



Shenzhen Sunlight Electronic CO., LTD

承認書

SPECIFICATION FOR APPROVAL

DOE VI AC DC Adapter 5V 4A Power Supply Switching 4000mA 5 Volt Adaptor

CUSTOMER: _____

DESCRIPTION: ADAPTER

SPECS: 5V4A AC/DC ADAPTER

MODEL NO.: ITXPOWER.NET GA050040

DATE: Feb-25-2015

| | | |
|---------------------------|--------------|--------------|
| APPROVAL SIGNATURE | | |
| DATE: | DATE: | DATE: |

PLEASE RETURN TO US ONE COPY OF “SPECIFICATION FOR APPROVAL” WITH YOUR APPROVED SIGNATURE

ADD : A Area, 3F , Building B, Xinshidai Gongrong Industrial Area, NO.2, Shihuan Road, Shilong Community , Shiyuan Streets, Bao’an District, Shenzhen City, Guangdong.

web : www.itxpower.net

mail : 15015139704@163.com

Shenzhen Sunlight Electronic CO.,LTD

SPECIFICATION FOR APPROVAL

CONTENT OF APPROVAL SHEET :

| | | |
|--|-------|-------|
| 1. REVISION CONTROL LIST | ----- | 3 |
| 2. FEATURE | ----- | 4 |
| 3. INPUT | ----- | 4 |
| 4. OUTPUT | ----- | 4 |
| 5. PROTECTION | ----- | 4~5 |
| 6. SAFETY AND EMI REQUIREMENT | ----- | 5~6 |
| 7. OPERATION & ENVIRONMENT PERFORMANCE | ----- | 6~7 |
| 8. MECHANICAL REQUIREMENT | ----- | 7 |
| 9. PRODUCT GUARANTEE | ----- | 7 |
| 10. PRODUCT OUTLINE DRAWING | ----- | 8 |
| 11. DC OUTPUT CORD DRAWING | ----- | 9 |
| 12. RATING LABEL DRAWING | ----- | 10 |
| 13. PCB LAYOUT : | ----- | 11 |
| 14. TEST REPORT | ----- | 12 |
| 15. PACKING DRAWING | ----- | 13 |
| 16. LICENSE | ----- | 14~15 |

Shenzhen Sunlight Electronic CO.,LTD

SPECIFICATION FOR APPROVAL

2. FEATURE :

- INPUT : UNIVERSAL 100-240 Vac/50-60 Hz INPUT, WITHOUT ANY SLIDE SWITCH
- OUTPUT : +5.0V / 0-4.0A
- DIMENSION : 80.0(D)*50.0(W)*35.0(T)
- EFFICIENCY : 83.1% TYPICAL
- SAFETY : UL/CB/GS/SAA/PSE/LVD/CCC
- EMI : FCC CLASS B / EN55022 CLASS B; CONDUCTED & RADIATED MEETED
- HIGH FREQUENCY DESIGN, LESS POWER CONSUMPTION
- OVER VOLTAGE PROTECTION, SHORT CIRCUITED PROTECTION, OVER POWER PROTECTION
- CAN BE USED AT TELCOMMUNICATION, COMPUTER, INDUSTRIAL CONTORLLER & OA SYSTEM

3. INPUT :

| | |
|-----------------------------|--|
| 3.1 VOLTAGE | UNIVERSAL 100~240Vac,SINGLE PHASE |
| 3.2 FREQUENCY | 50HZ~60HZ |
| 3.3 CURRENT | 1.0A Max |
| 3.4 INRUSH CURRENT | 20A Max/110Vac;40A Max/240Vac (COLD STABT AT 25°C FULL LOAD) |
| 3.5 EFFICIENCY | 83.1% TYPICAL (AT NOMINAL LINE VOLTAGE FULL LOAD) |
| 3.6 INPUT POWER DISSIPATION | UNDER 0.1W < ZERO LOAD 115V/60HZ INPUT |
| | UNDER 0.1W < ZERO LOAD 230V/50HZ INPUT |

4. OUTPUT :

| | | |
|---------------|----------------|-------------------------------|
| 4.1 DC OUTPUT | VOLTAGE | +5.0V |
| | CURRENT | 4.0A Max |
| | REGULATION | 4.70V Min~5.0V Typ.~5.25V Max |
| | RIPPLE & NOISE | 90mV Max |
| | TOTAL POWER | 20.0W Max |

NOTE : FOR RIPPLE & NOISE MEASUREMENT, USE A 20MHZ BAND WIDTH FREQUENCY OSCILLOSCOPF, AND ADD A 0.1uF MULTILAYER CAP. AND A LOW ESR ELECTROLYTICCAP. (10uF) AT OUTPUT CONNECTOR TERMINALS. (AT NOMINAL LINE VOLTAGE FULL LOAD)

5. PROTECTION :

| | |
|------------------------------|---|
| 5.1 OVER VOLTAGE PROTECTION | 6.8V MAX. The power supply shall be hiccupped when output voltage reaches to its over voltage protection trigger point. |
| 5.2 SHORT CIRCUIT PROTECTION | The power supply shall be hiccupped when operating any output in a short circuit condition. |

Shenzhen Sunlight Electronic CO.,LTD

SPECIFICATION FOR APPROVAL

| | |
|-----------------------------|---|
| 5.3 OVER POWER PROTECTION | The adapter provide protection at 120%~180% of rated output power, the adapter shall be hiccupped but not damage. |
| 5.4 OVER CURRENT PROTECTION | 7.2A MAX. The power supply shall be hiccupped when output current reaches to its over current protection trigger point. |

NOTE : WHEN PROTECTION CIRCUIT IS WORKING THE POWER SUPPLY WILL HICCUPPED, ONCE THE ABNORMAL CONDITIONS ARE REMOVED. THE POWER SUPPLY WILL RESTART AUTOMATICALLY.

6. SAFETY AND EMI REQUIREMENT :

6.1 SAFETY REQUIREMENT

a. SAFETY : UL/CB/GS/SAA/PSE/LVD/CCC

b. DIELECTRIC STRENGTH :5mA Max. CUT OFF CUREN

| | |
|-----------------------------|----------------------|
| (1):PRIMARY TO SECONDARY | 3000Vac FOR 1 MINUTE |
| (2):PRIMARY TO FRAME GROUND | 3000Vac FOR 1 MINUTE |

c. INSULAION RESISTANCE :

| | |
|-----------------------------|--------------------------|
| (1):PRIMARY TO SECONDARY | 50 M OHMS min FOR 500Vdc |
| (2):PRIMARY TO FRAME GROUND | 50 M OHMS min FOR 500Vdc |

d. LEAKAGE CURRENT :

| | |
|---------------------|-----------|
| (1) : 100VAC / 60HZ | < 0.25 mA |
| (2) : 240VAC / 50HZ | < 0.25 mA |

6.2 EMI/EMS REQUIREMENT

a. EMI : FCC CLASS B / EN55022 CLASS B; CONDUCTED & RADIATED MEETED

b. Electron Static Discharge(ESD) :

| Applicable Standard | CONDITION | SPECIFICATION |
|---------------------|---|-------------------------------------|
| IEC/EN 61000-4-2 | Contact discharge performance is 4KV; Air discharge performance is 8KV | Normal operation shall be continued |

Shenzhen Sunlight Electronic CO.,LTD

SPECIFICATION FOR APPROVAL

c. Lightning Surge :

| Applicable Standard | CONDITION | SPECIFICATION |
|---------------------|--|-------------------------------------|
| IEC/EN 61000-4-5 | +/- 1KV (Line to Line) +/- 2KV (Line to Ground) | Normal operation shall be continued |

d. Electric Fast Transients :

| Applicable Standard | CONDITION | SPECIFICATION |
|---------------------|------------------------------|-------------------------------------|
| IEC/EN 61000-4-4 | +/-1KV for Power Supply Line | Normal operation shall be continued |

7. OPERATION & ENVIRONMENT PERFORMANCE:

7.1 TEMPERATURE RANGE

| | |
|-----------|---------------|
| OPERATING | -10°C ~ +40°C |
| STORAGE | -40°C ~+70°C |

7.2 HUMIDITY RANGE (NON CONDENSING)

| | |
|-----------|--------------|
| OPERATING | 10% ~ 90% RH |
| STORAGE | 5% ~ 95% RH |

7.3 Product operating/storage test requirement :

| TEST ITEM | CONDITION | SPECIFICATION |
|--|----------------------|---|
| High Temperature Storage TEST | 70 degree C for 72H | There is no malfunction and deformation to be found after TEST. |
| High Temperature Operation TEST | 40 degree C for 16H | There is no malfunction and deformation to be found after TEST. |
| LowTemperature Storage TEST | -20 degree C for 72H | There is no malfunction and deformation to be found after TEST. |
| Low Temperature Operation TEST | 0 degree C for 16H | There is no malfunction and deformation to be found after TEST. |

Shenzhen Sunlight Electronic CO.,LTD

SPECIFICATION FOR APPROVAL

| | | |
|------------------------------------|---|---|
| Termal Shock Operation TEST | Apply 2 cycle from 0 degree C to +40 degree C as 24 Hours as 1 cycle | There is no malfunction and deformation to be found after TEST. |
| Termal Shock Storage TEST | Apply 2 cycle from -20 degree C to +70 degree C as 2 Hours as 1 cycle | There is no malfunction and deformation to be found after TEST. |

7.4 COOLING : SHOULD OPERATE WITHOUT FAN

7.5 M.T.B.F. : 30000 HOURS Min ; 25°C SEE CONDITION

8. MECHANICAL REQUIREMENT :

8.1 DIMENSION : 80.0(D)*50.0(W)*35.0(T)

8.2 DROP TEST : From a height of 100cm onto concrete or similar material.
No impairment of normal function, breaking away of any parts or change

8.3 VIBRATION TEST : Non-operating but with packing. Shock acceleration 50 G, sin, 100Ms.
Directions of force : X , Y , Z . One time at 6 directions. There is no malfunction and deformation to be found after TEST.

8.4 APPEARANCE : There shall not be any remarkable defects such as clack, distortion, uneven color, dirty nameplate and its peeling

8.5 Tensile Strength of the Cord : A static load of 100N is applied to the cord for 1 minute
The cord should not be deteriorated

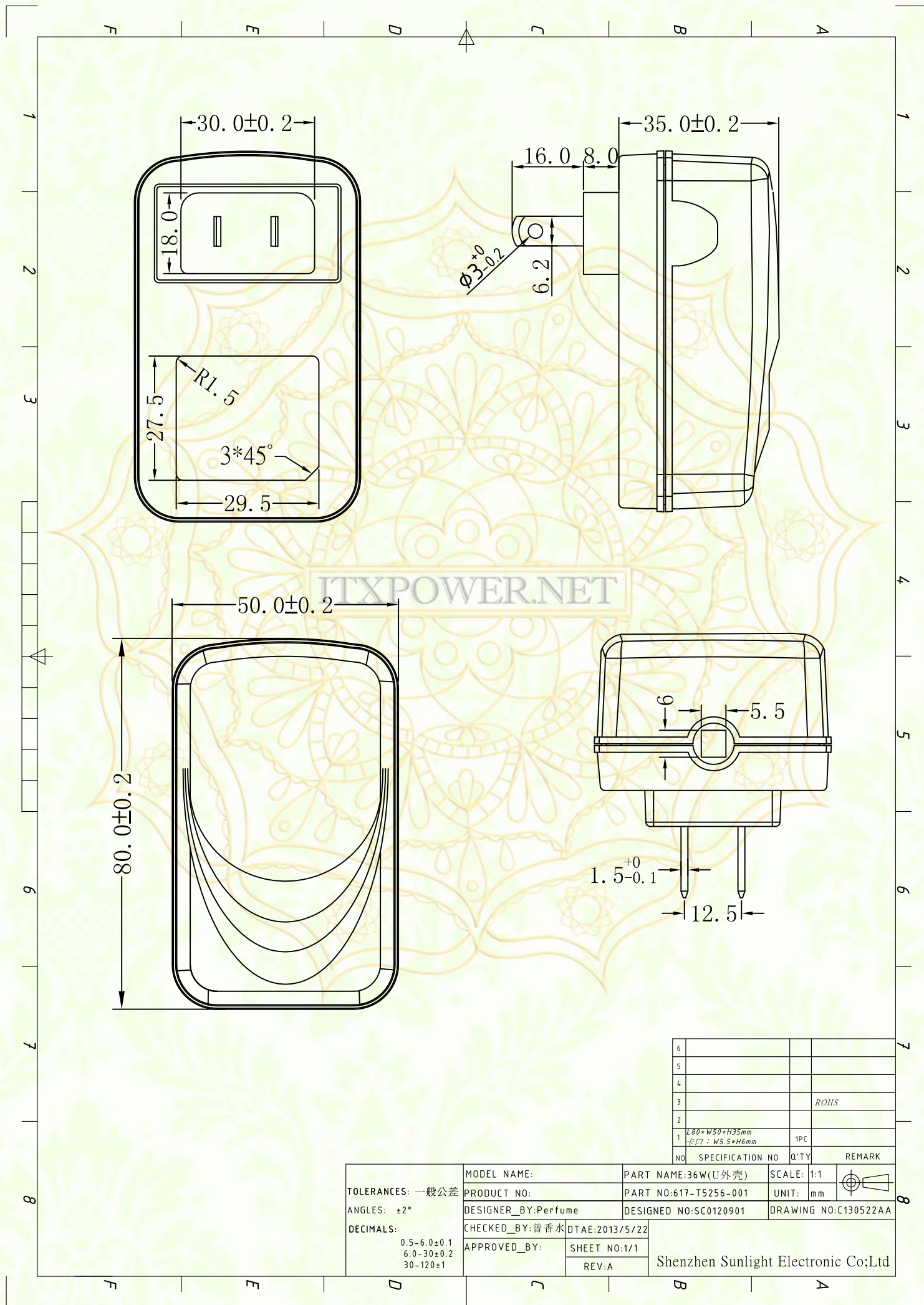
8.6 Cord Bending TEST : Hang the specified weight and swing it to one direction and return to the original position, then swing to the opposite direction and return to the original position .The strain relief shall be subjected to the specified cycles and speed. Weight 200 (g), Angle ± 60 degree, 800 times, Cycles in every minute 30, Distance 300mm.

9. PRODUCT GUARANTEE : AFTER SHIPMENT 12 MONTHS.

Shenzhen Sunlight Electronic CO.,LTD

SPECIFICATION FOR APPROVAL

10. PRODUCT OUTLINE DRAWING:



| 6 | | | |
|----|---------------------------------|------|--------|
| 5 | | | |
| 4 | | | |
| 3 | | | ROHS |
| 2 | | | |
| 1 | L80*W50*H35mm ±LT: W5.5*H6mm | | 1PC |
| NO | SPECIFICATION NO | Q'TY | REMARK |

| | | | | |
|--|-------------------------------|-------------------------------------|----------------------|--|
| TOLERANCES: 一般公差 ANGLES: ±2° DECIMALS: 0.5-6.0±0.1 6.0-30±0.2 30-120±1 | MODEL NAME: | PART NAME:36W(U外壳) | SCALE: 1:1 | |
| | PRODUCT NO: | PART NO:617-T5256-001 | UNIT: mm | |
| | DESIGNER_BY:Perfume | DESIGNED NO:SC0120901 | DRAWING NO:C130522AA | |
| | CHECKED_BY:曾香水 DTAE:2013/5/22 | | | |
| APPROVED_BY: | SHEET NO:1/1 | Shenzhen Sunlight Electronic Co;Ltd | | |
| | REV:A | | | |

Shenzhen Sunlight Electronic CO.,LTD

SPECIFICATION FOR APPROVAL

11. DC OUTPUT CORD DRAWING:



Image is loading.....

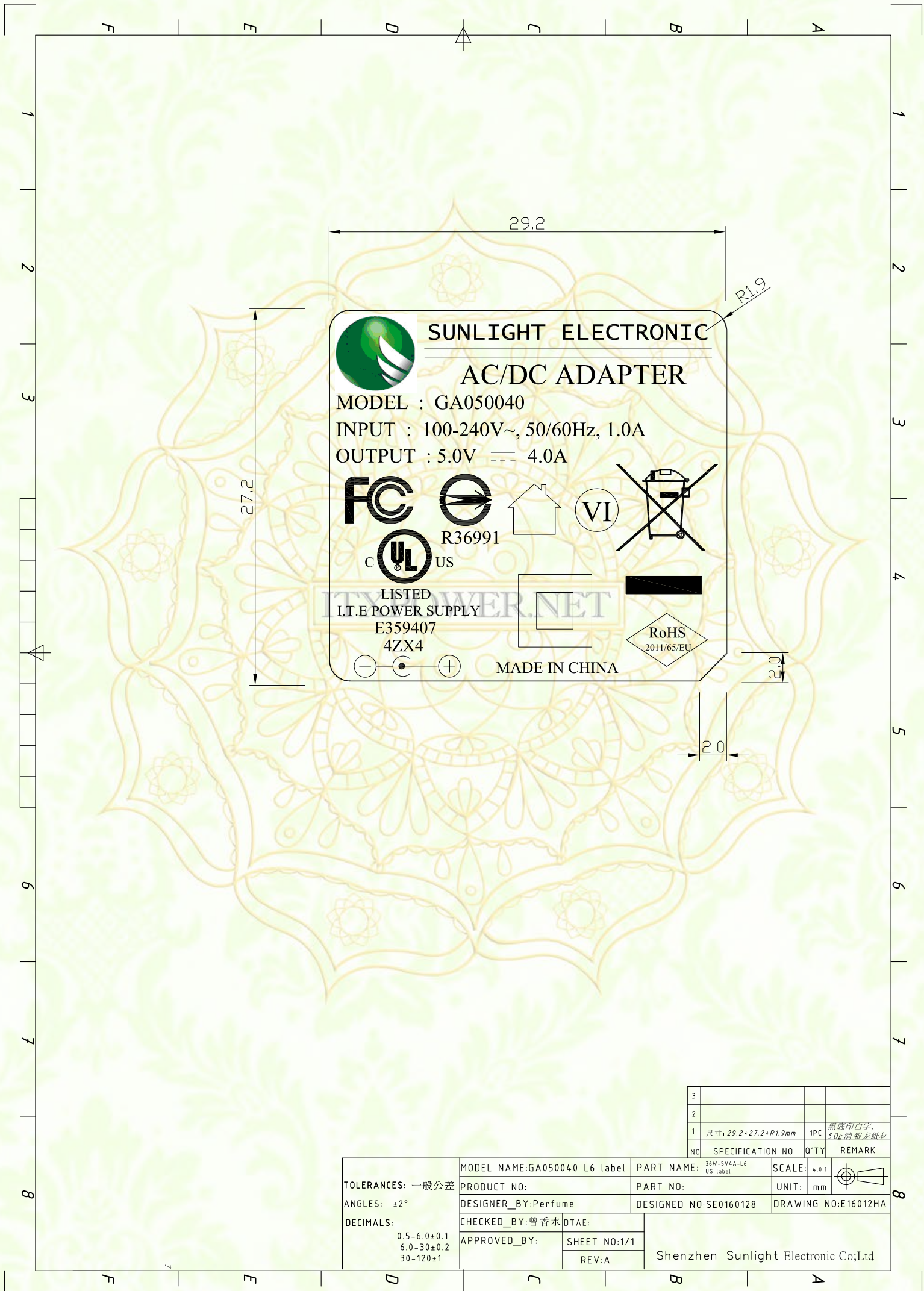
95%

图片正在加载中.....

Shenzhen Sunlight Electronic CO.,LTD

SPECIFICATION FOR APPROVAL

12. RATING LABEL DRAWING :



| 3 | | | |
|----|----------------------|------|-----------------|
| 2 | | | |
| 1 | 尺寸: 29.2*27.2*R1.9mm | 1PC | 黑底印白字, 50g 铜版龙纸 |
| NO | SPECIFICATION NO | Q'TY | REMARK |

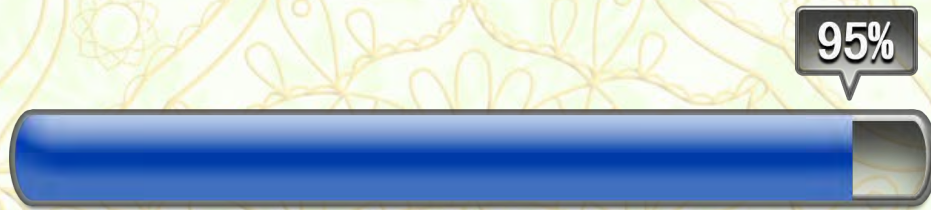
| | | | | |
|--|------------------------------|-------------------------------------|---------------------|--|
| TOLERANCES: 一般公差 ANGLES: ±2° DECIMALS: 0.5-6.0±0.1 6.0-30±0.2 30-120±1 | MODEL NAME:GA050040 L6 label | PART NAME: 36W-5V4A-L6 US label | SCALE: 4.0:1 | |
| | PRODUCT NO: | PART NO: | UNIT: mm | |
| | DESIGNER_BY:Perfume | DESIGNED NO:SE0160128 | DRAWING NO:E16012HA | |
| | CHECKED_BY:曾香水 DTAE: | Shenzhen Sunlight Electronic Co;Ltd | | |
| APPROVED_BY: | SHEET NO:1/1 | | | |
| | REV:A | | | |

Shenzhen Sunlight Electronic CO.,LTD

SPECIFICATION FOR APPROVAL

13. PCB LAYOUT :

Image is loading.....



图片正在加载中.....

ITXPOWER.NET

Shenzhen Sunlight Electronic CO.,LTD

SPECIFICATION FOR APPROVAL

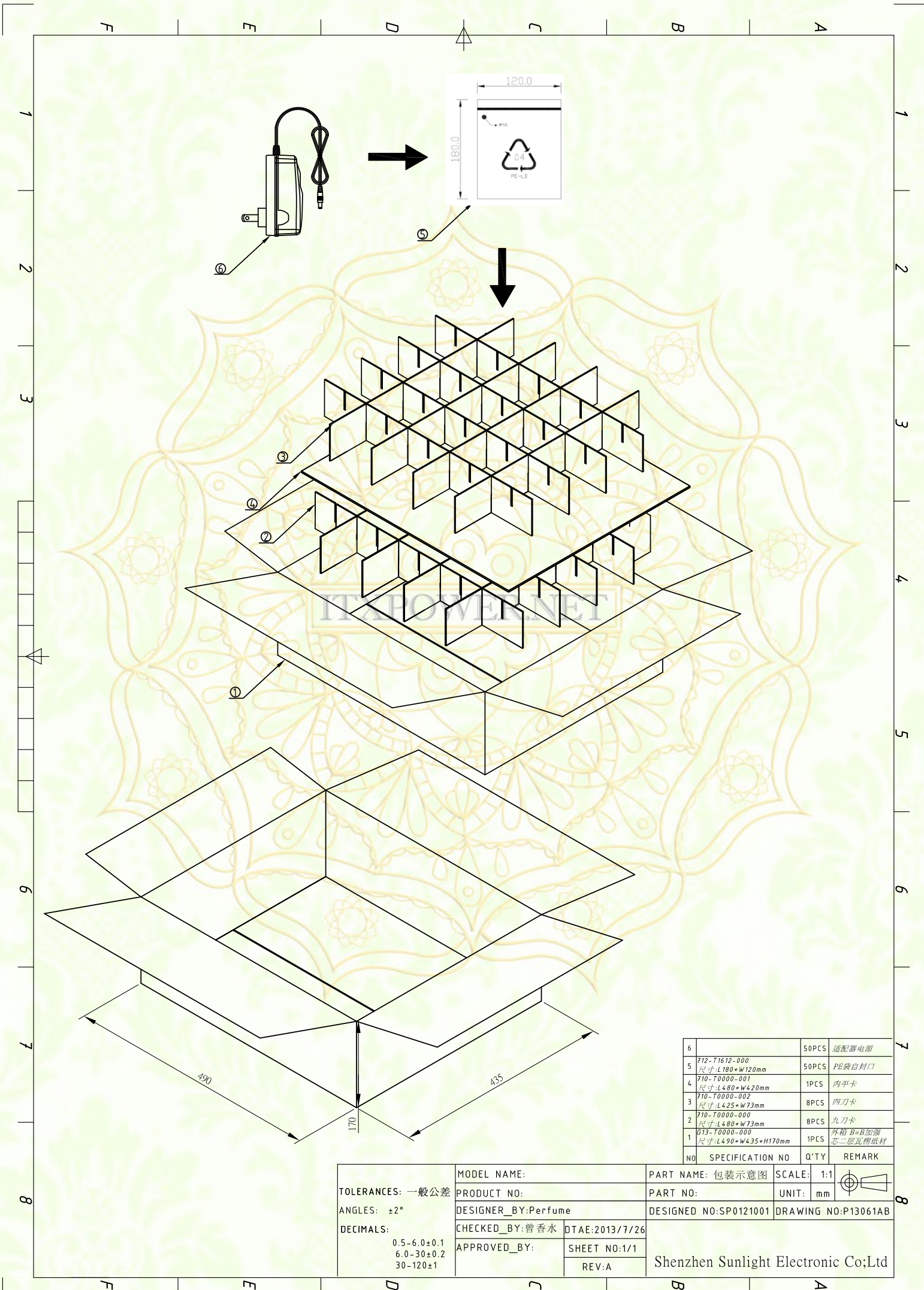
14.TEST REPORT:

| 电源适配器样品测试报告 | | | | | | | | | | |
|--------------------|--|---|---------|--|-----------|--------|--------|------------------|--------|---------|
| 客 户 | 3016424024028 | 客户编号 | | | | 室 温 | | 25℃ | | |
| 产品型号 | GA050040 | 产品编号 | | SAD1511-02 | | 日 期 | | 2015.01.28 | | |
| 输入电压/频率 | 100Vac-240Vac | | 50/60Hz | | 输出电压/电流 | | | 5V 4.0A | | |
| 测试内容 | | 1#样机 | | | | 2#样机 | | | | 判定 |
| 测试项目 | 测试标准 | 90V | 100V | 240V | 264V | 90V | 100V | 240V | 264V | PASS/NG |
| 空载电压 | 4.70V-5.25V | 5.22 | 5.22 | 5.22 | 5.22 | / | / | / | / | PASS |
| 空载纹波与噪声 | ≤90mV | 40 | 41 | 39 | 40 | / | / | / | / | PASS |
| 满载电压 | 4.70V-5.25V | 4.85 | 4.84 | 4.84 | 4.85 | / | / | / | / | PASS |
| 满载纹波与噪声 | ≤90mV | 85 | 84 | 76 | 73 | / | / | / | / | PASS |
| 最大输入电流 | <1000mA | 401 | 382 | 160 | 153 | / | / | / | / | PASS |
| 短路保护 | 无损坏,可恢复 OK/NG | OK | OK | OK | OK | / | / | / | / | PASS |
| 过流保护 | >4.8A <7.2A | 5.28 | 5.39 | 6.15 | 6.18 | / | / | / | / | PASS |
| 过压保护 (光耦开环) | <1V/满载 | OK | OK | OK | OK | / | / | / | / | PASS |
| 启动延迟时间 | < 4 s | 3 | 2.8 | 2 | 2 | / | / | / | / | PASS |
| 输出保持时间 | > 10 ms | √ | √ | √ | √ | / | / | / | / | PASS |
| 上升时间 | < 20 ms | 16.5 | 15.9 | 15.3 | 15.1 | / | / | / | / | PASS |
| 下降时间 | < 30 ms | 21.3 | 22.7 | 21.9 | 20.9 | / | / | / | / | PASS |
| 开机过冲 | < 5 % | 0 | 0 | 0 | 0 | / | / | / | / | PASS |
| 雷击电压 | 共模: (L/N-GND) | ± 2KV | | | 差模: (L-N) | | ± 1KV | | | PASS |
| 绝缘强度测试 | AC3.0KV 60S | < 5mA | | 泄漏电流 0.6mA: 绝缘击穿: <input type="checkbox"/> 有 <input checked="" type="checkbox"/> 无 | | | | | | PASS |
| 绝缘阻抗测试 | DC500V 60S | >100MΩ | | 绝缘阻抗 100MΩ: 绝缘击穿: <input type="checkbox"/> 有 <input checked="" type="checkbox"/> 无 | | | | | | PASS |
| 泄漏电流测试 | 264V | <0.25mA | | 泄漏电流 0.06mA | | | | | | PASS |
| 能效测试 | 平均效率 > 83.1% 空载功耗 < 0.10W (基于1.0米长度输出 线材测试数据) | 输入电压 | 100% | 75% | 50% | 25% | 平均效率 | 10%负载效率 > 73.10% | 空载输入功耗 | PASS |
| | | 115Vac | 82.66% | 83.71% | 84.29% | 82.96% | 83.41% | 78.56% | 0.05W | PASS |
| | | 230Vac | 83.82% | 83.73% | 83.23% | 81.92% | 83.17% | 76.81% | 0.08W | PASS |
| DC输出短路30分钟 | 264V输入 | 短路30分不损坏: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NG: 可恢复工作: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NG | | | | | | | | PASS |
| 90V/264V输入时满载开关机测试 | 各10次 | 正常开机: <input checked="" type="checkbox"/> OK <input type="checkbox"/> NG | | | | | | | | PASS |
| PASS | | | | | | | | | | |
| 测 试 | | | | | 核 准 | | KIKIN | | | |

Shenzhen Sunlight Electronic CO.,LTD

SPECIFICATION FOR APPROVAL

15. PACKING DRAWING :



| | | | |
|----|--------------------------------------|-------|---------------------|
| 6 | | 50PCS | 适配器电源 |
| 5 | 712-T1612-000 尺寸:L180*W120mm | 50PCS | PE袋自封口 |
| 4 | 710-T0000-001 尺寸:L480*W420mm | 1PCS | 内平卡 |
| 3 | 710-T0000-002 尺寸:L425*W73mm | 8PCS | 四刀卡 |
| 2 | 710-T0000-000 尺寸:L480*W73mm | 8PCS | 九刀卡 |
| 1 | 613-T0000-000 尺寸:L490*W435*H170mm | 1PCS | 外箱B=B加强 芯=二层瓦楞纸材 |
| NO | SPECIFICATION NO | Q'TY | REMARK |

| | | | | |
|---|------------------|------------------------|----------------------|--|
| TOLERANCES: 一般公差 ANGLES: ±2° DECIMALS: 0.5-6.0±0.1 6.0-30±0.2 30-120±1 | MODEL NAME: | PART NAME: 包装示意图 | SCALE: 1:1 | |
| | PRODUCT NO: | PART NO: | UNIT: mm | |
| | DESIGNER_BY: 曾香水 | DESIGNED NO: SP0121001 | DRAWING NO: P13061AB | |
| | CHECKED_BY: 曾香水 | DTAE: 2013/7/26 | | |
| | APPROVED_BY: | SHEET NO: 1/1 | | |
| | | REV: A | | |
| Shenzhen Sunlight Electronic Co;Ltd | | | | |

Shenzhen Sunlight Electronic CO.,LTD

SPECIFICATION FOR APPROVAL

16. SAFETY LICENSE : (UL+FCC)

Image is loading.....



图片正在加载中.....

ITXPOWER.NET

Shenzhen Sunlight Electronic CO.,LTD

SPECIFICATION FOR APPROVAL

Image is loading.....



图片正在加载中.....

ITXPOWER.NET