1.0HISTORY REVISION 修订履历

Revision Date 修订日期	**Revision Page** 修订页面	**Description** 说明	**Remark** 备注

2.0 Electrical performance 电气性能

1.1 2.1 Input Characteristics 输入特性:

Rated input voltage 额定输入电压	100-240Vac
Operating range 工作范围	90-264Vac
Rated input frequency 额定输入频率	50-60Hz
Rated input current 额定输入电流	**0.9A Max.**
Power consumption (no loading) 功耗（空载）	**0.1W Max.** （Input voltage 115V and 230V） 在输入电压 115V 和 230V 条件下 0.1W 最大
Primary current protection 初级电流保护	An adequate internal fuse on the AC input line is provide. 在交流输入的火线上加一个合适的保险丝
Configuration 结构	2 Conductor 2 类电源

2.2 Output Characteristics 输出特性:

2.2.1	Nominal dc output voltage 额定直流输出电压	**12.0V**
2.2.2	Minimum load current 最小负载电流	**0.0A**
2.2.3	Rating load current 额定负载电流	**3.0A**
2.2.4	Rating output power 额定输出功率	**36.0W**
2.2.5	Line regulation 线性调节	The line regulation is less than ±5% while measuring at rated load and +/-10% of input voltage changing. 额定输入电压±10%内变化，带额定负载，线性调节在±5%范围内
2.2.6	Load regulation 负载调节	The load regulation for output is less than ±5%, at measured output load from 10% to 100% rated load . 从负载 10%到 100%变化,输出负载调节率在±5%范围内，
2.2.7	No load voltage range 空载电压范围	**11.4-12.6**
2.2.8	Ripple and noise 纹波和噪声	**≤200mVp-p**
		Full load Ripple and noise 200mVp-pmax. Measurement is done by 20MHZ bandwidth oscilloscope and the output Paralleled a 0.1μF ceramic capacitor and a 10μF electrolysis capacitor.(test under the Condition of rated input and rated output) 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 10uF 的电解电容和一个 0.1uF 的瓷片电容.
2.2.9	Average efficiency 平均效率	Accord with energy level VI. Average efficiency **87.40%** minimum 符合能效六级，平均效率 87. 40%最小
		115V/60Hz and 230V/50Hz, output current from 100%, 75%, 50%, 25%. 当 115Vac 和 230Vac 输入电压时, 100%, 75%, 50%和 25%. 计算平均效率,

2.2.10	Turn on delay time 启动延迟时间	**5000 mS**. At nominal input AC voltage and full load 在额定输入交流电压和满负载状态下，不超过 5000 毫秒
2.2.11	Rise time 上升时间	The Supply shall have a start-up rise time of less than **100 mS** to rise to within regulation limits for all DC outputs. 在直流输出端，启动上升时间限制在 100 毫秒以内
2.2.12	Hold up time 保持时间	**5 mS** minimum At nominal input AC voltage and full load 在额定输入交流电压和满负载状态下，输出维持至少 5 毫秒
2.2.13	Output over-shoot 输出过冲	Less than **10%** of nominal voltage value 低于额定电压值的 10%
2.2.14	Protection function	
	Over current protection 过流保护	At 100-240V AC input, output current in the range of / , the power supply will protect 在 100-240V 交流输入下，输出电流在 / 范围时，电源供应器将保护

2.3Dielectric Withstand Voltage (HI-POT)电气耐压:

Engineering test:This Adapter shall be applied 3000Vac for 60s between AC input terminal to DC output terminal and enclosure. The cutoff current is specified as 10 mA；Large cargo product testing：This Adapter shall be applied 3000Vac for 2s between AC input terminal to DCoutput terminal and enclosure. The cutoff current is specified as 10 mA

工程样品测试：在交流输入端与输出端和交流输入与外壳之间，适配器须承受持续 60 秒的 3000 伏交流电压，截止电流设定为 10 毫安；大货产品测试: 在交流输入端与输出端和交流输入与外壳之间，适配器须承受持续 2 秒的 3000 伏交流电压，截止电流设定为 10 毫安.

2.4 Insulation Resistance 绝缘阻抗:

DC 500 V 30 MΩ min between input to output and enclosure.

在初级与次级间加 500VDC 进行测试，其绝缘电阻 30 兆欧最小。

2.5 Overload Test 过载试验:

In an ambient temperature of 25℃ applies a power source of rated input with the output load adjusted to 10% of rated output and rated continuously for 4 Hours, after turning off 60 minutes in normal temperature.

在 25℃环境温度下，提供额定交流源给适配器，让适配器输出大于额定值的 10%，连续工作 4 小时后，在常温下关闭 60 分钟.测试电性正常。

2.6 Humidity Test 湿度测试:

Temperature 35℃, 90~95% RH for 4 Hours after taken out from oven.

温度 35℃，相对湿度 90～95%，4 小时后从烤箱中取出测试电性正常。

3.0 Mechanical Characteristics 机械特性

3.1 Strain Relief Test 拉力测试:

Distance plug or 30CM SR position to impose a 10 pound weight, 1 minutes after the shift is less than 2MM。
距插头或 SR 30CM 位置施加 10 磅重量，1 分钟后移位小于 2MM。

3.2 Cord Bending Test:线弯曲试验:

The cord shall withstand a weight of 400 g, swinging from left to right at an angle of 120 degree, 40 cycle/min, 1000 times minimum. The cord shall be conductible.

电源线应能承受 400 克重，摆动一个角度，从左至右 120 度，40 次/分，1000 次最低。电源线应导通。

3.3 Drop Test 跌落测试:

Product shall be dropped from a height of 80cm, onto 1cm thickness dry wood surface 1 times from 3 different surface.

产品从 3 个不同的表面进行测试，在 80 厘米的高度上跌落在 1 厘米厚干实木板表面各 1 次

4.0 Environmental 环境:

4.1 Operating Temperature and Humidity Range 工作温度和湿度范围:

Operate over the temperature range of 0℃ to 35℃ ， 20% to 90% relative humidity no condensation.

工作在 0℃至 35℃温度范围内, 20％到 90％相对湿度无冷凝

4.2 Storage Temperature and Humidity Range 贮藏温度和湿度范围

The operation specified herein will not be adversely affected if stored or transported within the temperature limits of-20℃ to +70℃ with relative humidity up to 90% no condensation.

储存在-20℃至+70℃温度范围，相对湿度运送高达 90％无凝结，操作不会受到影响

5.0 Surface Structure 表面结构:

5.1 Appearance: Rift, dirty etc. are not permitted.

外观：裂缝，脏等都是不允许的

5.2 Outline: Dimension and express as drawing

外形：素描的方式表示尺寸

5.3 Net Weight: 168g Max.

净重量：168g 最大

6.0 Safety & EMC 安全与电磁兼容:

6.1 Safety Standard 安全标准: UL60950/EN60950-1/A12:2011/AS/NZS 60950.1:2011

6.2 EMC Standard 电磁标准: FCC Part 15/EN55022:2010/ AS/NZS CISPR 13

7.0 MTBF 可靠性:

the design and construction of this power supply shall exhibit a minimun mean time between failure of 35000 hours full rated load operation at 20--25℃.

在满载 20-25℃环境下，这个电源适配器的设计 MTBF 是 35000 小时。

8.0 Others：其他：

8.1 Instructions: 说明:

This power unit is intended to be correctly orientated in a vertical or floor mount position.

这个电源装置是被正确用在一个垂直或地板上的位置。

8.2 CAUTION (ATTENTION) 小心（注意）:

8.2.1 FOR INDOOR USE ONLY

只能在室内使用

(POUR UTILISATION À L'INTÉRIEUR SEULEMENT)

（只能在室内使用）

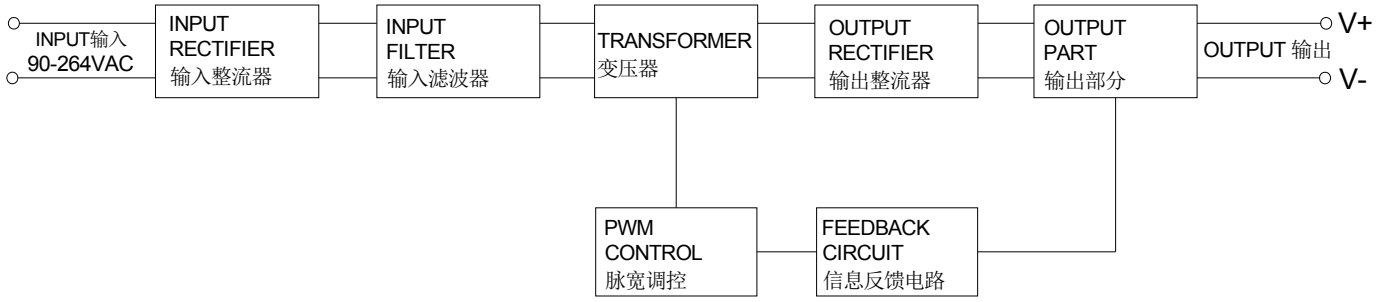
8.2.2 RISK OF FIRE OR ELECTRIC SHOCK

火灾危险或电击

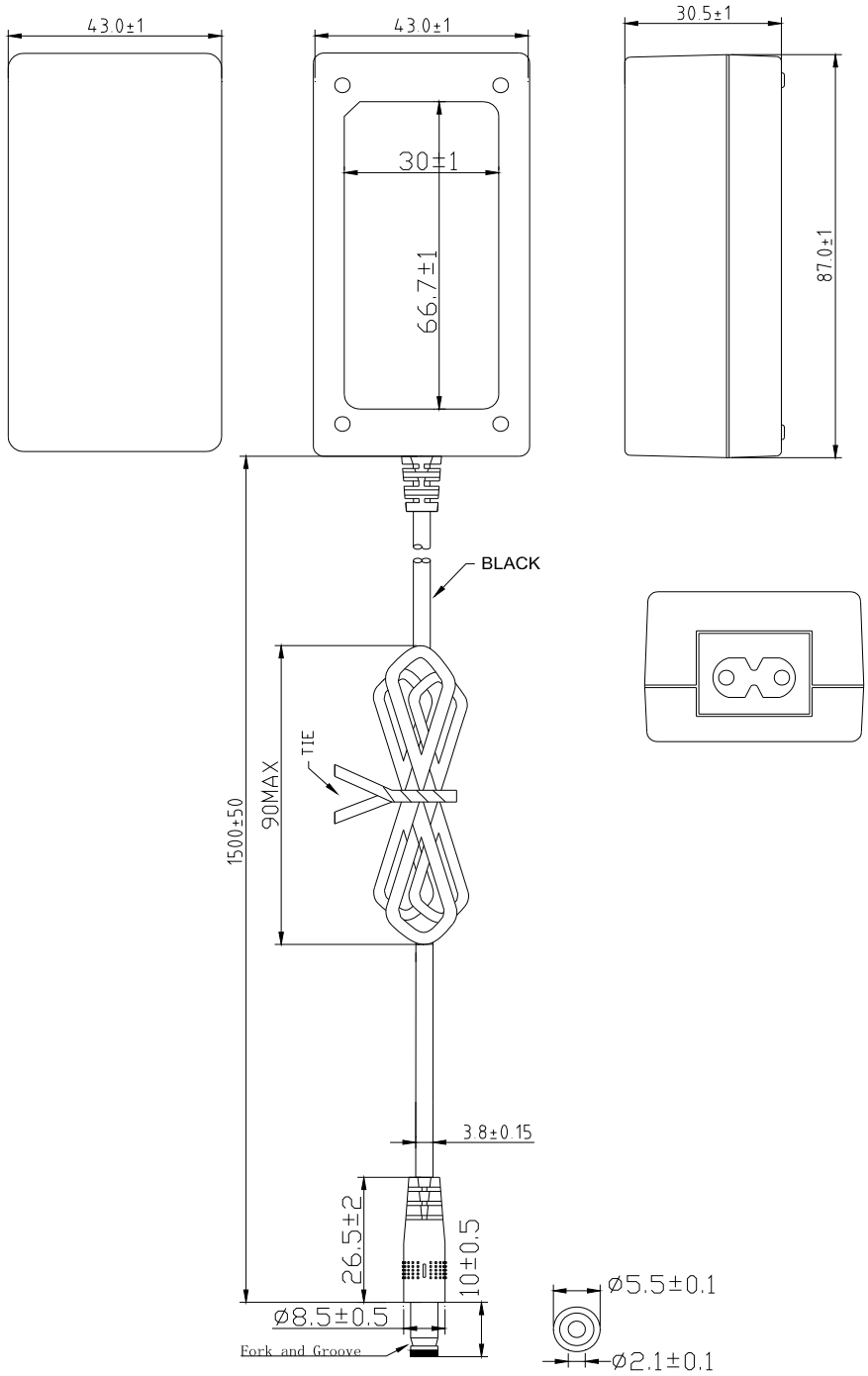
(RISQUES D'INCENDIE OU DE CHOC ÉLECTRIQUES)

（火灾或触电的危险）

9.0 WORKING MANUAL& BLOCK DIAGRAM: 工作手册及框图：



10.0 Appearance Drawing(Unit:mm) 外观尺寸图（单位：毫米）：



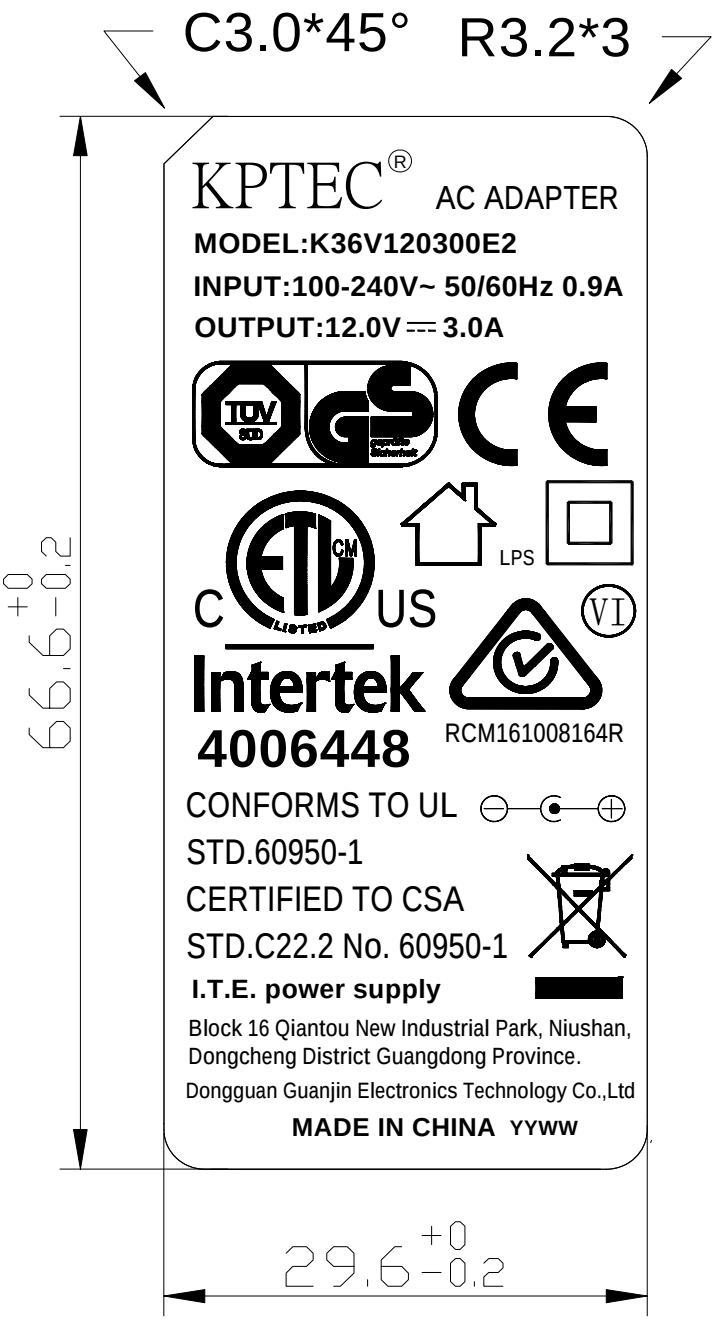
NOTE 备注：（单位：mm）

1) WIRE TYPE 线材类型：VW-1 2464 80℃ 300V L=1500mm 2C 20AWG 黑色

2) DC PLUG DC 头规格：5.5*2.1*10mm 普通带槽 直头

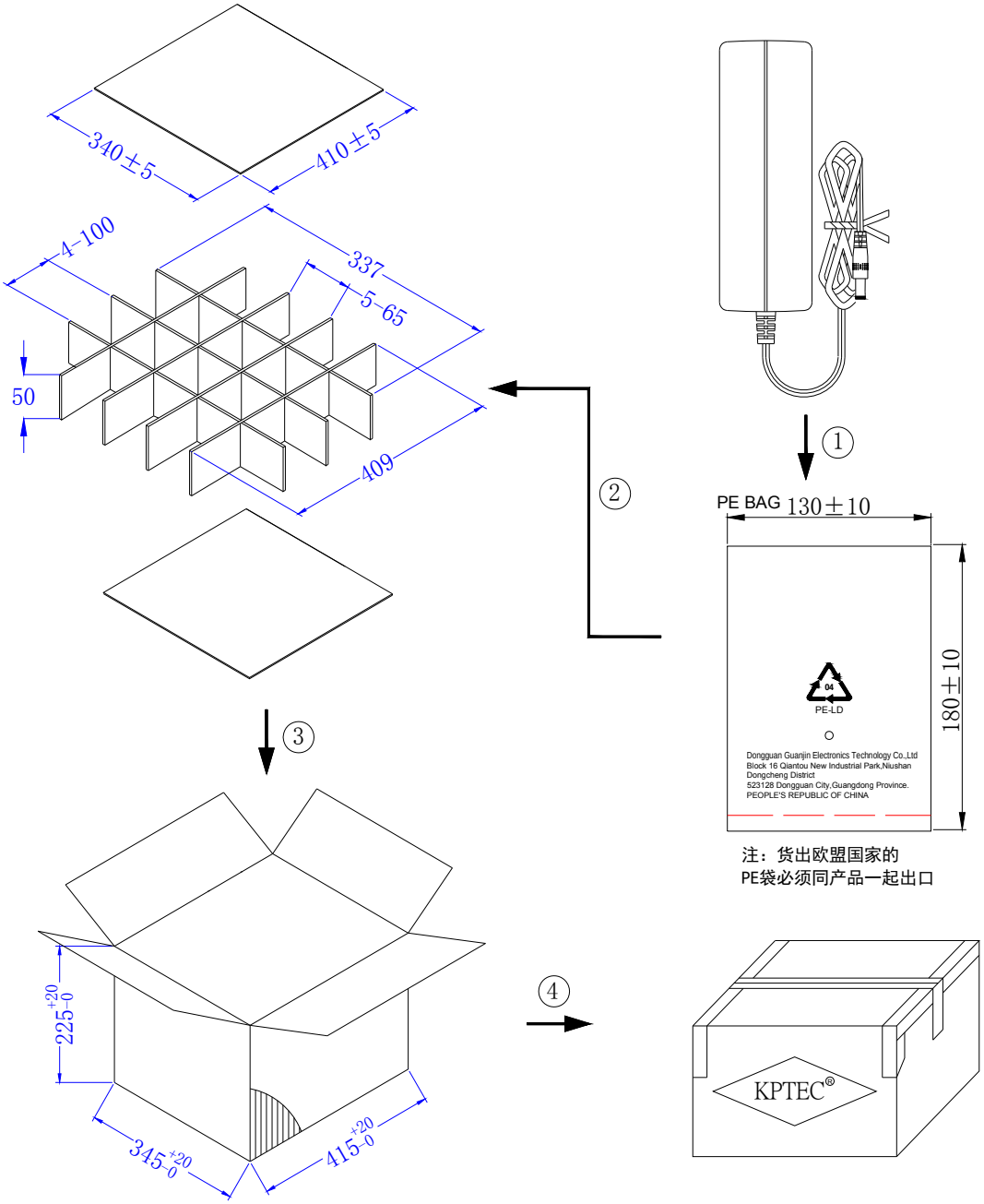
3) THE POLARITY 极性： ⊖—(•)—⊕

11.0 Nameplate(Unit:mm) 铭牌（单位：毫米）:



Note：
1）Material：PET,Conform to ROHS
材质：PET,符合ROHS
2）Color：WHITE characters BLACK background
颜色：黑底白字
3）"YYWW"expressed the production cycle:
"YY" the year, "WW" the week.**YYWW表示周期:**
YY表示年,WW表示周.

12. 0Packing Drawing(Unit:mm) 包装图（单位：毫米）：



NOTE: A case of 80 PCS, a total of 4 layers, 20 PCS/layer.一箱 80pcs，共 4 层，一层 20pcs。

1) Cardboard and Corrugated Board Material：B=C **2) PE bag Material :0.03mm**

隔板及刀卡材质:B=C PE 袋材质: **0.03mm**

3) Outer Carton Material：A=B **4) Anlistatig: No requirement.**

外箱材质：A=B 抗静电：无要求

5) Environmental protection requirement: 94/62/EC. 环保要求：94/62/EC

6) We will select cardboard packing if customer don't specify packing type.

如果客户没有指定包装类型，我们将选择纸板包装

7)The sample package for temporary packaging, the big goods packaging as shown above packaging.

样品包装为临时包装，大货包装如上图所示包装。

12.0.Testing Report 测试报告:

CUSTOMER / 客户:		**KP169**				SAMPLE NO./样单编号:			**K14310**	
MODEL NO. / 产品型号:		**K36V120300E2**				Voltage / Current/电压/电流:			**12.0V/3.0A**	
Sample form		sample (1)								
Items No.	Test Items / 测试项目	Unit / 单位	Test condition & result						Spec. Limit	Pass/ Fail
			90V	100V	115V	200V	230V	240V	264V	
1	Unload input power 空载输入功率	W	0.03	0.03	0.03	0.05	0.07	0.07	0.09	≤0.1W	PASS
2	Rated load input power 额定负载输入功率	W	42.32	41.91	41.56	41.09	41.10	41.10	41.15	≤44.0W	PASS
3	Unload output voltage 空载输出电压	V	12.30	12.30	12.30	12.30	12.30	12.30	12.30	11.4-12.6V	PASS
4	Rated load output voltage 额定负载输出电压	V	11.91	11.91	11.91	11.91	11.91	11.91	11.91	11.4-12.6V	PASS
5	Output ripple&noise voltage 输出纹波及噪声电压	m V	56	52	48	46	46	46	46	≤200mVp-p	PASS
6	Over current protection 过流保护点	A	3.98	4.12	4.24	4.44	4.52	4.52	4.60	/	PASS
7	Short-circuit Protection 短路保护	not damage and with auto recovery function									
8	Average Efficiency 平均效率	%	/	/	87.66	/	88.10	/	/	≥87.40% (AV Eff.)	PASS
9	Drop test 跌落试验	OK									
10	appearance 外观	Content of the NP label is correct, the appearance is clear no spot, scratch color-difference ,disconnection and gap 标签内容是正确的，外观没有明显污点，刮伤，色差，断线和间隙									
11	Burn-in test 老化试验	35°C Ambient, 85-95% load, 50min. ON and 10min. OFF, Burn-in 4Hrs 35°C 环境，85-95％负载，50 分钟/开和 10 分钟/关，老化 4 小时									
12	Insualtiontest 绝缘测试	INPUT TO OUTPUT:30MΩ min/DC500V, 输入对输出：30 兆欧最小/直流 500V									
13	Hi-pot test 介电强度	INPUT TO OUTPUT:3000Vac, 60 s, Cut off current ≤10mA 输入对输出：3000Vac，60 s，切断电流≤10mA									
Sample form		sample (2)								
1	Unload input power 空载输入功率	W	0.03	0.04	0.04	0.06	0.07	0.08	0.09	≤0.1W	PASS
2	Rated load input power 额定负载输入功率	W	42.46	41.96	41.49	41.01	40.98	41.01	41.02	≤44.0W	PASS
3	Unload output voltage 空载输出电压	V	12.30	12.30	12.30	12.30	12.29	12.29	12.29	11.4-12.6V	PASS
4	Rated load output voltage 额定负载输出电压	V	11.93	11.93	11.93	11.93	11.93	11.93	11.93	11.4-12.6V	PASS
5	Output ripple&noise voltage 输出纹波及噪声电压	m V	78	70	68	66	68	62	66	≤200mVp-p	PASS
6	Over current protection 过流保护点	A	4.12	4.28	4.38	4.50	4.56	4.58	4.64	/	PASS
7	Short-circuit Protection 短路保护	not damage and with auto recovery function									
8	Average Efficiency 平均效率	%	/	/	87.92	/	88.40	/	/	≥87.40% (AV Eff.)	PASS
9	Drop test 跌落试验	OK									
10	appearance 外观	Content of the NP label is correct, the appearance is clear no spot, scratch color-difference ,disconnection and gap 标签内容是正确的，外观没有明显污点，刮伤，色差，断线和间隙									
11	Burn-in test 老化试验	35°C Ambient, 85-95% load, 50min. ON and 10min. OFF, Burn-in 4Hrs 35°C 环境，85-95％负载，50 分钟/开和 10 分钟/关，老化 4 小时									
12	Insualtiontest 绝缘测试	INPUT TO OUTPUT:30MΩ min/DC500V, 输入对输出：30 兆欧最小/直流 500V									
13	Hi-pot test 介电强度	INPUT TO OUTPUT:3000Vac, 60 s, Cut off current ≤10mA 输入对输出：3000Vac，60 s，切断电流≤10mA									

13. 0External Power Supply Efficiency 能效测试报告:

<table>
<tr><td rowspan="3">N/O</td><td>机种名称/型号:
Model:</td><td colspan="2">K36V120300E2</td><td colspan="2">电压/电流:
Voltage / Current:</td><td colspan="2">12.0V/3.0A</td></tr>
<tr><td rowspan="2">测试项目/条件
Test
items/conditions</td><td colspan="3">115Vac/60Hz</td><td colspan="3">230Vac/50Hz</td></tr>
<tr><td>限制值/Limit</td><td colspan="2">实测值/Measured Values</td><td>限制值/Limit</td><td colspan="2">实测值/Measured Values</td></tr>
<tr><td rowspan="5">1#</td><td>空载测试功耗
No-load test power</td><td>≤0.1W</td><td colspan="2">0.03</td><td>≤0.1W</td><td colspan="2">0.07</td></tr>
<tr><td>25%负载测试:
25% load test:</td><td rowspan="4">87.40%</td><td>89.39%</td><td rowspan="4">87.66%</td><td rowspan="4">87.40%</td><td>88.60%</td><td rowspan="4">88.10%</td></tr>
<tr><td>50%负载测试:
50% load test:</td><td>88.32%</td><td>88.67%</td></tr>
<tr><td>75%负载测试:
75% load test:</td><td>87.17%</td><td>88.17%</td></tr>
<tr><td>100%负载测试:
100% load test:</td><td>85.76%</td><td>86.96%</td></tr>
<tr><td rowspan="5">2#</td><td>空载测试功耗
No-load test power</td><td>≤0.1W</td><td colspan="2">0.04</td><td>≤0.1W</td><td colspan="2">0.07</td></tr>
<tr><td>25%负载测试:
25% load test:</td><td rowspan="4">87.40%</td><td>89.30%</td><td rowspan="4">87.92%</td><td rowspan="4">87.40%</td><td>88.76%</td><td rowspan="4">88.40%</td></tr>
<tr><td>50%负载测试:
50% load test:</td><td>88.54%</td><td>88.89%</td></tr>
<tr><td>75%负载测试:
75% load test:</td><td>87.53%</td><td>88.59%</td></tr>
<tr><td>100%负载测试:
100% load test:</td><td>86.33%</td><td>87.36%</td></tr>
<tr><td rowspan="5">3#</td><td>空载测试功耗
No-load test power</td><td>≤0.1W</td><td colspan="2">0.04</td><td>≤0.1W</td><td colspan="2">0.07</td></tr>
<tr><td>25%负载测试:
25% load test:</td><td rowspan="4">87.40%</td><td>89.39%</td><td rowspan="4">87.95%</td><td rowspan="4">87.40%</td><td>88.84%</td><td rowspan="4">88.30%</td></tr>
<tr><td>50%负载测试:
50% load test:</td><td>88.61%</td><td>88.82%</td></tr>
<tr><td>75%负载测试:
75% load test:</td><td>87.53%</td><td>88.24%</td></tr>
<tr><td>100%负载测试:
100% load test:</td><td>86.30%</td><td>87.31%</td></tr>
</table>

批准 Approval: 审核 Checked: 测试 Test: 杨海