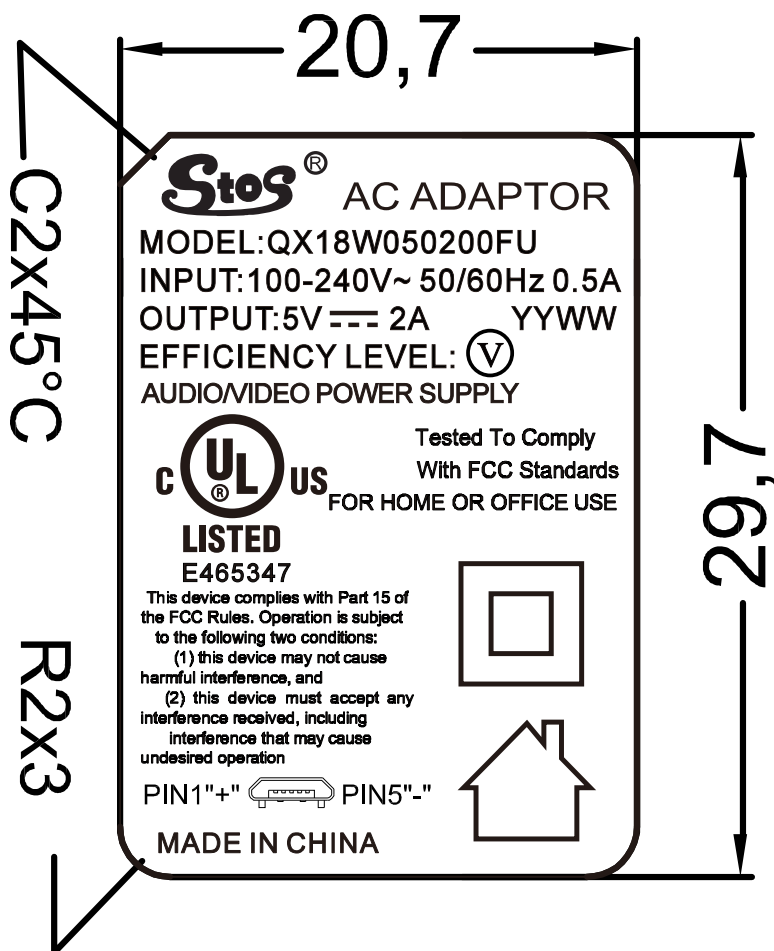
型号/Our model: QX18W050200FU

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9、铭牌/LABEL:



NOTE:

- 1.颜色/Color:黑底白字/ Black ground white
- 2.材质/Material:PET+雾面/fog surface
- 3.厚度/Thickness:0.20mm
- 4.误差/Toilerance:+0/-0.2mm
- 5.环保/RoHS
- 6.YYWW,YY 表示年份,WW 表示周数

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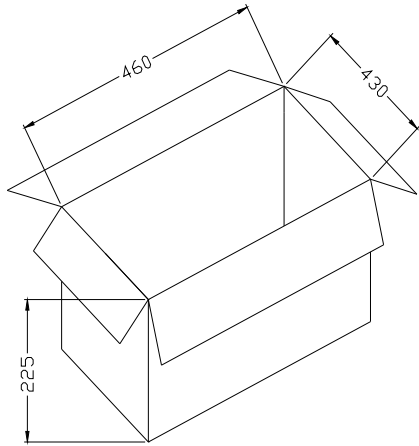
型号/Our model: QX18W050200FU

客户/Customer:

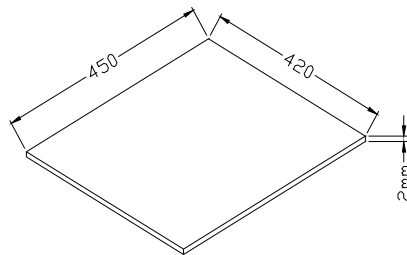
日期/Date:2014-07-16

样品编号/SAMPLE No:QX2014000803

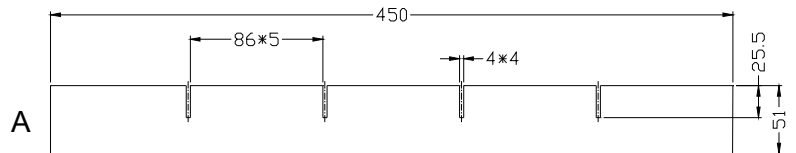
10、包装说明/PACKING:



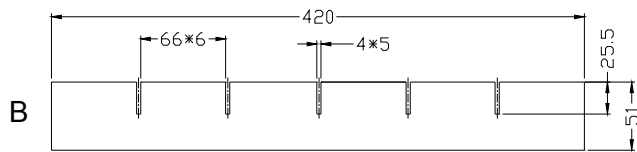
外箱/Outside box



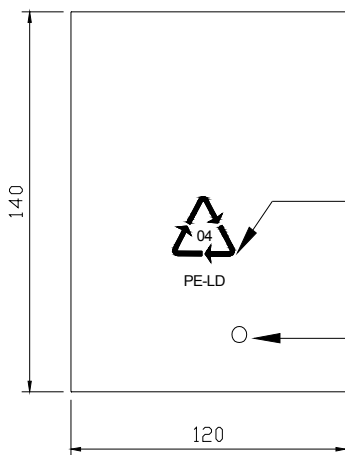
平板/Slab



A



B



绿色字体/  
Green lettering

透气孔  
Breathe freely os

包材/Packaging:

A:L450\*51mm

B:420\*51mm

外箱内径/Outside box:L460\*W430\*H225mm

平板/Slab:L450\*W420\*2mmT

胶袋/Pe bag:L140\*W120\*0.03mmT

数量/Quantity:120PCS/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<br>序号     | Test item<br>测试项目             | Test condition<br>测试条件  | Standard spec<br>标准规格  | Test data<br>测试数据 |       |   |   |   | Unit<br>单位 | Judge<br>判定 |
|--------------|-------------------------------|---|--|-------------------|-------|---|---|---|------------|-------------|
|              |                               |   |  | 1                 | 2     | 3 | 4 | 5 |            |             |
| 1            | Output Voltage<br>输出电压        | Vin100Vac 60Hz Io=0<br>输入 100Vac 空载   | 5.0+/-5%V  | 5.21              | 5.19  |   |   |   | V          | Pass        |
| 2            | Output Voltage<br>输出电压        | Vin100Vac60Hz Io=Rated Current<br>输入 100Vac 60Hz 负载   | 5.0+/-5%V  | 4.92              | 4.87  |   |   |   | V          | Pass        |
| 3            | Average Efficiency<br>平均效率    | Vin 115Vac 60Hz<br>输入 115Vac 60Hz   | 73.37%   | 76.66             | 76.58 |   |   |   | %          | Pass        |
| 4            | Ripple&Noise mVp-p<br>纹波&杂讯   | Vin100Vac 60Hz Full load<br>输入 100Vac 60Hz 满载   | 150mVp-p   | 90                | 90    |   |   |   | mVp-p      | Pass        |
| 5            | Line Regulation<br>线性调整率      | Vin=100V~240V Io=Rated<br>Current<br>额定电流   | ±3%  | OK                | OK    |   |   |   |            | Pass        |
| 6            | Standby Power<br>待机功耗         | Vin 115Vac 60Hz Io=0<br>输入 115Vac 60Hz  | 0.3W max   | 0.13              | 0.13  |   |   |   | W          | Pass        |
| 7            | Short circuit test<br>短路测试    | Vin100Vac 60Hz<br>输入 100Vac 空载  | No odor smoke fire<br>plastic deformation<br>and excessive heat<br>happen.<br>无冒烟,起火,外壳变<br>形及过热现象 | OK                | OK    |   |   |   |            | Pass        |
| 8            | OCP<br>过电流保护                  | Vin100Vac 60Hz<br>输入 100Vac   | Amax   | 3.15              | 3.19  |   |   |   | A          |             |
| 9            | Output Voltage<br>输出电压        | Vin240Vac 50Hz Io=0<br>输入 240Vac 空载   | 5.0+/-5%V  | 5.21              | 5.19  |   |   |   | V          | Pass        |
| 10           | Output Voltage<br>输出电压        | Vin240Vac60Hz Io=Rated Current<br>输入 240Vac 60Hz 负载   | 5.0+/-5%V  | 4.92              | 4.87  |   |   |   | A          | Pass        |
| 11           | Average Efficiency<br>平均效率    | Vin230Vac 50Hz<br>输入 230Vac 50Hz  | 73.37%   | 74.15             | 74.11 |   |   |   | %          | Pass        |
| 12           | Ripple & Noise mVp-p<br>纹波&杂讯 | Vin240Vac 50Hz Full load<br>输入 240Vac 50Hz 额定电流   | 150mVp-p   | 100               | 100   |   |   |   | mVp-p      | Pass        |
| 13           | Line Regulation<br>线性调整率      | Vin=100V~240V Io=Rated<br>Current<br>输入 100V~240V   | 3%   | OK                | OK    |   |   |   |            | Pass        |
| 14           | Standby Power<br>待机功耗         | Vin230Vac 50Hz Io=0<br>输入 230V 50Hz   | 0.3W max   | 0.19              | 0.19  |   |   |   |            | Pass        |
| 15           | Short circuit test<br>短路测试    | Vin240Vac 50Hz<br>输入 240Vac 50Hz  | No odor smoke fire<br>plastic deformation<br>and excessive heat<br>happen.<br>无冒烟,起火,外壳变<br>形及过热现象 | OK                | OK    |   |   |   |            | Pass        |
| 16           | OCP<br>过电流保护                  | Vin230Vac 50Hz<br>输入 230Vac 50Hz  | Amax   | 3.33              | 3.40  |   |   |   | A          |             |
| 17           | Hi-pot test<br>高压测试           | 高压/DIELECTRIC STRENGTH Hi-Pot: 初级对次级<br>/Primary to secondary:4242Vdc/5mA/60S for type test |  | OK                | OK    |   |   |   |            | Pass        |
| 18           | Burn in<br>老化                 | Input:220Vac/50Hz Full Load 4hrs<br>输入 220Vac/50Hz 满载 4 小时                                  |  | OK                | OK    |   |   |   |            | Pass        |
| 19           | Drop test<br>跌落               | Heigh:1m Three*faces(once on each plane)<br>高 1 米,3 个面,每面 1 次.                              |  | OK                | OK    |   |   |   |            | Pass        |
| REMARK<br>备注 |                               |   |  |                   |       |   |   |   |            |             |

NOTICE OF COMPLETION  
AND  
AUTHORIZATION TO APPLY THE UL MARK



2013-12-19

Qi Xin Technology (hongkong) Co Ltd  
Mr. Wan Ming Li  
16th Fl Kln Bldg  
555 Nathan Rd  
Mongkok  
Kln , Hk

Our Reference: File E465347, Vol. X1 Project Number 4786182262  
Your Reference: Li, Wan Ming Mr. (Dec 10, 2013)  
Project Scope: UL/CUL - Investigation of Switching Model Power Adapter, Model QX18Wxyzu  
(Where x=050-240, Represent output voltage, minimum step by 0.1V, 050=5.0Vdc,  
240=24Vdc, y=001-300, Represent output current, minimum step by 0.01A, 001=0.01A,  
300=3.0A, z= F,H, L, Stands for input voltage type : F: Full voltage(100-240Vac),H: high  
voltage (200-240Vac), L: low voltage(100-120Vac), u=U, Stands for AC Pin type , U indicates  
the American type AC Plug)

Dear Mr. Wan Ming Li:

Congratulations! UL's investigation of your product(s) has been completed under the above Reference Number and the product was determined to comply with the applicable requirements. This letter temporarily supplements the UL Follow-Up Services Procedure and serves as authorization to apply the UL Mark at authorized factories under UL's Follow-Up Service Program. To provide your manufacturer(s) with the intended authorization to use the UL Mark, you must send a copy of this notice to each manufacturing location currently authorized under File E465347, Vol. X1 and including any special instructions as indicated in the addendum to this letter.

Records in the Follow-Up Services Procedure covering the product are now being prepared and will be sent in the near future. Until then, this letter authorizes application of the UL Mark for 90 days from the date indicated above.

Additional requirements related to your responsibilities as the Applicant can be found in the document "Applicant responsibilities related to Early Authorizations" that can be found at the following web-site:  
<http://www.ul.com/EAResponsibilities>

Any information and documentation provided to you involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

We are excited you are now able to apply the UL Mark to your products and appreciate your business. Feel free to contact me or any of our Customer Service representatives if you have any questions.

Very truly yours,

Alex Liu  
+852 2276 9280  
Engineering Associate  
Alex.Liu@ul.com

Reviewed by:

William R. Carney  
847/664-1088  
Chief Engineer Director I  
William.R.Carney@ul.com

CC: ,

NWTFCCB-9281E4

# IPI ADDENDUM



## NOTICE OF COMPLETION AND AUTHORIZATION TO APPLY THE UL MARK

Our Reference: File E465347, Vol. X1 Project Number 4786182262

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Project Scope: UL/CUL - Investigation of Switching Model Power Adapter, Model QX18Wxyzu  
(Where x=050-240, Represent output voltage, minimum step by 0.1V, 050=5.0Vdc, 240=24Vdc, y=001-300, Represent output current, minimum step by 0.01A, 001=0.01A, 300=3.0A, z= F,H, L, Stands for input voltage type : F: Full voltage(100-240Vac),H: high voltage (200-240Vac), L: low voltage(100-120Vac), u=U, Stands for AC Pin type , U indicates the American type AC Plug)

This addendum covers products manufactured at the following location:

SHENZHEN QI XIN ELECTRONICS CO LTD  
3RD FL, BLDG A6, XINFU INDUSTRIAL ZONE,  
CHONGQING RD, FUYONG, BAOAN, SHENZHEN 518103, CHINA  
深圳市齐鑫电子有限公司  
中國深圳市宝安区福永镇重庆路新福工业园A6栋3楼

Before you may begin shipping product with the UL Mark at the above manufacturing locations, an Initial Production Inspection (IPI) must be successfully performed by a UL representative at the location.

The IPI is intended to confirm that your manufacturing location is capable of producing a product in accordance with UL's requirements. **YOU MAY NOT SHIP PRODUCTS WITH THE UL MARK UNTIL THE IPI HAS BEEN COMPLETED AND UL HAS FOUND THE PRODUCTS AT THE FACTORY TO COMPLY WITH OUR REQUIREMENTS.** Once the IPI has been successfully completed, you will be granted authorization to ship products bearing the UL Mark.

Instructions for the IPI will be sent to our inspection center nearest to you. The Inspection Center will contact you shortly to make arrangements for the IPI.

Inspection Center information

Inspection Center 750  
Shenzhen Inspection Center (For Manufacturer No.100611-733)  
深圳检验中心(上述工厂标号100611-733)  
深圳市南山区科苑北路银河风云大厦三楼, 邮政编码518057  
755-86130536  
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