CUSTOMER _____

SPECIFICATION FOR APPROVAL

AC/DC ADAPTOR

CUSTOMER SPEC:INPUT: 100-240V AC 50/60Hz OUTPUT:5VDC 3000mA

CUSTOMER DWG./PART NO. _____

PART NO. **KSA29A0500300D5(PAHS+REACH+ROHS)**

SAMPLE NO: S **REV.:** A **ISSUE DATE:** 2020-09-09

PRDUCT NO: KS

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
EDDY 袁	周松平	宋军	阳灿

Von Development Ltd. 旺怡發展有限公司

1A, Fook Ying Bldg, 379 Kings Road, North Point, Hong Kong

TEL: 852-2187-2875 FAX: 852-3012-1881

info@vonhk.com

	KUANTECH P/N:	PRODUCT NO	CUSTOMER P/N:
	KSA29A0500300D5		

Project Modify List

Item	Content	Rev.	Date	Prepared By	Checked By
1	First REV.	A			
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

1 GENERAL

1.1 Description

This specification defines the performance and characteristics of an adaptor, single-phase 15.0 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 IEC62368-1.

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.
Power consumption (no loading)	0.1W max.
Primary current protection	An adequate internal fuse on the AC input line is provide.
Configuration	2 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	3.0A
3.4	Peak load current	/
3.5	Rating output power	15.0W
3.6	Line regulation	The line regulation is less than ±7% while measuring at rated load and +/-10% of input voltage changing.
3.7	Load regulation	The load regulation for +5.0V is less than +/-7%, at measured output load from 10% to 100% rated load.
3.8	Peak load regulation	The peak load regulation for +5.0V is less than / , 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	81.39% minimum 115V/60Hz and 230V/50Hz, output current from 100%, 75%, 50%, 25%.
3.11	Turn on delay time	4000 mS at nominal input AC voltage and full load
3.12	Rise time	The supply shall have a start-up rise time of less than 20 mS to rise to within regulation limits for all DC outputs.
3.13	Hold up time	When power off, DC output +5.0V must be maintain 10 msec in regulation limit at 230Vac and full load.
3.14	Output over-shoot	Less than 10% of nominal voltage value
3.15	Temperature coefficient	Output voltage temperature coefficient ±0.05%/℃
3.16	LED indication function	/
3.17	Protection function	
	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 output shall be protected against the over current conditions. A power cycle shall be required to restore normal operation.

4 MECHANICAL

4.1 Enclosure and Layout

Plastic case: UL94V-0
Weight : / g (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 recommended that the external power supply be tested 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.
EN55032, Class B for radiated and conducted emissions.
GB9254, GB17625.1

5.2 Immunity

5.2.1 Electrostatic Discharge Immunity

EN 55024, EN 61000-4-2

- Air Discharge: ±8kV
- Contact Discharge: ±4kV
- 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, 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, EN 61000-4-4

- Power line: 1kV
- Signal line: 0.5kV
- Performance Criteria B

5.2.4 Surge Immunity

EN 55024, EN 61000-4-5

- 1.2/50 usec Open Circuit voltage
- 8/20 usec Short Circuit current
- Power line: 1kV

- Line to Earth: 2kV

Lightning Surge Voltage shall be applied in differential and common mode to AC input lines and cross primary AC input and secondary GND.

5.3 Safety Requirements and Certification

5.3.1 Regulatory Standard

The power supply shall complied the following international regulatory standards

for short	Country	Certified Status	Standard/标准
UL	USA	Meet	UL 60950-1
CUL	Canada	Meet	CSA C22.2 NO.60950-1
CE	Europe	Meet	Declared& CE Mark EN62368-1
RCM	Australia	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

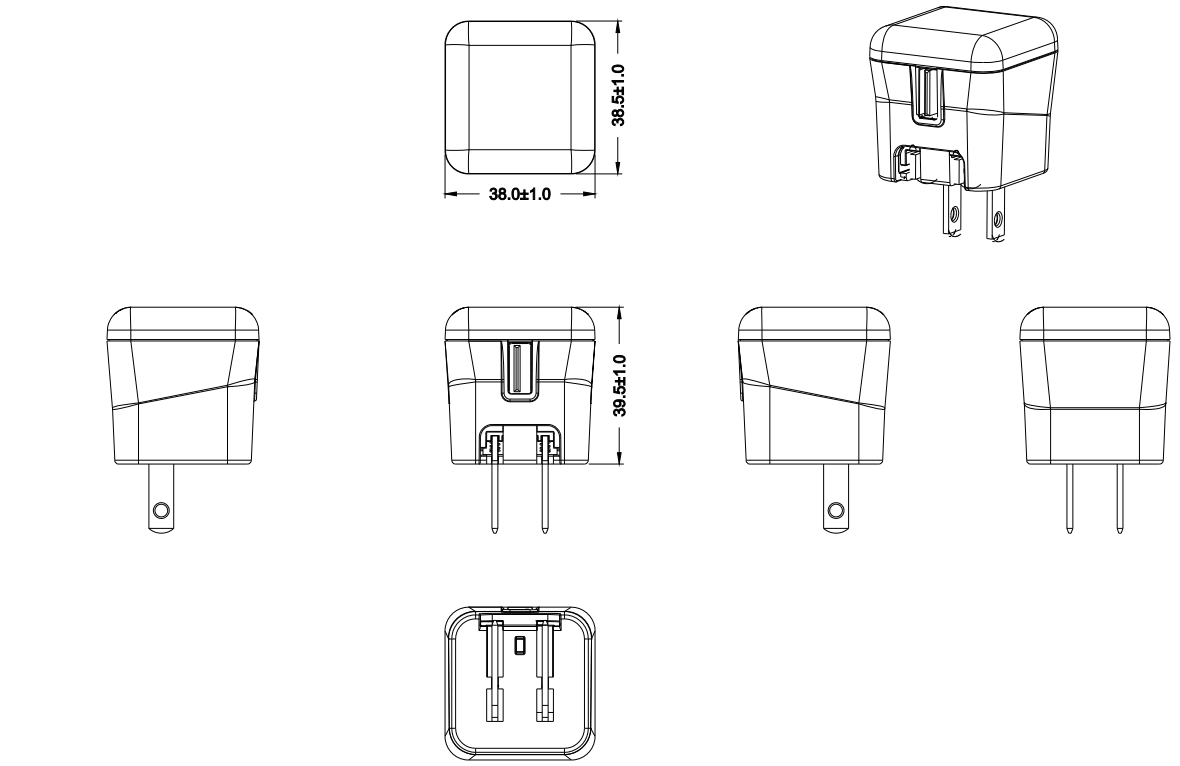
◎ Non-Operating: -20 °C +80 °C

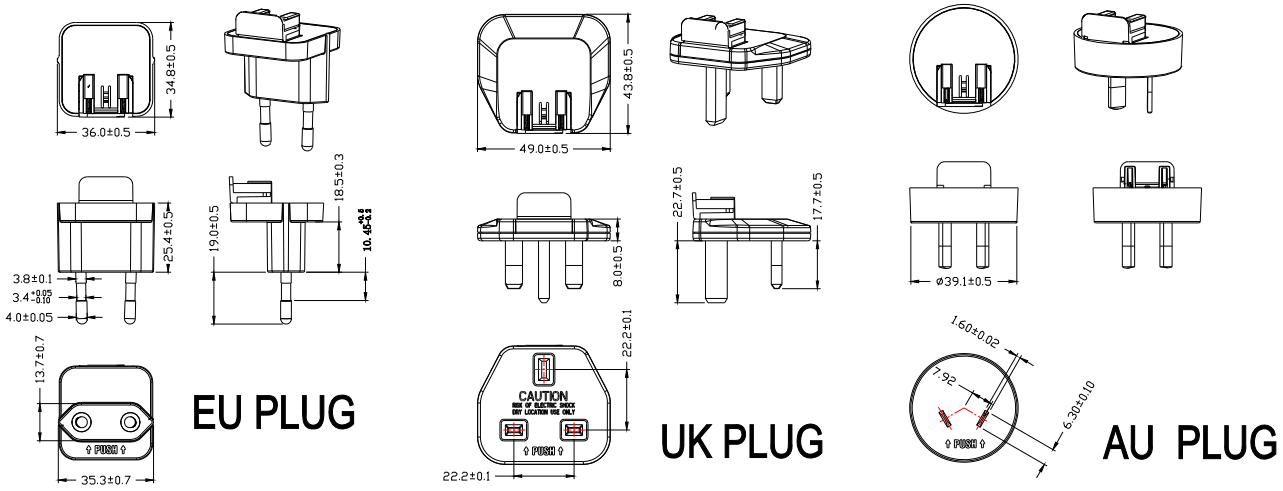
6.2 Humidity

◎ Operating: 10%~90% (Non Condensing)

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

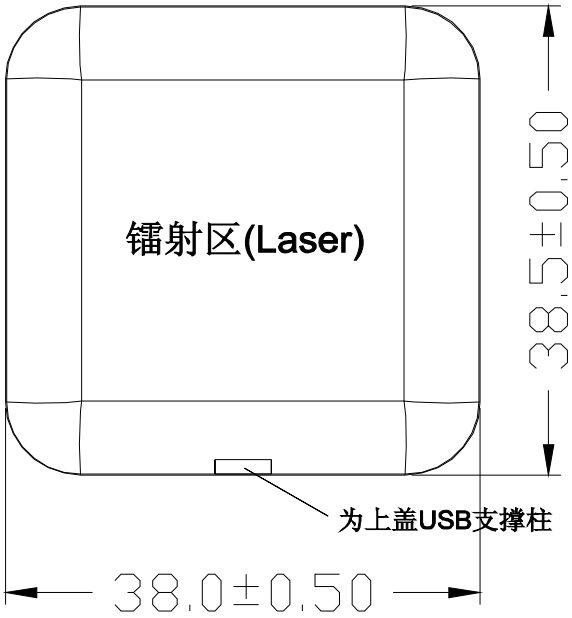
7 APPEARANCE DRAWING: (Unit: mm)

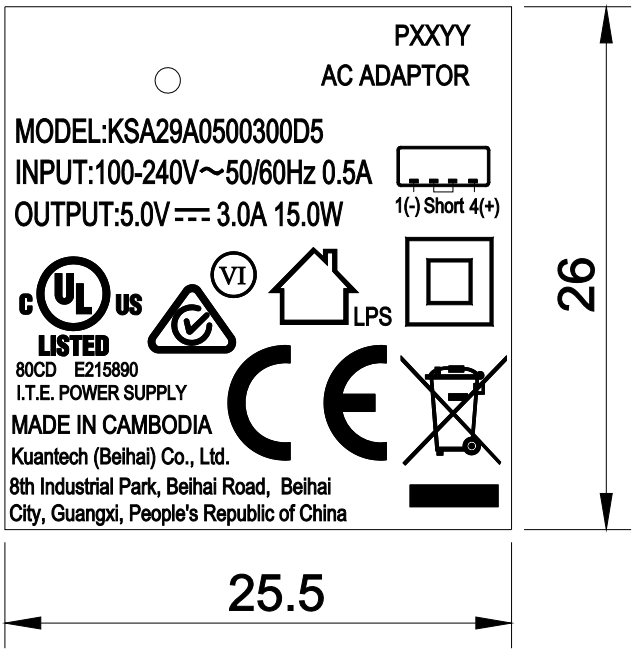




NOTE: 1. Case cover & chassis material:
PC: BLACK
2. AC PIN MATERIAL: BRASS (NI PLATED)
3. PAHS+REACH+ROHS
4. Satin Finish 雾面

8 NAME PLATE (Unit: mm):



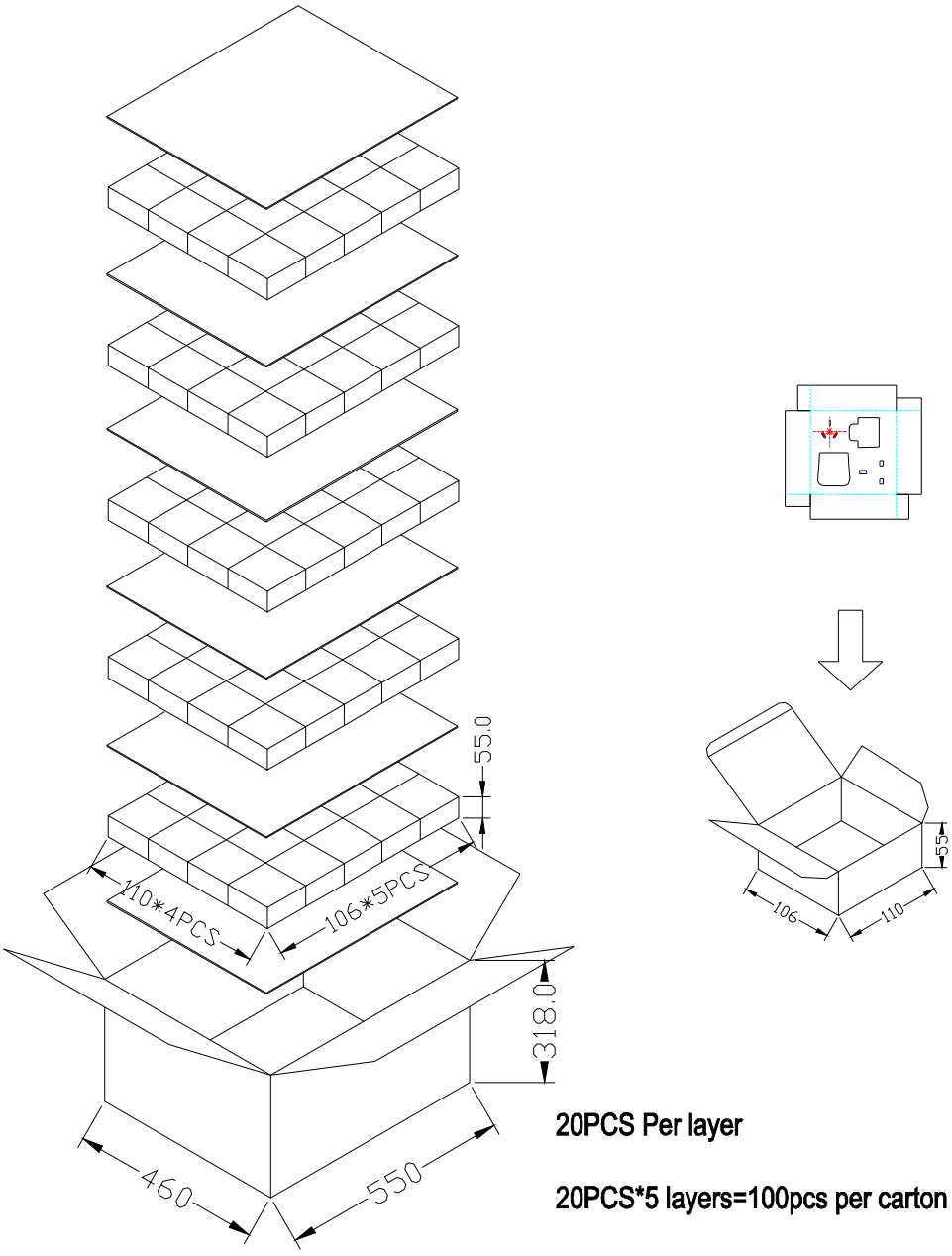


Note:

Laser (镭射)

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

9 PACKING (UNIT: MM)



20PCS Per layer

20PCS*5 layers=100pcs per carton

*此包装为公司标准品包装，与样品包装可能不同，请确认！

NOTICE OF COMPLETION
AND
AUTHORIZATION TO APPLY THE UL MARK

11/30/2012

Kuantech Co Ltd
Mr. Eric Peng
10th Fl
116 Bauguau Rd
Shindian City Taipei 231, Tw

Our Reference:	File E215890, Vol. X1	Project Number	12CA62549
Your Reference:	VICTOR MENG 06-NOV-2012		
Project Scope:	UL/CUL: DIRECT PLUG IN, MODEL KSA29A050YYYYD5, FULL INVESTIGATION WITH ONE TRANSFORMER.		
	*Assume:		
	1. All components are UL recognized.		
	2. Full Investigation with single component source.		
	3. one transformer with only secondary different.		

Dear Mr. Eric Peng:

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 E215890, Vol. X1.

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,

RichardJianMin Wang
1-4167575250
Project Engineer
Richard.J.Wang@ul.com

Reviewed by:

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

CC: GUANGZHOU ITL CO LTD, MR. VICTOR MENG

TPI1AE4-59BCEE