

SPECIFICATION FOR APPROVAL
AC/DC ADAPTOR

CUSTOMER SPEC: INPUT: 100-240V AC 50/60Hz OUTPUT: 5.0VDC 2100mA

CUSTOMER DWG./PART NO. _____

PART NO. SW4478B

SAMPLE NO: _____ REV.: B ISSUE DATE: 2015-11-18

PRODUCT NO: _____

Unit Color: Black White

APPROVED SIGNATURES/客户确认		
核准/APPROVED BY	审核/ CHECKED BY:	检测/TESTED BY:

Manufacturer/制造商			
业务/SALES	品管/QE	核准/APPROVED BY	制样/DESIGNED BY
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Project Modify List

Item	Content	Rev.	Date	Designed By	Checked By
1	First REV.	A	2015.10.22	Chenxian	Wenzhanxin
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1 GENERAL

1.1 Description

This specification defines the performance and characteristics of an adaptor, single-phase 10.5 watts. Single output level power supply

- Simple design philosophy.
- Reliability level of 50K hours MTBF @ 25° C (rated input voltage, and using the BELLCORE SR-332 method).
- DC output voltage must be Safe Extra Low Voltage (SELV) & Limited Power as defined by IEC60950-1.

2 INPUT REQUIREMENTS

2.1 Input Conditions

The Supply shall operate over the voltage ranges as follows:

Rated input voltage	100-240Vac
Operating range	90-264Vac
Rated input frequency	50/60Hz +/- 3Hz
Rated input current	0.5A max.
Maximum input power	13.93W
Input current (no loading)	≤20mA
Power consumption (no loading)	Max. 0.075W
Configuration	<u>2</u> Conductor

2.2 AC Inrush Current

No damage shall be occurred and the input fuse shall not be blown up nominal input voltage full load 25°C cold start.

3 OUTPUT REQUIREMENTS

3.1	Nominal dc output voltage	+5.0V
3.2	Minimum load current	0.0A
3.3	Rating load current	2.1A
3.4	Peak load current	/
3.5	Rating output power	10.5W
3.6	Line regulation	The line regulation is less than <u>±5%</u> while measuring at rated load and +/-10% of input voltage changing.
3.7	Load regulation	The load regulation for <u>+5.0V</u> is less than <u>+/-5%</u> , at measured output load from 10% to 100% rated load.
3.8	Peak load regulation	The peak load regulation for <u>+5.0V</u> is less than <u>/</u> , at measured output load from 30% to 100% rated load.
3.9	Ripple and noise	120 mVp-p

		Add 0.1uF/50V ceramic capacitor and 10uF/50V aluminum electrolytic capacitor across the output terminal. Measured with 20MHz Bandwidth Oscilloscope.
3.10	Switching efficiency	<u>79.36%</u> minimum 115V/60Hz and 230V/50Hz, output current from 100%, 75%, 50%, 25%.
3.11	Turn on delay time	<u>4000 mS</u> At nominal input AC voltage and full load
3.12	Rise time	The Supply shall have a start-up rise time of less than <u>20 mS</u> to rise to within regulation limits for all DC outputs.
3.13	Hold up time	When power off, DC output <u>+5.0V</u> must be maintain <u>10 msec</u> in regulation limit at 230Vac and full load.
3.14	Output over-shoot	Less than <u>10%</u> of nominal voltage value
3.15	LED indication function	/
3.16	Protection function	
3.17	Over-voltage protection	The output voltage shall be clamped by internal protection.
	Short-circuit protection	The adapter shall not be damaged by short the DC output to Ground. The adapter shall resume normal operation when a short circuited fault condition is removed.
	Over current protection	The power supply will be protection when output power $\leq 2.5A$ of all rated dc output

4 MECHANICAL

4.1 Enclosure And Layout

Plastic case: UL94V-0
 Weight : 55g (Max.)
 Dimensions: 38*38.5*39.5mm
 Colour : BLACK

4.2 Input and Output Configuration

Input pin: International PIN
 Output connector : dc plug type: female standard type USB
 Polarity: PIN1:"-", PIN4:"+" PIN2.3"Short"

5 REGULATORY COMPLIANCE

5.1 EMC Specifications

The external power supply must meet all specification in this section. it is required that the external power supply work closely with the customer's equipment in order to get the best EMC solution.

5.1.1 Radiated and Conducted Emission

The power supply shall comply to:

FCC part 15: Class B for radiated and conducted emissions.

EN55022:2010, Class B for radiated and conducted emissions.

5.2 Immunity

5.2.1 Electrostatic Discharge Immunity

EN 55024:2010, EN 61000-4-2

- Air Discharge: $\pm 8\text{kV}$

- Contact Discharge: $\pm 4\text{kV}$

- Performance Criteria B

Electrostatic-discharge test by contact or air should be conducted with Static-discharge tester, energy storage capacitance of 150pF, and discharge resistance of 330Ω , 8KV air discharge, 4KV contact discharge.

5.2.2 Radiated Field Immunity

EN 55024:2010, EN 61000-4-3

Frequency Range: 80-1000MHz

Field Strength: 3 V/m with 80% amplitude modulation of 1kHz

Performance Criteria A

Radio-frequency electromagnetic field susceptibility test, RS 80-1000MHz, 3V/m, 80%AM(1KHz).

5.2.3 Fast Transient Immunity

EN 55024:2010, EN 61000-4-4

- Power line: 1kV

- Signal line: 0.5kV

- Performance Criteria B

5.2.4 Surge Immunity

EN 55024:2010, EN 61000-4-5

- 1.2/50 usec Open Circuit voltage

- 8/20 usec Short Circuit current

- Power line: 1Kv

- Line to Earth: 2kV

Lighting Surge Voltage of differential and common modes shall be applies across AC input lines and cross input and frame ground.

5.3 Safety Requirements and Certification

5.3.1 Regulatory Standard

The power supply shall comply with the following international regulatory standards

for short	Country	Certified Status	Standard/标准
UL	USA/美国	Meet	UL 60950-1
CSA	Canada/加拿大	Meet	CSA C22.2 NO.950
TUV	Europe	Meet	EN60950-1
CE	Europe	Meet	Declared & CE Mark
SAA	Australia/澳洲	Meet	AS/NZS60950-1

5.3.2 Additional Safety Requirements

- ⊙ Dielectric Withstand Voltage, Primary(input AC short)-to-Secondary(output DC short): 3000 Vac, 5m A, 1 minute.
- ⊙ Insulation Resistance, Input to output: 10M Ω(MIN.) at 500 VDC.
- ⊙ Reinforced insulation system, Primary-to-Ground and Primary-to-Secondary.
- ⊙ The leakage current shall not exceed 0.25mA.

6 ENVIRONMENTAL REQUIREMENTS

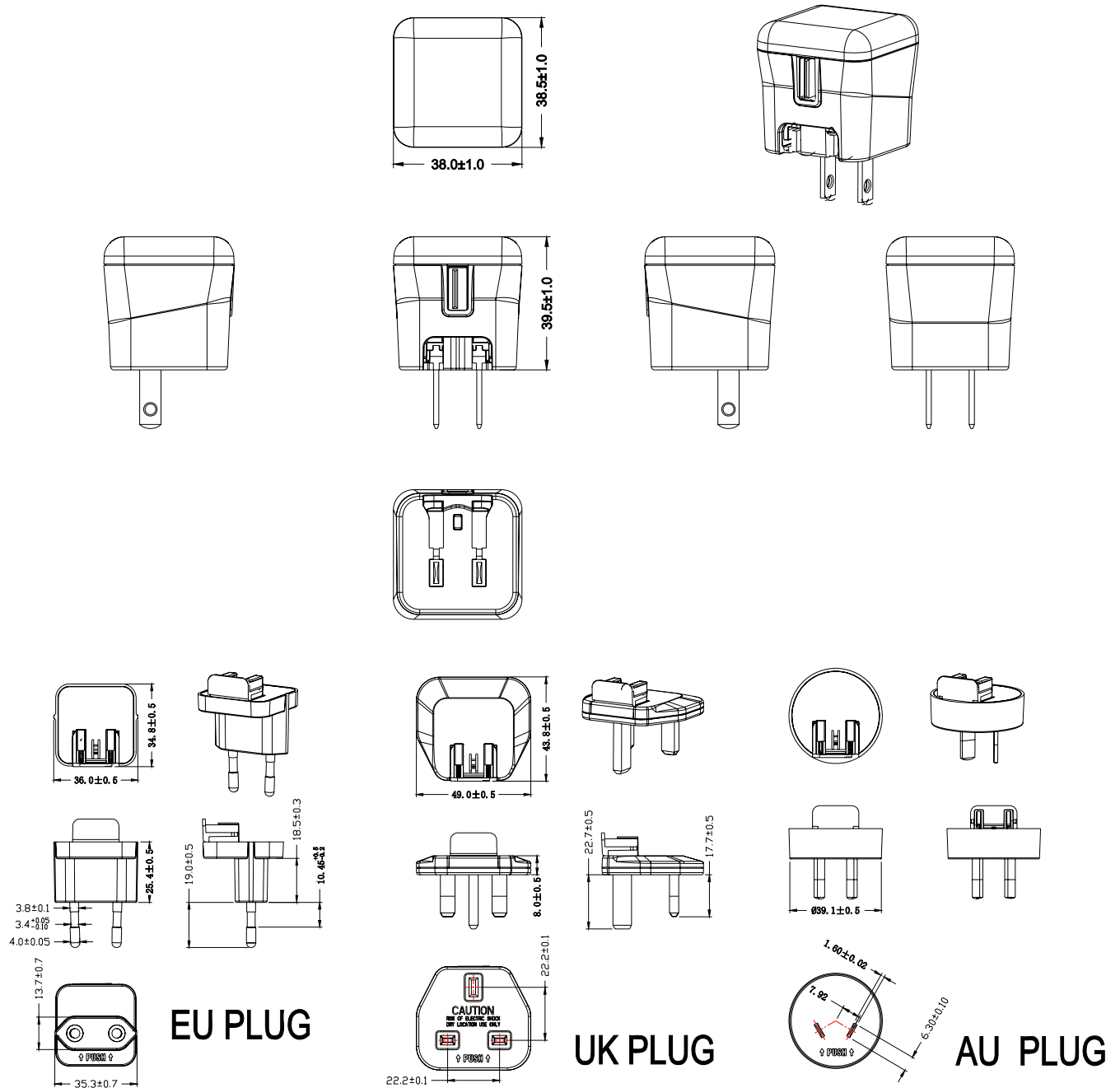
6.1 Temperature

- ⊙ Operating: 0 °C +40 °C
- ⊙ Non-Operating: -20 °C +80 °C

6.2 Humidity

- ⊙ Operating: 10%~90% (Non Condensing)
- ⊙ Non-Operating: 10%~90% (Non Condensing)

7 APPEARANCE DRAWING: (Unit: mm)



NOTE: 1. Case cover & chassis material:

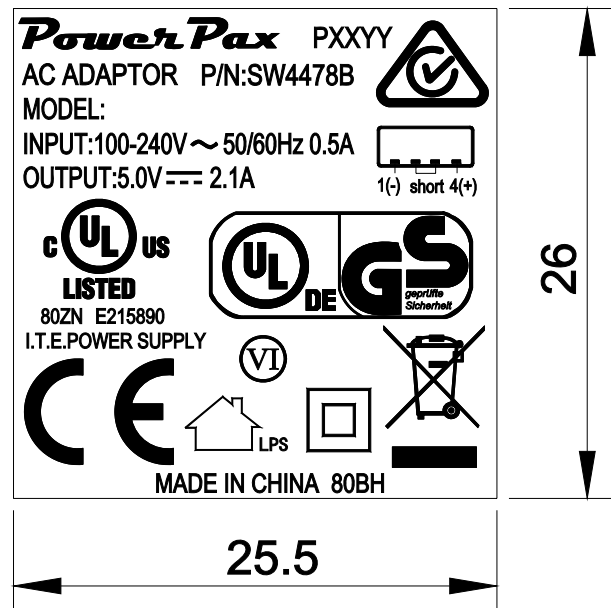
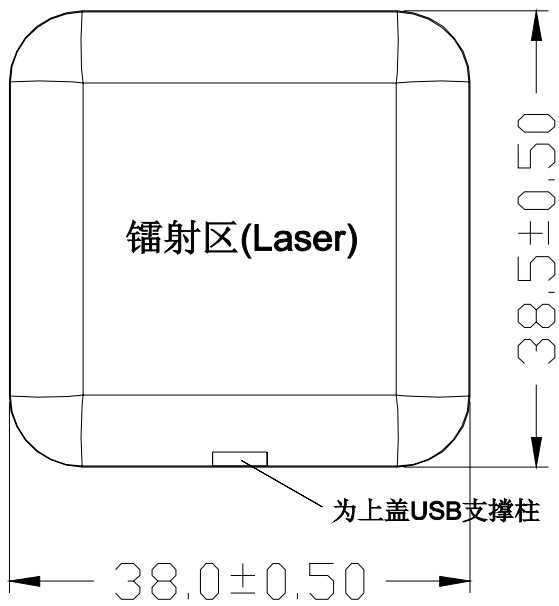
PC: BLACK

2. AC PIN MATERIAL: BRASS (NI PLATED)

3. PAHS+REACH+ROHS

4. Satin Finish 雾面

8 NAME PLATE:

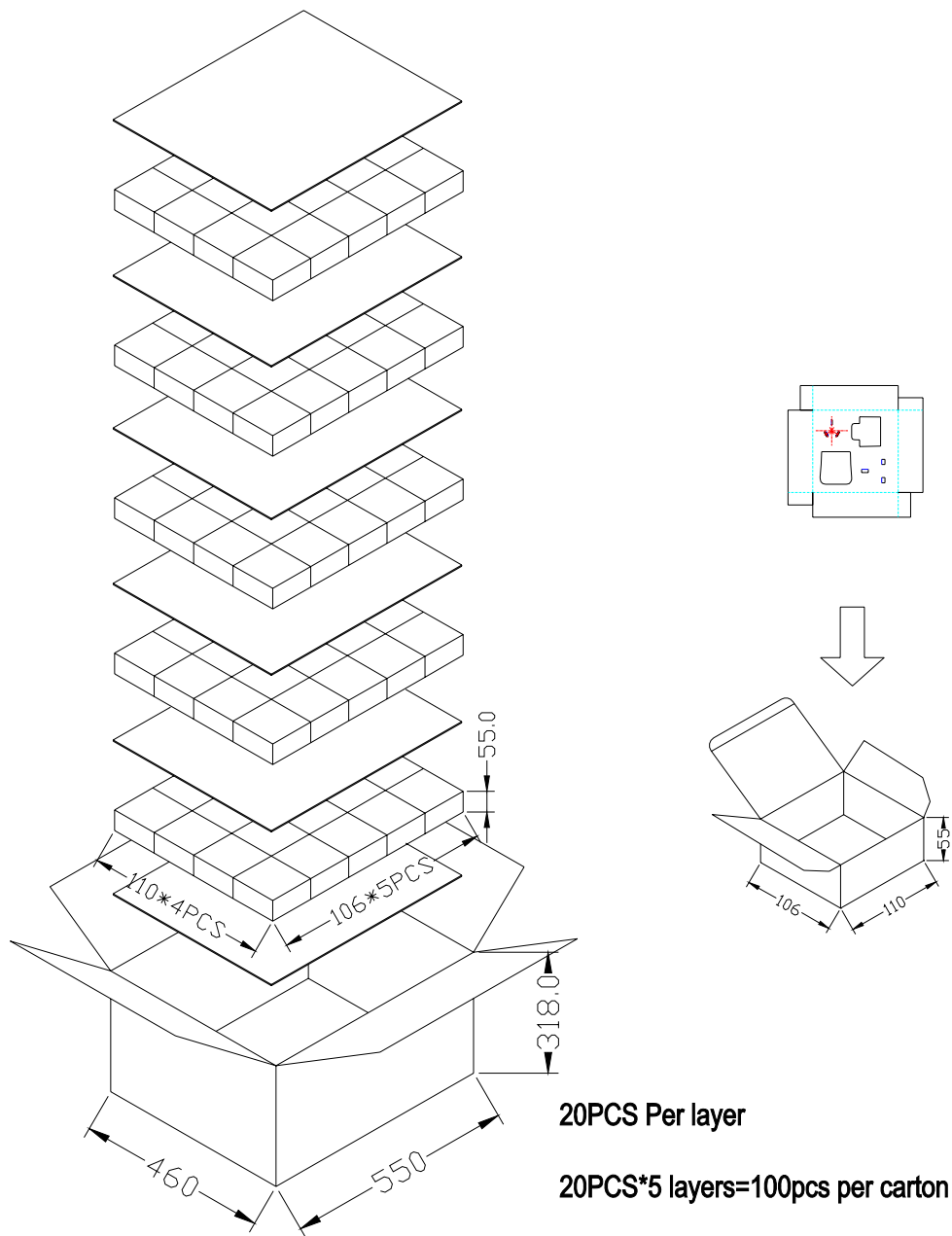


Note: 1. MATERIAL: POLYESTER+PVC; COATING:0.25+-0.05mm
White characters Black background
PAHS+REACH+ROHS

2. Laser (镭射)

PXXYY (P=PAHS XX=WEEK YY=YEAR) 按实际生产日期

9 PACKING (Unit: mm)



*此包装为公司标准品包装，与样品包装可能不同，请确认！