

CUSTOMER

Sharism

**SPECIFICATION FOR APPROVAL
AC/DC ADAPTOR**

CUSTOMER SPEC:INPUT: 100-240V AC 50/60Hz OUTPUT:12VDC 300mA

CUSTOMER DWG./PART NO. _____

Ktec PART NO. KSAS0061200030D5D(PAHS REACH)

SAMPLE NO: S54877 REV.: A ISSUE DATE: 2011-06-16

PRODUCT NO: KS032941

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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KUANTECH INCORPORATED COMPANY

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冠德科技股份有限公司
KUANTECH INCORPORATED COMPANY

Switching power supply specification(class B)

KUANTECH P/N:

PRODUCT NO:

CUSTOMER P/N:

KSAS0061200030D5D

KS032941

Project Modify List

Item	Content	Rev.	Date	Designed By	Checked By
1	First REV.	A	2011-06-16	ChenXian	Chenanping
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APPROVE: 宋军

DATE: 2011-06-16

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		KUANTECH P/N:	PRODUCT NO:	CUSTOMER P/N:
		KSAS0061200030D5D	KS032941	
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KUANTECH INCORPORATED COMPANY

Switching power supply specification(class B)

KUANTECH P/N:	PRODUCT NO:	CUSTOMER P/N:
KSAS0061200030D5D	KS032941	

1 GENERAL

1.1 Description

This specification defines the performance characteristics for a class II adapter., single-phase 3.6watts. Single output level power supply.

- Simple design philosophy.
- Overload protection during either (a) specified power threshold requirements or (b) short circuit condition.
- 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.

The maximum room ambient temperature (T_{mra}), as mentioned in clause 1.4.12 of IEC 60950-1. for the external power supply is 40 °C.

- Cooling: natural convection.

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	0.18A max.
Maximum input power	5.85W
Input current (no loading)	≤20mA
Power consumption (no loading)	Max. 0.5W
Primary current protection	An adequate internal fuse on the AC input line is provide.
Configuration	<u>2</u> Conductor

2.2 AC Inrush Current

Peak inrush current shall be limited to **30 A** for a cold start. Under both cold & warm start conditions, there shall be no immediate damage or long term impact on the reliability of the Supply. The conformance test for this requirement shall be performed at +12.5% of the rated input voltage. Voltage and current waveforms will be observed on an oscilloscope following closure of the external power switch. Switch closure will be repeated until the waveforms show closure coincident with a voltage peak. The current measured during this occurrence will be defined as the peak inrush current.

3 OUTPUT REQUIREMENTS

3.1	Nominal dc output voltage	+12V
3.2	Minimum load current	0.01A
3.3	Rating load current	0.3A

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3.4	Rating output power	3.6W
3.5	Line regulation	The line regulation is less than <u>±5%</u> while measuring at rated load and +/-10% of input voltage changing.
3.6	Load regulation	The load regulation for <u>+12V</u> is less than <u>+/-5%</u> , at measured output load from 0% to 100% rated load .
3.7	Ripple and noise	200 mVp-p Add 0.1uF/50V ceramic capacitor and 10uF/50V aluminum electrolytic capacitor across the output terminal. Measured with 20MHz Bandwidth Oscilloscope.
3.8	Switching efficiency	61.5% minimum 115V/60Hz and 230V/50Hz, output current from 100%, 75%, 50%, 25%.
3.9	Turn on delay time	3000 mS At nominal input AC voltage and full load
3.10	Rise time	The Supply shall have a start-up rise time of less than 100 mS to rise to within regulation limits for all DC outputs.
3.11	Hold up time	10 mS minimum At nominal input AC voltage and full load
3.12	Output over-shoot	Less than 10% of nominal voltage value
3.13	Temperature coefficient	Output voltage temperature coefficient ±0.05%/°C
3.14	LED indication function	/
3.15	Protection function	
	Over-voltage protection	The output voltage shall be clamped by internal protection IC.
	Short-circuit protection	The adapter shall not damage and with auto recovery function by short the DC output to Ground.
	Over current protection	The power supply will be protection when output power at 110-200% of all rated dc output

4 MECHANICAL

4.1 Enclosure And Layout

Plastic case: **UL94V-1**
Weight : **70 g** (Max.)
Dimensions: **54*36*45 mm**
Colour : **BLACK**

4.2 Input and Output Configuration

Input pin: **International PIN**
Output connector : dc plug type: **5.5*2.1*11mm"L"**
Polarity: **Center"+"**

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Cable: **2.5M VW-1 300V 80℃ 2468 24AWG 2C BLACK+WHITE (PAHS REACH)**

5 REGULATORY COMPLIANCE

5.1 Safety Requirements and Certification

5.1.1 Regulatory Standard

The power supply shall complied 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.950-1
TUV	Europe/欧洲	MEET	TUV/VDE-EN60950-1
CE	Europe/欧洲	MEET	Declared& CE Mark
PSE	Japan/日本	/	J60950(H14)/J55001(H14)
BSMI	Taiwan/台湾	/	CNS13438
CCC	CHINA	MEET	GB4943-2001
UK	Britain/英国	MEET	EN60950-1/A1:2006
AU	Australia/澳洲	MEET	A60950-1

5.1.2 Additional Safety Requirements

- ⊙ Dielectric Withstand Voltage, Primary(input AC short)-to-Secondary(output DC short): **3000 Vac, 10m 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℃ +40℃**
- ⊙ Non-Operating: **-20℃ +80℃**

6.2 Humidity

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

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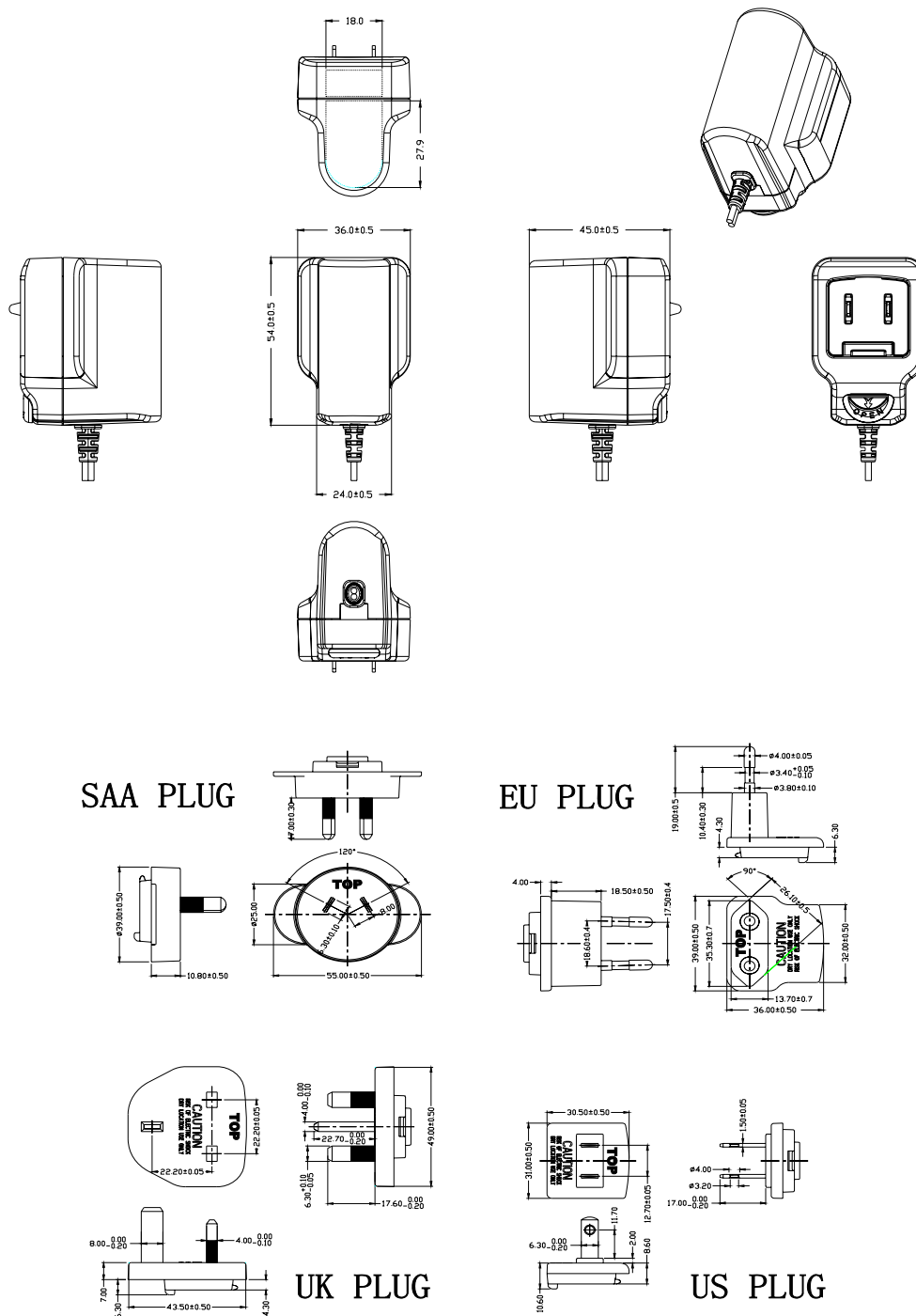
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7 APPEARANCE DRAWING: (Unit: mm)

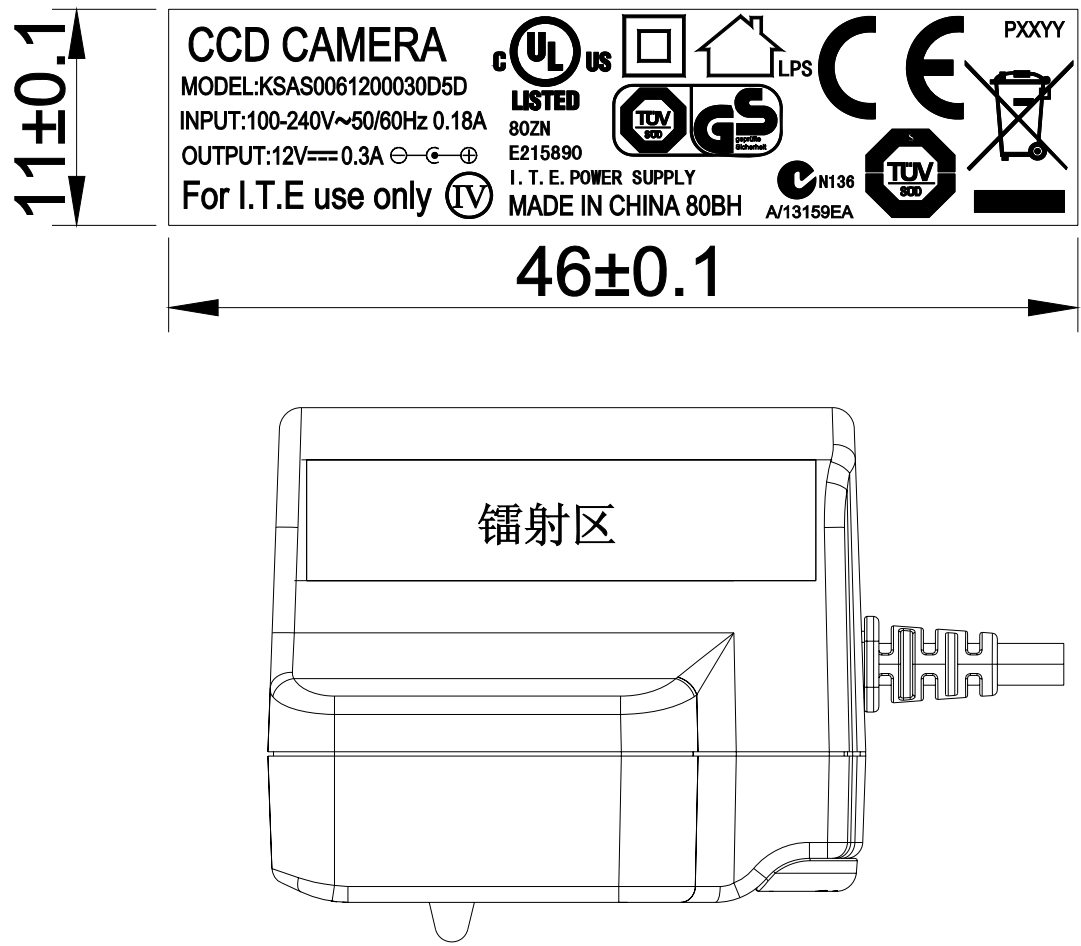


NOTE: 1. Case cover & chassis material:
SE-1/SE-100 BLACK
2. AC PIN MATERIAL: BRASS (NI PLATED)
3. PAHS REACH

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Ktec® 冠德科技股份有限公司 KUANTECH INCORPORATED COMPANY	Switching power supply specification(class B)		
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8
NAME PLATE:



- Note:
- MATERIAL: POLYESTER+PVC; COATING:0.25+-0.05mm
White characters Black background
PAHS REACH
 - Laser (辐射)
 - PXXYY(P=PAHS XX=WEEK YY=YEAR),按实际日期制作。

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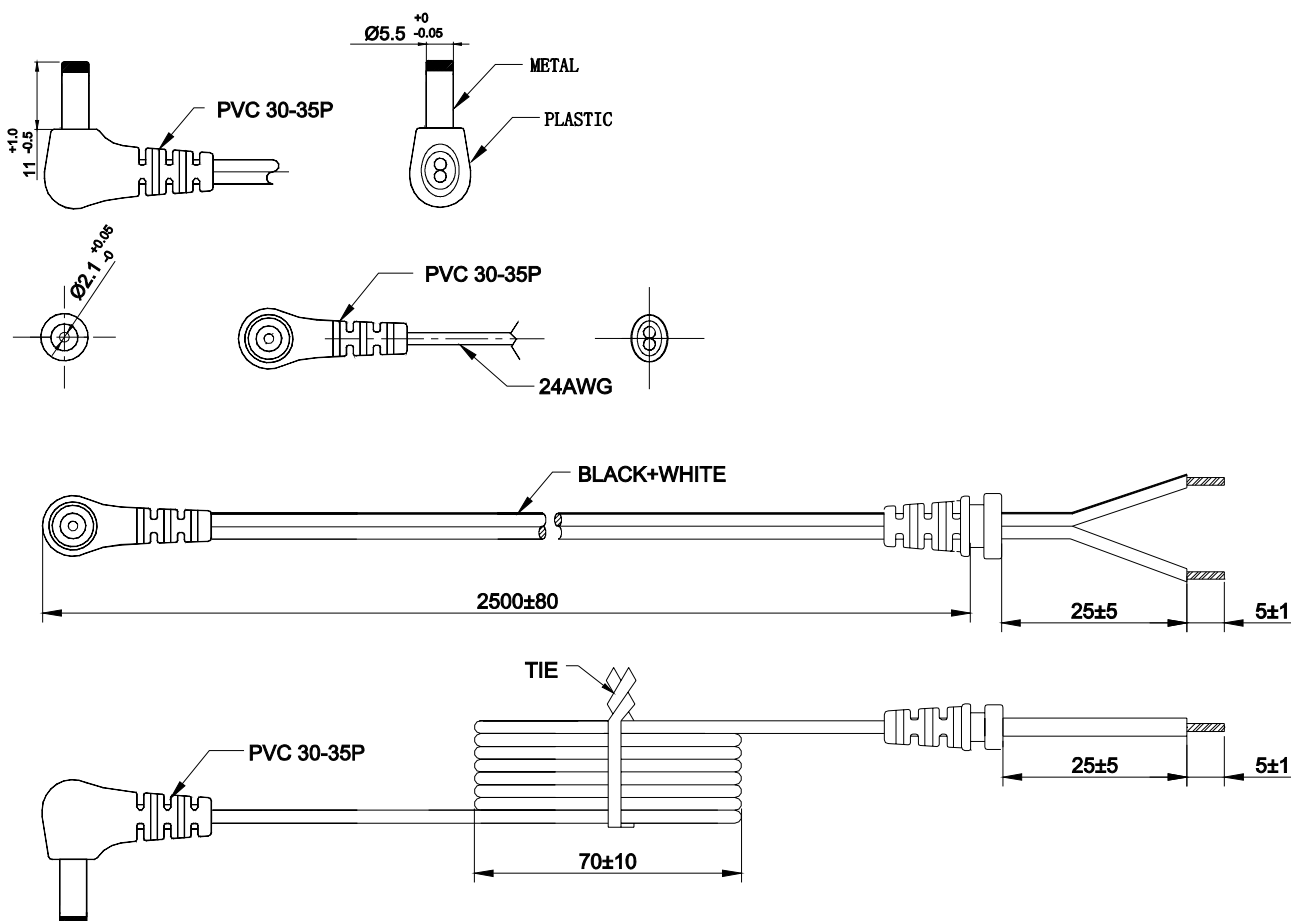


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KUANTECH P/N:	PRODUCT NO:	CUSTOMER P/N:
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9 DIMENSION OF OUTPUT PLUG & DC CORD (Unit: mm)



NOTE: (unit:mm)

- 1).WIRE TYPE:VW-1 80°C 300V L=2500mm 2468 24AWG 2C BLACK+WHITE
BLACK and WHITE----Positive BLACK----Negative
- 2).THE POLARITY: \ominus \bullet \oplus
- 3).PAHS REACH

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Tier 2 External Power Supply Efficiency

Manufacturer: KUANTECH (BEIHAI) CO., LTD
Model No.: KSAS0061200030D5D S548 **Cord Length (cm)** 250
DC Cord Description: 2468VW-1 24AWG 300V 80 °C Black and White (Lead Free)

Enter Applicable Nameplate Information

Rated AC Input Voltage	100-240	VAC
Rated Input Power		W
Rated AC Input Current	0.18	A
Rated Input Volt-Amperes		VA
Rated Input AC Frequency	50-60	Hz
Rated Output Voltage	12	V
Rated Output Current	300	mA
Input and Output Method	AC/DC	
Efficiency Level Mark	IV	
Manufactured Date	2011-6-17	

Tier 2 Standards

Minimum Average Efficiency in Active Mode:	
≤ 1 Watt	0.50 * Nameplate Output
> 1 to ≤ 51 Watts	0.09 * Ln (Nameplate Output) + 0.50
> 51 Watts	0.85
Maximum Energy Consumption in No Load Mode:	
0 to < 10 Watts	0.50 W
≥ 10 to ≤ 250 Watts	0.50 W
Test Method: EPA Test Method for Calculating the Energy Efficiency of Single-Voltage External Ac-Dc and Ac-Ac Power Supplies - August 11, 2004	
CEC Effective Date: Manufactured On or After 7/1/2006	

Tier 2 Standards for This Power Supply

Rated Output Power (Voltage * Current):	3.60 W
Maximum Energy Consumption - No Load:	0.5 W
Minimum Average Efficiency in Active Mode:	0.615 61.5%

115 VAC / 60 Hz External Power Supply Results Summary				
	Sample #1	Sample #2	Sample #3	Average
100% Load Efficiency	75.69%	74.36%	75.69%	75.2%
75% Load Efficiency	75.31%	74.53%	75.67%	75.2%
50% Load Efficiency	74.69%	73.71%	74.88%	74.4%
25% Load Efficiency	71.13%	68.70%	70.63%	70.2%
Average Active Mode Efficiency	74.2%	72.8%	74.2%	73.7%
No Load Input Power (W)	0.17	0.19	0.17	0.18

This Power Supply Meets Tier 2 Efficiency Standards At 115VAC / 60Hz

Test Lab: KUANTECH LAB
 Technician: WEN ZHAO LAN
 Date: 2011-6-17
 1.0

Sample #1 Test Results - 115 VAC / 60 Hz

Output Measurements

AC Input Measurements

Load Condition #1: 100%			
Set Output Current to	300 mA	Measured Input Power	4.80 W
Min Output Current	294 mA	Measured Input Voltage	115 VAC
Max Output Current	306 mA	Measured Frequency	60 Hz
		True Power Factor	0.554
Measured Output Current	300 mA	Total Harmonic Distortion (THD)	%
Measured Output Voltage	12.11 V	Calculated Power Consumed	1.17 W
Calculated Output Power	3.63 W	Calculated Efficiency (Ouput/Input)	75.69%
Load Condition #2: 75%			
Set Output Current to	225 mA	Measured Input Power	3.60 W
Min Output Current	219 mA	Measured Input Voltage	115 VAC
Max Output Current	231 mA	Measured Frequency	60 Hz
		True Power Factor	0.527
Measured Output Current	225 mA	Total Harmonic Distortion (THD)	%
Measured Output Voltage	12.05 V	Calculated Power Consumed	0.89 W
Calculated Output Power	2.71 W	Calculated Efficiency (Ouput/Input)	75.31%
Load Condition #3: 50%			
Set Output Current to	150 mA	Measured Input Power	2.41 W
Min Output Current	144 mA	Measured Input Voltage	115 VAC
Max Output Current	156 mA	Measured Frequency	60 Hz
		True Power Factor	0.492
Measured Output Current	150 mA	Total Harmonic Distortion (THD)	%
Measured Output Voltage	12 V	Calculated Power Consumed	0.61 W
Calculated Output Power	1.80 W	Calculated Efficiency (Ouput/Input)	74.69%
Load Condition #4: 25%			
Set Output Current to	75 mA	Measured Input Power	1.26 W
Min Output Current	69 mA	Measured Input Voltage	115 VAC
Max Output Current	81 mA	Measured Frequency	60 Hz
		True Power Factor	0.441
Measured Output Current	75 mA	Total Harmonic Distortion (THD)	%
Measured Output Voltage	11.95 V	Calculated Power Consumed	0.36 W
Calculated Output Power	0.90 W	Calculated Efficiency (Ouput/Input)	71.13%
Average Active Mode Efficiency: 74.2%			
Sample #1 Meets The Tier 2 Active Efficiency Standard			

Load condition #5: No Load		AC Input Measurements	
Set the Output to No Load		Measured Input Power	0.17 W
		Measured Input Voltage	115 VAC
		Measured Frequency	60 Hz
		True Power Factor	0.327
		Total Harmonic Distortion (THD)	%
Sample #1 Meets The Tier 2 No Load Standard			

Sample #2 Test Results - 115 VAC / 60 Hz

Output Measurements

AC Input Measurements

Load Condition #1: 100%			
Set Output Current to	300 mA	Measured Input Power	4.91 W
Min Output Current	294 mA	Measured Input Voltage	115 VAC
Max Output Current	306 mA	Measured Frequency	60 Hz
		True Power Factor	0.556
Measured Output Current	300 mA	Total Harmonic Distortion (THD)	%
Measured Output Voltage	12.17 V	Calculated Power Consumed	1.26 W
Calculated Output Power	3.65 W	Calculated Efficiency (Ouput/Input)	74.36%
Load Condition #2: 75%			
Set Output Current to	225 mA	Measured Input Power	3.65 W
Min Output Current	219 mA	Measured Input Voltage	115 VAC
Max Output Current	231 mA	Measured Frequency	60 Hz
		True Power Factor	0.528
Measured Output Current	225 mA	Total Harmonic Distortion (THD)	%
Measured Output Voltage	12.09 V	Calculated Power Consumed	0.93 W
Calculated Output Power	2.72 W	Calculated Efficiency (Ouput/Input)	74.53%
Load Condition #3: 50%			
Set Output Current to	150 mA	Measured Input Power	2.45 W
Min Output Current	144 mA	Measured Input Voltage	115 VAC
Max Output Current	156 mA	Measured Frequency	60 Hz
		True Power Factor	0.494
Measured Output Current	150 mA	Total Harmonic Distortion (THD)	%
Measured Output Voltage	12.04 V	Calculated Power Consumed	0.64 W
Calculated Output Power	1.81 W	Calculated Efficiency (Ouput/Input)	73.71%
Load Condition #4: 25%			
Set Output Current to	75 mA	Measured Input Power	1.31 W
Min Output Current	69 mA	Measured Input Voltage	115 VAC
Max Output Current	81 mA	Measured Frequency	60 Hz
		True Power Factor	0.444
Measured Output Current	75 mA	Total Harmonic Distortion (THD)	%
Measured Output Voltage	12 V	Calculated Power Consumed	0.41 W
Calculated Output Power	0.90 W	Calculated Efficiency (Ouput/Input)	68.70%
Average Active Mode Efficiency: 72.8%			
Sample #2 Meets The Tier 2 Active Efficiency Standard			

Load condition #5: No Load		AC Input Measurements	
Set the Output to No Load		Measured Input Power	0.19 W
		Measured Input Voltage	115 VAC
		Measured Frequency	60 Hz
		True Power Factor	0.328
		Total Harmonic Distortion (THD)	%
Sample #2 Meets The Tier 2 No Load Standard			

Sample #3 Test Results - 115 VAC / 60 Hz

Output Measurements

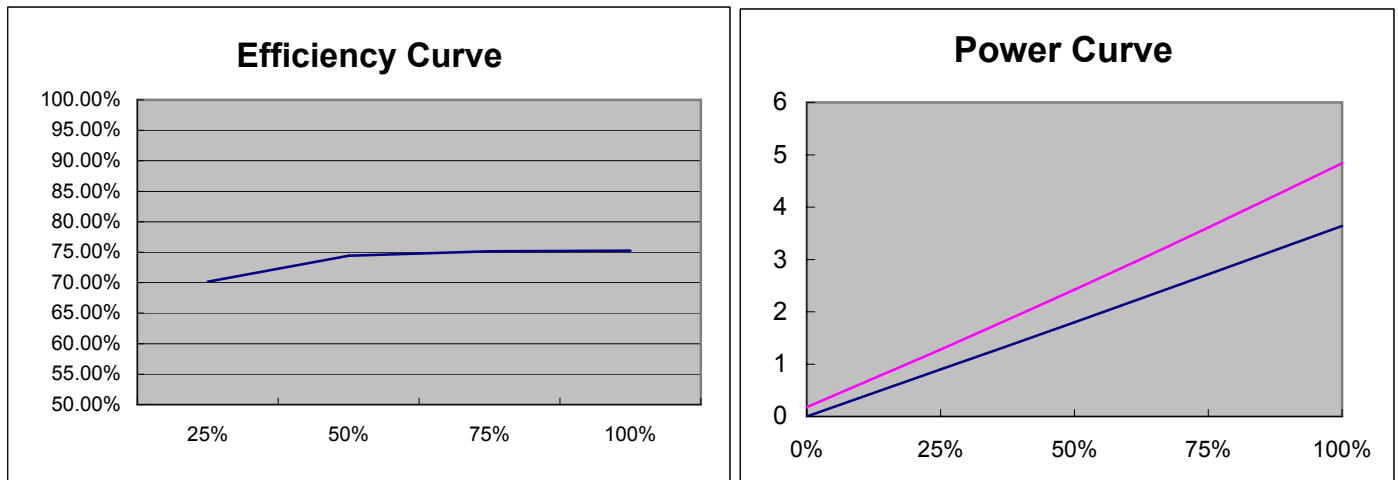
AC Input Measurements

Load Condition #1: 100%			
Set Output Current to	300 mA	Measured Input Power	4.80 W
Min Output Current	294 mA	Measured Input Voltage	115 VAC
Max Output Current	306 mA	Measured Frequency	60 Hz
		True Power Factor	0.555
Measured Output Current	300 mA	Total Harmonic Distortion (THD)	%
Measured Output Voltage	12.11 V	Calculated Power Consumed	1.17 W
Calculated Output Power	3.63 W	Calculated Efficiency (Ouput/Input)	75.69%
Load Condition #2: 75%			
Set Output Current to	225 mA	Measured Input Power	3.58 W
Min Output Current	219 mA	Measured Input Voltage	115 VAC
Max Output Current	231 mA	Measured Frequency	60 Hz
		True Power Factor	0.528
Measured Output Current	225 mA	Total Harmonic Distortion (THD)	%
Measured Output Voltage	12.04 V	Calculated Power Consumed	0.87 W
Calculated Output Power	2.71 W	Calculated Efficiency (Ouput/Input)	75.67%
Load Condition #3: 50%			
Set Output Current to	150 mA	Measured Input Power	2.40 W
Min Output Current	144 mA	Measured Input Voltage	115 VAC
Max Output Current	156 mA	Measured Frequency	60 Hz
		True Power Factor	0.494
Measured Output Current	150 mA	Total Harmonic Distortion (THD)	%
Measured Output Voltage	11.98 V	Calculated Power Consumed	0.60 W
Calculated Output Power	1.80 W	Calculated Efficiency (Ouput/Input)	74.88%
Load Condition #4: 25%			
Set Output Current to	75 mA	Measured Input Power	1.27 W
Min Output Current	69 mA	Measured Input Voltage	115 VAC
Max Output Current	81 mA	Measured Frequency	60 Hz
		True Power Factor	0.444
Measured Output Current	75 mA	Total Harmonic Distortion (THD)	%
Measured Output Voltage	11.96 V	Calculated Power Consumed	0.37 W
Calculated Output Power	0.90 W	Calculated Efficiency (Ouput/Input)	70.63%
Average Active Mode Efficiency: 74.2%			
Sample #3 Meets The Tier 2 Active Efficiency Standard			

Load condition #5: No Load		AC Input Measurements	
Set the Output to No Load		Measured Input Power	0.17 W
		Measured Input Voltage	115 VAC
		Measured Frequency	60 Hz
		True Power Factor	0.329
		Total Harmonic Distortion (THD)	%
Sample #3 Meets The Tier 2 No Load Standard			

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Power and Efficiency Curve



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HTTP:www.twktec.com

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Tier 2 External Power Supply Efficiency

Manufacturer: KUANTECH (BEIHAI) CO., LTD
Model No.: KSAS0061200030D5D S54877 **Cord Length (cm)** 250
DC Cord Description: 2468VW-1 24AWG 300V 80°C Black and White (Lead Free)

Enter Applicable Nameplate Information

Rated AC Input Voltage	100-240	VAC
Rated Input Power		W
Rated AC Input Current	0.18	A
Rated Input Volt-Amperes		VA
Rated Input AC Frequency	50-60	Hz
Rated Output Voltage	12	V
Rated Output Current	300	mA
Input and Output Method	AC/DC	
Efficiency Level Mark	IV	
Manufactured Date	2011-6-17	

Tier 2 Standards

Minimum Average Efficiency in Active Mode:		
≤ 1 Watt	0.50 * Nameplate Output	
> 1 to ≤ 51 Watts	0.09 * Ln (Nameplate Output) + 0.50	
> 51 Watts	0.85	
Maximum Energy Consumption in No Load Mode:		
0 to < 10 Watts	0.50 W	
≥ 10 to ≤ 250 Watts	0.50 W	
Test Method: EPA Test Method for Calculating the Energy Efficiency of Single-Voltage External Ac-Dc and Ac-Ac Power Supplies - August 11, 2004		
CEC Effective Date: Manufactured On or After 7/1/2006		

Tier 2 Standards for This Power Supply

Rated Output Power (Voltage * Current):	3.60 W	
Maximum Energy Consumption - No Load:	0.5 W	
Minimum Average Efficiency in Active Mode:	0.615	61.5%

230 VAC / 50 Hz External Power Supply Results Summary				
	Sample #1	Sample #2	Sample #3	Average
100% Load Efficiency	74.45%	72.26%	74.14%	73.6%
75% Load Efficiency	74.36%	72.94%	73.28%	73.5%
50% Load Efficiency	72.34%	70.59%	71.82%	71.6%
25% Load Efficiency	66.83%	64.13%	65.85%	65.6%
Average Active Mode Efficiency	72.0%	70.0%	71.3%	71.1%
No Load Input Power (W)	0.20	0.22	0.22	0.21

This Power Supply Meets Tier 2 Efficiency Standards At 230VAC / 50Hz

Test Lab: KUANTECH LAB
 Technician: WEN ZHAO LAN
 Date: 2011-6-17
 1.0

Sample #1 Test Results - 230 VAC / 50 Hz

Output Measurements	AC Input Measurements
Load Condition #1: 100%	
Set Output Current to 300 mA	Measured Input Power 4.88 W
Min Output Current 294 mA	Measured Input Voltage 230 VAC
Max Output Current 306 mA	Measured Frequency 50 Hz
	True Power Factor 0.450
Measured Output Current 300 mA	Total Harmonic Distortion (THD) %
Measured Output Voltage 12.11 V	Calculated Power Consumed 1.25 W
Calculated Output Power 3.63 W	Calculated Efficiency (Output/Input) 74.45%
Load Condition #2: 75%	
Set Output Current to 225 mA	Measured Input Power 3.64 W
Min Output Current 219 mA	Measured Input Voltage 230 VAC
Max Output Current 231 mA	Measured Frequency 50 Hz
	True Power Factor 0.429
Measured Output Current 225 mA	Total Harmonic Distortion (THD) %
Measured Output Voltage 12.03 V	Calculated Power Consumed 0.93 W
Calculated Output Power 2.71 W	Calculated Efficiency (Output/Input) 74.36%
Load Condition #3: 50%	
Set Output Current to 150 mA	Measured Input Power 2.48 W
Min Output Current 144 mA	Measured Input Voltage 230 VAC
Max Output Current 156 mA	Measured Frequency 50 Hz
	True Power Factor 0.405
Measured Output Current 150 mA	Total Harmonic Distortion (THD) %
Measured Output Voltage 11.96 V	Calculated Power Consumed 0.69 W
Calculated Output Power 1.79 W	Calculated Efficiency (Output/Input) 72.34%
Load Condition #4: 25%	
Set Output Current to 75 mA	Measured Input Power 1.34 W
Min Output Current 69 mA	Measured Input Voltage 230 VAC
Max Output Current 81 mA	Measured Frequency 50 Hz
	True Power Factor 0.365
Measured Output Current 75 mA	Total Harmonic Distortion (THD) %
Measured Output Voltage 11.94 V	Calculated Power Consumed 0.44 W
Calculated Output Power 0.90 W	Calculated Efficiency (Output/Input) 66.83%
Average Active Mode Efficiency: 72.0%	
Sample #1 Meets The Tier 2 Active Efficiency Standard	

Load condition #5: No Load	AC Input Measurements
Set the Output to No Load	Measured Input Power 0.20 W
	Measured Input Voltage 230 VAC
	Measured Frequency 50 Hz
	True Power Factor 0.287
	Total Harmonic Distortion (THD) %
Sample #1 Meets The Tier 2 No Load Standard	

Sample #2 Test Results - 230 VAC / 50 Hz

Output Measurements	AC Input Measurements
Load Condition #1: 100%	
Set Output Current to 300 mA	Measured Input Power 5.04 W
Min Output Current 294 mA	Measured Input Voltage 230 VAC
Max Output Current 306 mA	Measured Frequency 50 Hz
	True Power Factor 0.465
Measured Output Current 300 mA	Total Harmonic Distortion (THD) %
Measured Output Voltage 12.14 V	Calculated Power Consumed 1.40 W
Calculated Output Power 3.64 W	Calculated Efficiency (Ouput/Input) 72.26%
Load Condition #2: 75%	
Set Output Current to 225 mA	Measured Input Power 3.72 W
Min Output Current 219 mA	Measured Input Voltage 230 VAC
Max Output Current 231 mA	Measured Frequency 50 Hz
	True Power Factor 0.444
Measured Output Current 225 mA	Total Harmonic Distortion (THD) %
Measured Output Voltage 12.06 V	Calculated Power Consumed 1.01 W
Calculated Output Power 2.71 W	Calculated Efficiency (Ouput/Input) 72.94%
Load Condition #3: 50%	
Set Output Current to 150 mA	Measured Input Power 2.55 W
Min Output Current 144 mA	Measured Input Voltage 230 VAC
Max Output Current 156 mA	Measured Frequency 50 Hz
	True Power Factor 0.417
Measured Output Current 150 mA	Total Harmonic Distortion (THD) %
Measured Output Voltage 12 V	Calculated Power Consumed 0.75 W
Calculated Output Power 1.80 W	Calculated Efficiency (Ouput/Input) 70.59%
Load Condition #4: 25%	
Set Output Current to 75 mA	Measured Input Power 1.40 W
Min Output Current 69 mA	Measured Input Voltage 230 VAC
Max Output Current 81 mA	Measured Frequency 50 Hz
	True Power Factor 0.378
Measured Output Current 75 mA	Total Harmonic Distortion (THD) %
Measured Output Voltage 11.97 V	Calculated Power Consumed 0.50 W
Calculated Output Power 0.90 W	Calculated Efficiency (Ouput/Input) 64.13%
Average Active Mode Efficiency: 70.0%	
Sample #2 Meets The Tier 2 Active Efficiency Standard	

Load condition #5: No Load	AC Input Measurements
Set the Output to No Load	Measured Input Power 0.22 W
	Measured Input Voltage 230 VAC
	Measured Frequency 50 Hz
	True Power Factor 0.293
	Total Harmonic Distortion (THD) %
Sample #2 Meets The Tier 2 No Load Standard	

Sample #3 Test Results - 230 VAC / 50 Hz

Output Measurements

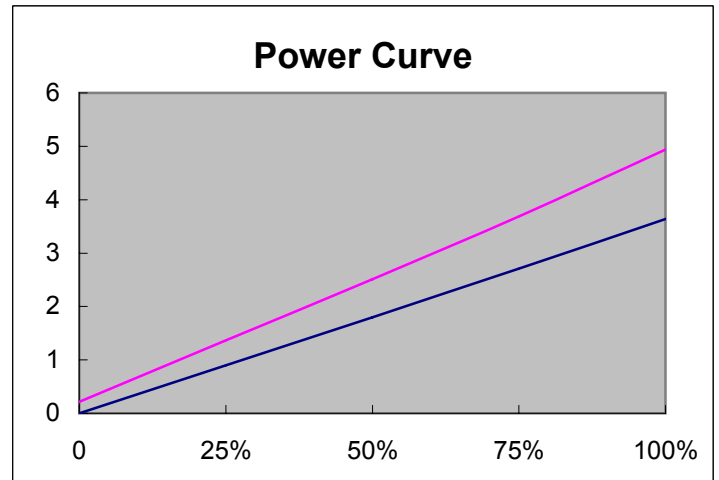
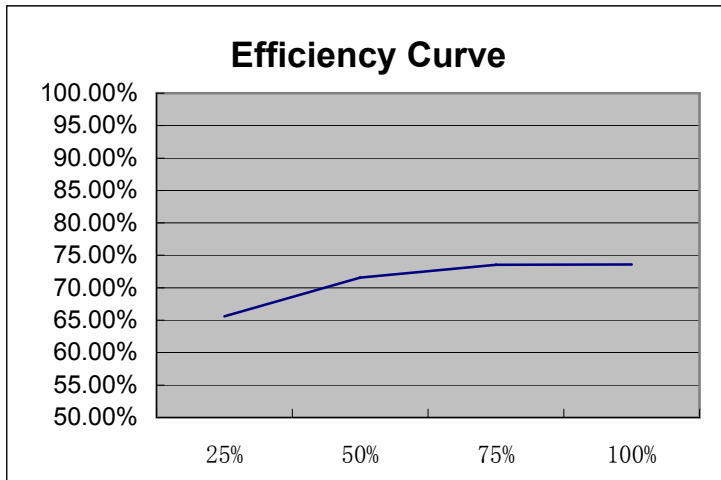
AC Input Measurements

Load Condition #1: 100%			
Set Output Current to	300 mA	Measured Input Power	4.90 W
Min Output Current	294 mA	Measured Input Voltage	230 VAC
Max Output Current	306 mA	Measured Frequency	50 Hz
		True Power Factor	0.451
Measured Output Current	300 mA	Total Harmonic Distortion (THD)	%
Measured Output Voltage	12.11 V	Calculated Power Consumed	1.27 W
Calculated Output Power	3.63 W	Calculated Efficiency (Ouput/Input)	74.14%
Load Condition #2: 75%			
Set Output Current to	225 mA	Measured Input Power	3.70 W
Min Output Current	219 mA	Measured Input Voltage	230 VAC
Max Output Current	231 mA	Measured Frequency	50 Hz
		True Power Factor	0.431
Measured Output Current	225 mA	Total Harmonic Distortion (THD)	%
Measured Output Voltage	12.05 V	Calculated Power Consumed	0.99 W
Calculated Output Power	2.71 W	Calculated Efficiency (Ouput/Input)	73.28%
Load Condition #3: 50%			
Set Output Current to	150 mA	Measured Input Power	2.50 W
Min Output Current	144 mA	Measured Input Voltage	230 VAC
Max Output Current	156 mA	Measured Frequency	50 Hz
		True Power Factor	0.405
Measured Output Current	150 mA	Total Harmonic Distortion (THD)	%
Measured Output Voltage	11.97 V	Calculated Power Consumed	0.70 W
Calculated Output Power	1.80 W	Calculated Efficiency (Ouput/Input)	71.82%
Load Condition #4: 25%			
Set Output Current to	75 mA	Measured Input Power	1.36 W
Min Output Current	69 mA	Measured Input Voltage	230 VAC
Max Output Current	81 mA	Measured Frequency	50 Hz
		True Power Factor	0.379
Measured Output Current	75 mA	Total Harmonic Distortion (THD)	%
Measured Output Voltage	11.94 V	Calculated Power Consumed	0.46 W
Calculated Output Power	0.90 W	Calculated Efficiency (Ouput/Input)	65.85%
Average Active Mode Efficiency: 71.3%			
Sample #3 Meets The Tier 2 Active Efficiency Standard			

Load condition #5: No Load		AC Input Measurements	
Set the Output to No Load		Measured Input Power	0.22 W
		Measured Input Voltage	230 VAC
		Measured Frequency	50 Hz
		True Power Factor	0.291
		Total Harmonic Distortion (THD)	%
Sample #3 Meets The Tier 2 No Load Standard			

KTEC

Power and Efficiency Curve





Product Service

CERTIFICATE

No. Z1 10 05 48694 833

Holder of Certificate: Kuantech (Shenzhen) Co., Ltd.

 6th Honghua Road, Gongming Town
 Baoan District, Shenzhen
 PEOPLE'S REPUBLIC OF CHINA

**Production
Facility(ies):**

64970

Certification Mark:

Product:

Switch mode power supplies

Model(s):

 KSAS006xxxxxyyyzzm (xxx=030-120 indicates rated
 output voltage range 3,0-12,0 V d.c.; yyy=0010-0120
 indicates rated output current range 0,1-1,2 A; zz=VK, VE;
 VK indicates UK plug, VE indicates Europe plug; m=U, D;
 U indicates USB output, D indicates DC cord output.)

Parameters:

Rated voltage:	100-240 V
Rated frequency:	50/60 Hz
Rated current:	0,18 A
Rated output voltage:	3,0-12,0 V d.c.
Rated output current:	0,1-1,2 A
Protection class:	II
Degree of protection:	IPX0
Remark:	See page 2-6 for output details.

Tested according to: EN 60950-1/A11:2009
 BS EN 60950-1/A1:2006

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition the certification holder must not transfer the certificate to third parties. See also notes overleaf.

Test report no.: 6421010063001

Date, 2010-05-25

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(Shaochang Liu)





Product Service

CERTIFICATE

No. Z1 10 05 48694 833

KSAS006xxxxxyzzm (xxx=030-120 indicates rated output voltage range 3,0-12,0 V d.c., yyyy=0010-0120 indicates rated output current range 0,1-1,2 A, zz=VK, VE, VK indicates UK plug, VE indicates Europe plug, m=U, D; U indicates USB output, D indicates DC cord output.)		
Model No.	Rated output voltage (V d.c.)	Rated output current range (A)
KSAS006030yyyyzzm (yyyy=0010-0120)	3,0	0,1-1,2
KSAS006031yyyyzzm (yyyy=0010-0120)	3,1	0,1-1,2
KSAS006032yyyyzzm (yyyy=0010-0120)	3,2	0,1-1,2
KSAS006033yyyyzzm (yyyy=0010-0120)	3,3	0,1-1,2
KSAS006034yyyyzzm (yyyy=0010-0120)	3,4	0,1-1,2
KSAS006035yyyyzzm (yyyy=0010-0120)	3,5	0,1-1,2
KSAS006036yyyyzzm (yyyy=0010-0120)	3,6	0,1-1,2
KSAS006037yyyyzzm (yyyy=0010-0120)	3,7	0,1-1,2
KSAS006038yyyyzzm (yyyy=0010-0120)	3,8	0,1-1,2
KSAS006039yyyyzzm (yyyy=0010-0120)	3,9	0,1-1,2
KSAS006040yyyyzzm (yyyy=0010-0120)	4,0	0,1-1,2
KSAS006041yyyyzzm (yyyy=0010-0120)	4,1	0,1-1,2
KSAS006042yyyyzzm (yyyy=0010-0120)	4,2	0,1-1,2
KSAS006043yyyyzzm (yyyy=0010-0120)	4,3	0,1-1,2
KSAS006044yyyyzzm (yyyy=0010-0120)	4,4	0,1-1,2
KSAS006045yyyyzzm (yyyy=0010-0120)	4,5	0,1-1,2
KSAS006046yyyyzzm (yyyy=0010-0120)	4,6	0,1-1,2
KSAS006047yyyyzzm (yyyy=0010-0120)	4,7	0,1-1,2
KSAS006048yyyyzzm (yyyy=0010-0120)	4,8	0,1-1,2
KSAS006049yyyyzzm (yyyy=0010-0120)	4,9	0,1-1,2

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Product Service

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KSAS006050yyyyzzm (yyyy=0010-0120)	5,0	0,1-1,2
KSAS006051yyyyzzm (yyyy=0010-0117)	5,1	0,1-1,17
KSAS006052yyyyzzm (yyyy=0010-0115)	5,2	0,1-1,15
KSAS006053yyyyzzm (yyyy=0010-0113)	5,3	0,1-1,13
KSAS006054yyyyzzm (yyyy=0010-0111)	5,4	0,1-1,11
KSAS006055yyyyzzm (yyyy=0010-0109)	5,5	0,1-1,09
KSAS006056yyyyzzm (yyyy=0010-0107)	5,6	0,1-1,07
KSAS006057yyyyzzm (yyyy=0010-0105)	5,7	0,1-1,05
KSAS006058yyyyzzm (yyyy=0010-0103)	5,8	0,1-1,03
KSAS006059yyyyzzm (yyyy=0010-0101)	5,9	0,1-1,01
KSAS006060yyyyzzm (yyyy=0010-0100)	6,0	0,1-1,00
KSAS006061yyyyzzm (yyyy=0010-0098)	6,1	0,1-0,98
KSAS006062yyyyzzm (yyyy=0010-0096)	6,2	0,1-0,96
KSAS006063yyyyzzm (yyyy=0010-0095)	6,3	0,1-0,95
KSAS006064yyyyzzm (yyyy=0010-0093)	6,4	0,1-0,93
KSAS006065yyyyzzm (yyyy=0010-0092)	6,5	0,1-0,92
KSAS006066yyyyzzm (yyyy=0010-0090)	6,6	0,1-0,90
KSAS006067yyyyzzm (yyyy=0010-0089)	6,7	0,1-0,89
KSAS006068yyyyzzm (yyyy=0010-0088)	6,8	0,1-0,88
KSAS006069yyyyzzm (yyyy=0010-0086)	6,9	0,1-0,86
KSAS006070yyyyzzm (yyyy=0010-0085)	7,0	0,1-0,85
KSAS006071yyyyzzm (yyyy=0010-0084)	7,1	0,1-0,84
KSAS006072yyyyzzm (yyyy=0010-0083)	7,2	0,1-0,83

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KSAS006073yyyyzzm (yyyy=0010-0082)	7,3	0,1-0,82
KSAS006074yyyyzzm (yyyy=0010-0081)	7,4	0,1-0,81
KSAS006075yyyyzzm (yyyy=0010-0080)	7,5	0,1-0,80
KSAS006076yyyyzzm (yyyy=0010-0078)	7,6	0,1-0,78
KSAS006077yyyyzzm (yyyy=0010-0077)	7,7	0,1-0,77
KSAS006078yyyyzzm (yyyy=0010-0076)	7,8	0,1-0,76
KSAS006079yyyyzzm (yyyy=0010-0075)	7,9	0,1-0,75
KSAS006080yyyyzzm (yyyy=0010-0075)	8,0	0,1-0,75
KSAS006081yyyyzzm (yyyy=0010-0074)	8,1	0,1-0,74
KSAS006082yyyyzzm (yyyy=0010-0073)	8,2	0,1-0,73
KSAS006083yyyyzzm (yyyy=0010-0072)	8,3	0,1-0,72
KSAS006084yyyyzzm (yyyy=0010-0071)	8,4	0,1-0,71
KSAS006085yyyyzzm (yyyy=0010-0070)	8,5	0,1-0,70
KSAS006086yyyyzzm (yyyy=0010-0069)	8,6	0,1-0,69
KSAS006087yyyyzzm (yyyy=0010-0068)	8,7	0,1-0,68
KSAS006088yyyyzzm (yyyy=0010-0068)	8,8	0,1-0,68
KSAS006089yyyyzzm (yyyy=0010-0067)	8,9	0,1-0,67
KSAS006090yyyyzzm (yyyy=0010-0066)	9,0	0,1-0,66
KSAS006091yyyyzzm (yyyy=0010-0065)	9,1	0,1-0,65
KSAS006092yyyyzzm (yyyy=0010-0065)	9,2	0,1-0,65
KSAS006093yyyyzzm (yyyy=0010-0064)	9,3	0,1-0,64
KSAS006094yyyyzzm (yyyy=0010-0063)	9,4	0,1-0,63
KSAS006095yyyyzzm (yyyy=0010-0063)	9,5	0,1-0,63

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Product Service

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KSAS006096yyyyzzm (yyyy=0010-0062)	9,6	0,1-0,62
KSAS006097yyyyzzm (yyyy=0010-0061)	9,7	0,1-0,61
KSAS006098yyyyzzm (yyyy=0010-0061)	9,8	0,1-0,61
KSAS006099yyyyzzm (yyyy=0010-0060)	9,9	0,1-0,60
KSAS006100yyyyzzm (yyyy=0010-0060)	10,0	0,1-0,60
KSAS006101yyyyzzm (yyyy=0010-0059)	10,1	0,1-0,59
KSAS006102yyyyzzm (yyyy=0010-0058)	10,2	0,1-0,58
KSAS006103yyyyzzm (yyyy=0010-0058)	10,3	0,1-0,58
KSAS006104yyyyzzm (yyyy=0010-0057)	10,4	0,1-0,57
KSAS006105yyyyzzm (yyyy=0010-0057)	10,5	0,1-0,57
KSAS006106yyyyzzm (yyyy=0010-0056)	10,6	0,1-0,56
KSAS006107yyyyzzm (yyyy=0010-0056)	10,7	0,1-0,56
KSAS006108yyyyzzm (yyyy=0010-0055)	10,8	0,1-0,55
KSAS006109yyyyzzm (yyyy=0010-0055)	10,9	0,1-0,55
KSAS006110yyyyzzm (yyyy=0010-0054)	11,0	0,1-0,54
KSAS006111yyyyzzm (yyyy=0010-0054)	11,1	0,1-0,54
KSAS006112yyyyzzm (yyyy=0010-0053)	11,2	0,1-0,53
KSAS006113yyyyzzm (yyyy=0010-0053)	11,3	0,1-0,53
KSAS006114yyyyzzm (yyyy=0010-0052)	11,4	0,1-0,52
KSAS006115yyyyzzm (yyyy=0010-0052)	11,5	0,1-0,52
KSAS006116yyyyzzm (yyyy=0010-0051)	11,6	0,1-0,51
KSAS006117yyyyzzm (yyyy=0010-0051)	11,7	0,1-0,51
KSAS006118yyyyzzm (yyyy=0010-0050)	11,8	0,1-0,50

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Product Service

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KSAS006119yyyyzzm (yyyy=0010-0050)	11,9	0,1-0,50
KSAS006120yyyyzzm (yyyy=0010-0050)	12,0	0,1-0,50

-End-

Test report no.: 6421010063001

Date, 2010-05-25



Product Service

CERTIFICATE

No. Z1A 10 05 48694 832

Holder of Certificate: Kuantech (Shenzhen) Co., Ltd.

 6th Honghua Road, Gongming Town
 Baoan District, Shenzhen
 PEOPLE'S REPUBLIC OF CHINA

Factory(ies): 64970

Certification Mark:

Product: Switch mode power supplies

Model(s): KSAS006xxxxxyyyzzm (xxx=030-120 indicates rated output voltage range 3,0-12,0 V d.c.; yyyy=0010-0120 indicates rated output current range 0,1-1,2 A; zz=VK, VE; VK indicates UK plug, VE indicates Europe plug; m=U, D; U indicates USB output, D indicates DC cord output.)

Parameters:	Rated voltage:	100-240 V
	Rated frequency:	50/60 Hz
	Rated current:	0,18 A
	Rated output voltage:	3,0-12,0 V d.c.
	Rated output current:	0,1-1,2 A
	Protection class:	II
	Degree of protection:	IPX0
	Remark:	See page 2-6 for output details.

Tested according to: EN 60950-1/A11:2009

The product meets the safety and health requirements of the German Equipment and Product Safety Act section 7 subsection 1 sentence 2 GPSG. The certification marks shown above can be affixed on the product. It is not permitted to alter the certification marks in any way. In addition the certificate holder must not transfer the certificate to third parties. This certificate is valid until the listed date, unless it is cancelled earlier. See also notes overleaf.

Test report no.: 6421010063001

Valid until: 2015-05-24

Date, 2010-05-25

(Shaochang Liu)

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Product Service

CERTIFICATE

No. Z1A 10 05 48694 832

KSAS006xxxxyyzzm (xxx=030-120 indicates rated output voltage range 3,0-12,0 V d.c.; yyyy=0010-0120 indicates rated output current range 0,1-1,2 A; zz=VK, VE; VK indicates UK plug, VE indicates Europe plug; m=U, D; U indicates USB output, D indicates DC cord output.)		
Model No.	Rated output voltage (V d.c.)	Rated output current range (A)
KSAS006030yyyyzzm (yyyy=0010-0120)	3,0	0,1-1,2
KSAS006031yyyyzzm (yyyy=0010-0120)	3,1	0,1-1,2
KSAS006032yyyyzzm (yyyy=0010-0120)	3,2	0,1-1,2
KSAS006033yyyyzzm (yyyy=0010-0120)	3,3	0,1-1,2
KSAS006034yyyyzzm (yyyy=0010-0120)	3,4	0,1-1,2
KSAS006035yyyyzzm (yyyy=0010-0120)	3,5	0,1-1,2
KSAS006036yyyyzzm (yyyy=0010-0120)	3,6	0,1-1,2
KSAS006037yyyyzzm (yyyy=0010-0120)	3,7	0,1-1,2
KSAS006038yyyyzzm (yyyy=0010-0120)	3,8	0,1-1,2
KSAS006039yyyyzzm (yyyy=0010-0120)	3,9	0,1-1,2
KSAS006040yyyyzzm (yyyy=0010-0120)	4,0	0,1-1,2
KSAS006041yyyyzzm (yyyy=0010-0120)	4,1	0,1-1,2
KSAS006042yyyyzzm (yyyy=0010-0120)	4,2	0,1-1,2
KSAS006043yyyyzzm (yyyy=0010-0120)	4,3	0,1-1,2
KSAS006044yyyyzzm (yyyy=0010-0120)	4,4	0,1-1,2
KSAS006045yyyyzzm (yyyy=0010-0120)	4,5	0,1-1,2
KSAS006046yyyyzzm (yyyy=0010-0120)	4,6	0,1-1,2
KSAS006047yyyyzzm (yyyy=0010-0120)	4,7	0,1-1,2
KSAS006048yyyyzzm (yyyy=0010-0120)	4,8	0,1-1,2
KSAS006049yyyyzzm (yyyy=0010-0120)	4,9	0,1-1,2

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Product Service

CERTIFICATE

No. Z1A 10 05 48694 832

KSAS006050yyyyzzm (yyyy=0010-0120)	5,0	0,1-1,2
KSAS006051yyyyzzm (yyyy=0010-0117)	5,1	0,1-1,17
KSAS006052yyyyzzm (yyyy=0010-0115)	5,2	0,1-1,15
KSAS006053yyyyzzm (yyyy=0010-0113)	5,3	0,1-1,13
KSAS006054yyyyzzm (yyyy=0010-0111)	5,4	0,1-1,11
KSAS006055yyyyzzm (yyyy=0010-0109)	5,5	0,1-1,09
KSAS006056yyyyzzm (yyyy=0010-0107)	5,6	0,1-1,07
KSAS006057yyyyzzm (yyyy=0010-0105)	5,7	0,1-1,05
KSAS006058yyyyzzm (yyyy=0010-0103)	5,8	0,1-1,03
KSAS006059yyyyzzm (yyyy=0010-0101)	5,9	0,1-1,01
KSAS006060yyyyzzm (yyyy=0010-0100)	6,0	0,1-1,00
KSAS006061yyyyzzm (yyyy=0010-0098)	6,1	0,1-0,98
KSAS006062yyyyzzm (yyyy=0010-0096)	6,2	0,1-0,96
KSAS006063yyyyzzm (yyyy=0010-0095)	6,3	0,1-0,95
KSAS006064yyyyzzm (yyyy=0010-0093)	6,4	0,1-0,93
KSAS006065yyyyzzm (yyyy=0010-0092)	6,5	0,1-0,92
KSAS006066yyyyzzm (yyyy=0010-0090)	6,6	0,1-0,90
KSAS006067yyyyzzm (yyyy=0010-0089)	6,7	0,1-0,89
KSAS006068yyyyzzm (yyyy=0010-0088)	6,8	0,1-0,88
KSAS006069yyyyzzm (yyyy=0010-0086)	6,9	0,1-0,86
KSAS006070yyyyzzm (yyyy=0010-0085)	7,0	0,1-0,85
KSAS006071yyyyzzm (yyyy=0010-0084)	7,1	0,1-0,84
KSAS006072yyyyzzm (yyyy=0010-0083)	7,2	0,1-0,83

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Product Service

CERTIFICATE

No. Z1A 10 05 48694 832

KSAS006073yyyyzzm (yyyy=0010-0082)	7,3	0,1-0,82
KSAS006074yyyyzzm (yyyy=0010-0081)	7,4	0,1-0,81
KSAS006075yyyyzzm (yyyy=0010-0080)	7,5	0,1-0,80
KSAS006076yyyyzzm (yyyy=0010-0078)	7,6	0,1-0,78
KSAS006077yyyyzzm (yyyy=0010-0077)	7,7	0,1-0,77
KSAS006078yyyyzzm (yyyy=0010-0076)	7,8	0,1-0,76
KSAS006079yyyyzzm (yyyy=0010-0075)	7,9	0,1-0,75
KSAS006080yyyyzzm (yyyy=0010-0075)	8,0	0,1-0,75
KSAS006081yyyyzzm (yyyy=0010-0074)	8,1	0,1-0,74
KSAS006082yyyyzzm (yyyy=0010-0073)	8,2	0,1-0,73
KSAS006083yyyyzzm (yyyy=0010-0072)	8,3	0,1-0,72
KSAS006084yyyyzzm (yyyy=0010-0071)	8,4	0,1-0,71
KSAS006085yyyyzzm (yyyy=0010-0070)	8,5	0,1-0,70
KSAS006086yyyyzzm (yyyy=0010-0069)	8,6	0,1-0,69
KSAS006087yyyyzzm (yyyy=0010-0068)	8,7	0,1-0,68
KSAS006088yyyyzzm (yyyy=0010-0068)	8,8	0,1-0,68
KSAS006089yyyyzzm (yyyy=0010-0067)	8,9	0,1-0,67
KSAS006090yyyyzzm (yyyy=0010-0066)	9,0	0,1-0,66
KSAS006091yyyyzzm (yyyy=0010-0065)	9,1	0,1-0,65
KSAS006092yyyyzzm (yyyy=0010-0065)	9,2	0,1-0,65
KSAS006093yyyyzzm (yyyy=0010-0064)	9,3	0,1-0,64
KSAS006094yyyyzzm (yyyy=0010-0063)	9,4	0,1-0,63
KSAS006095yyyyzzm (yyyy=0010-0063)	9,5	0,1-0,63

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Product Service

CERTIFICATE

No. Z1A 10 05 48694 832

KSAS006096yyyyzzm (yyyy=0010-0062)	9,6	0,1-0,62
KSAS006097yyyyzzm (yyyy=0010-0061)	9,7	0,1-0,61
KSAS006098yyyyzzm (yyyy=0010-0061)	9,8	0,1-0,61
KSAS006099yyyyzzm (yyyy=0010-0060)	9,9	0,1-0,60
KSAS006100yyyyzzm (yyyy=0010-0060)	10,0	0,1-0,60
KSAS006101yyyyzzm (yyyy=0010-0059)	10,1	0,1-0,59
KSAS006102yyyyzzm (yyyy=0010-0058)	10,2	0,1-0,58
KSAS006103yyyyzzm (yyyy=0010-0058)	10,3	0,1-0,58
KSAS006104yyyyzzm (yyyy=0010-0057)	10,4	0,1-0,57
KSAS006105yyyyzzm (yyyy=0010-0057)	10,5	0,1-0,57
KSAS006106yyyyzzm (yyyy=0010-0056)	10,6	0,1-0,56
KSAS006107yyyyzzm (yyyy=0010-0056)	10,7	0,1-0,56
KSAS006108yyyyzzm (yyyy=0010-0055)	10,8	0,1-0,55
KSAS006109yyyyzzm (yyyy=0010-0055)	10,9	0,1-0,55
KSAS006110yyyyzzm (yyyy=0010-0054)	11,0	0,1-0,54
KSAS006111yyyyzzm (yyyy=0010-0054)	11,1	0,1-0,54
KSAS006112yyyyzzm (yyyy=0010-0053)	11,2	0,1-0,53
KSAS006113yyyyzzm (yyyy=0010-0053)	11,3	0,1-0,53
KSAS006114yyyyzzm (yyyy=0010-0052)	11,4	0,1-0,52
KSAS006115yyyyzzm (yyyy=0010-0052)	11,5	0,1-0,52
KSAS006116yyyyzzm (yyyy=0010-0051)	11,6	0,1-0,51
KSAS006117yyyyzzm (yyyy=0010-0051)	11,7	0,1-0,51
KSAS006118yyyyzzm (yyyy=0010-0050)	11,8	0,1-0,50

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Product Service

CERTIFICATE

No. Z1A 10 05 48694 832

KSAS006119yyyyzzm (yyy=0010-0050)	11,9	0,1-0,50
KSAS006120yyyyzzm (yyy=0010-0050)	12,0	0,1-0,50

-End-

Test report no.: 6421010063001

Date, 2010-05-25

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Certificate of Approval

Number A/13159EA

Authorised marking: A/13159EA

This is to certify that ITACS has approved the electrical equipment described hereunder and authorises the certificate holder to affix the abovementioned mark to products of the same type; or the Regulatory Compliance Mark (RCM) provided that the requirements of all relevant parts of AS/NZS 4417 applicable to the article are fulfilled

Declared class: Power Supply or Charger
Product: Ktec model KSAS006xxxxyyyzzm AC Adaptor
"xxx" = 030 to 120 denotes output voltage: 030=3.0V, 120=12.0V
"yyy" = 0010 to 0120 denotes output current: 0010=0.1A, 0120=1.2A ()
"zz" = VA or D5: VA denotes Australia direct plug-in,
D5 denotes detachable plug portion
"m" = U or D denotes output type: U – USB output, D – DC output cord
Input: 100-240Va.c, 50/60Hz, 0.18A
Output: 3.0-12.0Vd.c, 0.1-1.2A

Certified to the relevant requirements of:

AS/NZS 60950.1:2003 inc. amendments 1, 2 & 3

Certificate Holder: Kuantech (Shenzhen) Co. Ltd.
6th Honghua Road, Gongming Town
Baoan District, Shenzhen
P.R. China

Conditions:

This certificate is not transferable and remains the property of ITACS

This certificate may only be reproduced in full

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the standards listed above.

This certificate is granted subject to the conditions and obligations as set out in the ITACS Electrical Product Safety Certification application form.

Signed for and on behalf of issuing body



Certification Authority

Issue date: 17/11/2010

Expiry date: 17/11/2015

 ABN 60 098 886 563	<p><i>Certificate issued by</i></p> <hr/> <p>International Testing And Certification Services Pty. Ltd. 4-6 Second Street SA 5007 Australia PO Box 300 Hindmarsh SA 5007 Australia Phone: +61 8 8346 8680 <i>Email: itacs@itacslab.com</i></p>	 Accreditation by the Joint Accreditation System of Australia and New Zealand Acc No. Z2870404AA www.jas-anz.org
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NOTICE OF AUTHORIZATION TO APPLY THE UL MARK

2010-06-01

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

Our Reference: File E215890, Vol. X2 Project Number 10CA23949
Your Reference: SHI, RICE MR.
Project Scope: UL/CUL investigation for AC ADAPTOR. Models KSAS006xxxxxyyVUm (xxx= 030-120, indicates rated output voltage range is 3.0V to 12.0V; yyyy= 0010-0120, indicates output current range is 0.1A to 1.2A; Maximum output power 6W. m= U or D, U indicates output with USB connector, D indicates output with DC cord). Report reference E215890-A65-UL-1.

Dear Mr. RICE SHI:

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 only at authorized factories under UL's Follow-Up Service Program.

To provide the manufacturer with the intended authorization to use the UL Mark, the addressee must send a copy of this notice to each manufacturing location currently authorized in File E215890, Vol. X2.

This authorization is effective from the date of this Notice and only for products at the indicated manufacturing locations. Records in the Follow-Up Services Procedure covering the product are now being prepared and will be sent in the near future. This letter authorizes application of the UL Mark for 90 days from the date of this letter.

Products that bear the UL Mark shall be identical to those that were evaluated by UL and found to comply with UL's requirements. If changes in construction are discovered, appropriate action will be taken for products not in conformance with UL's requirements and continued use of the UL Mark may be withdrawn. UL may elect to withdraw use of the UL Mark if the Applicant or Manufacturer fails to comply with UL's requirements including ongoing compliance of the product, under UL's Follow-Up Service.

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

The contents of this Letter are intended solely for the use of UL and the Applicant. The opinions and findings of UL represent its judgment given with due consideration to the necessary limitations of practical operation in accordance with UL's objectives and purposes. UL shall not otherwise be responsible for the use of or reliance upon the contents of this letter by anyone. UL shall not incur any obligation or liability for any loss, expense or damages, including incidental, consequential or punitive damages, arising out of or in connection with the use or reliance upon the contents of this letter to anyone other than the Applicant as provided in the agreement between UL and Applicant. Any use or reference to UL's name or certification mark(s) by anyone other than the Applicant in accordance with the agreement is prohibited without the express written approval of UL.

Very truly yours,

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Engineer
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Kelvin.Tang@cn.ul.com

CC: I-TEST LABORATORY, MR. VICTOR MENG

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