

GFCUSTOMER

B63IC1

**SPECIFICATION FOR APPROVAL  
AC/DC ADAPTOR**

**CUSTOMER SPEC:INPUT: 100-240V AC 50/60Hz OUTPUT:12VDC1500mA**

**CUSTOMER DWG./PART NO.** \_\_\_\_\_

**Ktec PART NO. KSAS0151200150HA (ROHS)**

**SAMPLE NO: S57223 REV.: A ISSUE DATE: 2011-10-11**

**PRODUCT NO: KS034591**

**Unit Color: Black**

**White**

**APPROVED SIGNATURES/客户确认**

<b>核准/APPROVED BY</b>	<b>审核/ CHECKED BY:</b>	<b>检测/TESTED BY:</b>

**Manufacturer/制造商**

<b>业务/SALES</b>	<b>品管/QE</b>	<b>核准/APPROVED BY</b>	<b>制样/DESIGNED BY</b>
刘亚琴	周松平	宋军	毛银娥

**KUANTECH INCORPORATED COMPANY**

**冠德科技股份有限公司**

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**[Http://www.globalsources.com/kuantech.com](http://www.globalsources.com/kuantech.com)**

**[Http://www.twktec.com](http://www.twktec.com)**



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KUANTECH INCORPORATED COMPANY

**Switching power supply specification(class B)**

KUANTECH P/N:

PRODUCT NO:

CUSTOMER P/N:

KSAS0151200150HA

KS034591

**Project Modify List**

Item	Content	Rev.	Date	Designed By	Checked By
1	First REV.	A	2011-10-11	ChenXian	Liyunsong
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TITLE:		REVISIONS: A	DRAWING NO.:		
DESIGN: 陈娴	CHECK: 李云松	APPROVE: 宋军	DATE: 2011-10-11	PAGE: 2 OF 11	



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**Switching power supply specification(class B)**

<b>KUANTECH P/N:</b>	<b>PRODUCT NO:</b>	<b>CUSTOMER P/N:</b>
KSAS0151200150HA	KS034591	

<b>1</b>	<b>GENERAL</b> .....	<b>4</b>
1.1	Description.....	4
<b>2</b>	<b>INPUT REQUIREMENTS</b> .....	<b>4</b>
2.1	Input Conditions .....	4
2.2	AC Inrush Current .....	4
<b>3</b>	<b>OUTPUT REQUIREMENTS</b> .....	<b>4</b>
<b>4</b>	<b>MECHANICAL</b> .....	<b>5</b>
4.1	Enclosure And Layout .....	5
4.2	Input and Output Configuration .....	5
<b>5</b>	<b>REGULATORY COMPLIANCE</b> .....	<b>6</b>
5.1	Safety Requirements and Certification .....	6
5.1.1	Regulatory Standard.....	6
5.1.2	Additional Safety Requirements .....	6
<b>6</b>	<b>ENVIRONMENTAL REQUIREMENTS</b> .....	<b>6</b>
6.1	Temperature .....	6
6.2	Humidity .....	6
<b>7</b>	<b>APPEARANCE DRAWING: (Unit: mm)</b> .....	<b>7</b>
<b>8</b>	<b>NAME PLATE:</b> .....	<b>8</b>
<b>9</b>	<b>DIMENSION OF OUTPUT PLUG &amp; DC CORD (Unit: mm)</b> .....	<b>9</b>
10	DC cord(Label)(Unit: mm).....	10
11	PACKING(Unit: mm) .....	11

<b>TITLE:</b>		<b>REVISIONS: A</b>	<b>DRAWING NO.:</b>	
<b>DESIGN:</b> 陈娴	<b>CHECK:</b> 李云松	<b>APPROVE:</b> 宋军	<b>DATE:</b> 2011-10-11	<b>PAGE:</b> 3 OF 11



**Switching power supply specification(class B)**

KUANTECH P/N:	PRODUCT NO:	CUSTOMER P/N:
KSAS0151200150HA	KS034591	

**1 GENERAL**

**1.1 Description**

This specification defines the performance characteristics for a class II adapter., single-phase 18watts. Single output level power supply.

- Simple design philosophy.
- Overload Latch-Off 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	<b>100-240Vac</b>
Operating range	<b>90-264Vac</b>
Rated input frequency	<b>50/60Hz +/- 3Hz</b>
Rated input current	<b>0.4A max.</b>
Maximum input power	<b>22.42W</b>
Input current (no loading)	<b>≤25mA</b>
Power consumption (no loading)	<b>Max. 0.3W</b>
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 60 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	<b>+12V</b>
3.2	Minimum load current	<b>0.0A</b>
3.3	Rating load current	<b>1.5A</b>

TITLE:		REVISIONS: A	DRAWING NO.:	
DESIGN: 陈娴	CHECK: 李云松	APPROVE: 宋军	DATE: 2011-10-11	PAGE: 4 OF 11



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KUANTECH INCORPORATED COMPANY

**Switching power supply specification(class B)**

KUANTECH P/N:	PRODUCT NO:	CUSTOMER P/N:
KSAS0151200150HA	KS034591	


3.4	Peak load current	/
3.5	Rating output power	<b>18W</b>
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>+12.0V</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>+12.0V</u> is less than <u>/</u> , at measured output load from 30% to 100% rated load.
3.9	Ripple and noise	<b>120 mVp-p</b>
		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	<b>80.3%</b> minimum
		115V/60Hz and 230V/50Hz, output current from 100%, 75%, 50%, 25%.
3.11	Turn on delay time	<b>3000 mS</b> At nominal input AC voltage and full load
3.12	Rise time	The Supply shall have a start-up rise time of less than <b>20 mS</b> to rise to within regulation limits for all DC outputs.
3.13	Hold up time	<b>10 mS</b> minimum At nominal input AC voltage and full load
3.14	Output over-shoot	Less than <u>7%</u> of nominal voltage value
3.15	Temperature coefficient	Output voltage temperature coefficient ±0.05%/°C
3.16	LED indication function	/
3.17	Protection function	
	Over-voltage protection	The output voltage shall be clamped by internal protection zener.
	Short-circuit protection	The adapter shall <b>not damage and with auto recovery function</b> by short the DC output to Ground.
	Over current protection	The power supply will be protection when output power at <u>/</u> of all rated dc output

**4 MECHANICAL**

**4.1 Enclosure And Layout**

Plastic case: **UL94V-1**  
 Weight : **137g** (Max.)  
 Dimensions: **82\*43.5\*31mm**  
 Colour : **BLACK**

**4.2 Input and Output Configuration**

Input pin: **SAA PIN**  
 Output connector : dc plug type: **/**  
 Polarity: 

TITLE:		REVISIONS: A	DRAWING NO.:	
DESIGN: 陈娴	CHECK: 李云松	APPROVE: 宋军	DATE: 2011-10-11	PAGE: 5 OF 11



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:
KSAS0151200150HA	KS034591	

**Cable: 1.83M VW-1 80°C 300V 2468 22AWG BLACK+WHITE(ROHS)**

**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
AU	Australia/澳洲	meet	A60960/NSW25014

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

**6.2 Humidity**

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

TITLE:		REVISIONS: A	DRAWING NO.:	
DESIGN: 陈娴	CHECK: 李云松	APPROVE: 宋军	DATE: 2011-10-11	PAGE: 6 OF 11

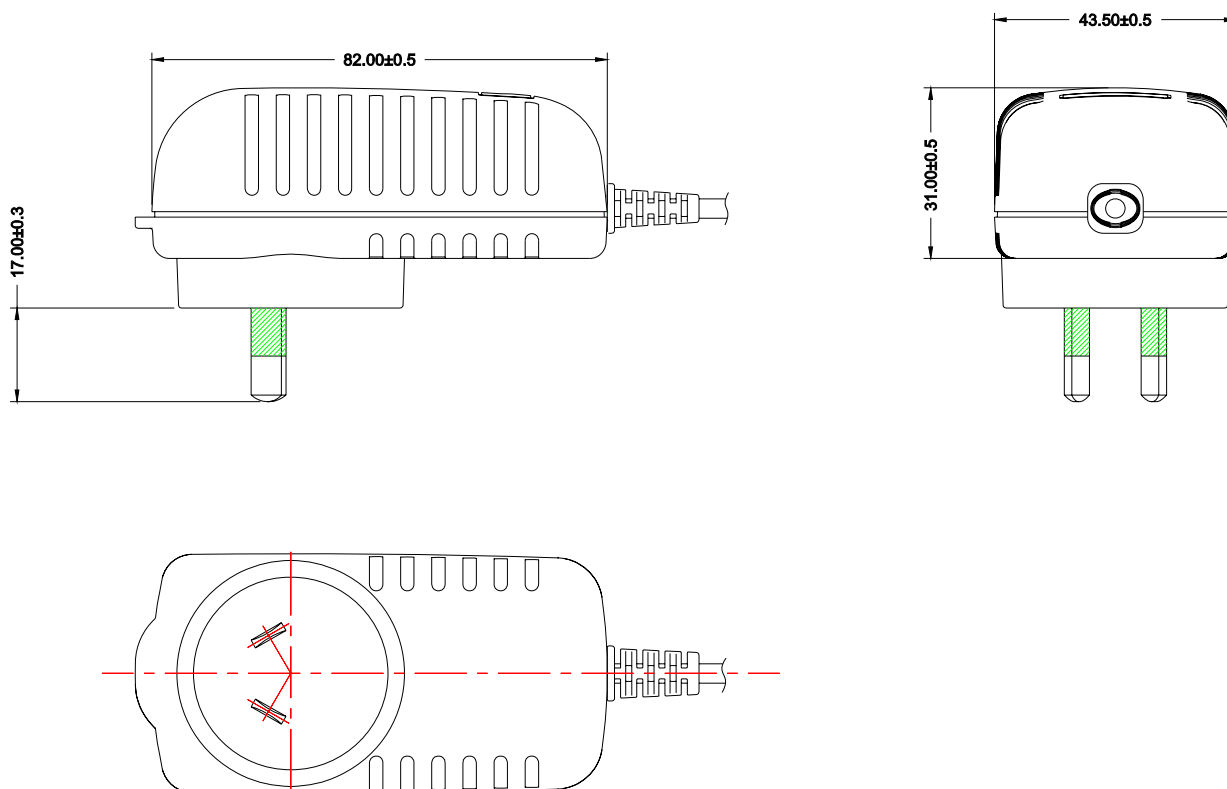


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Switching power supply specification(class B)

KUANTECH P/N:	PRODUCT NO:	CUSTOMER P/N:
KSAS0151200150HA	KS034591	

7 APPEARANCE DRAWING: (Unit: mm)



- NOTE: 1. Case cover & chassis material:  
SE-1/SE-100 BLACK(NO KTEC)  
2. AC PIN MATERIAL: BRASS (NI PLATED)  
3. ROHS

TITLE:		REVISIONS: A	DRAWING NO.:	
DESIGN: 陈娴	CHECK: 李云松	APPROVE: 宋军	DATE: 2011-10-11	PAGE: 7 OF 11

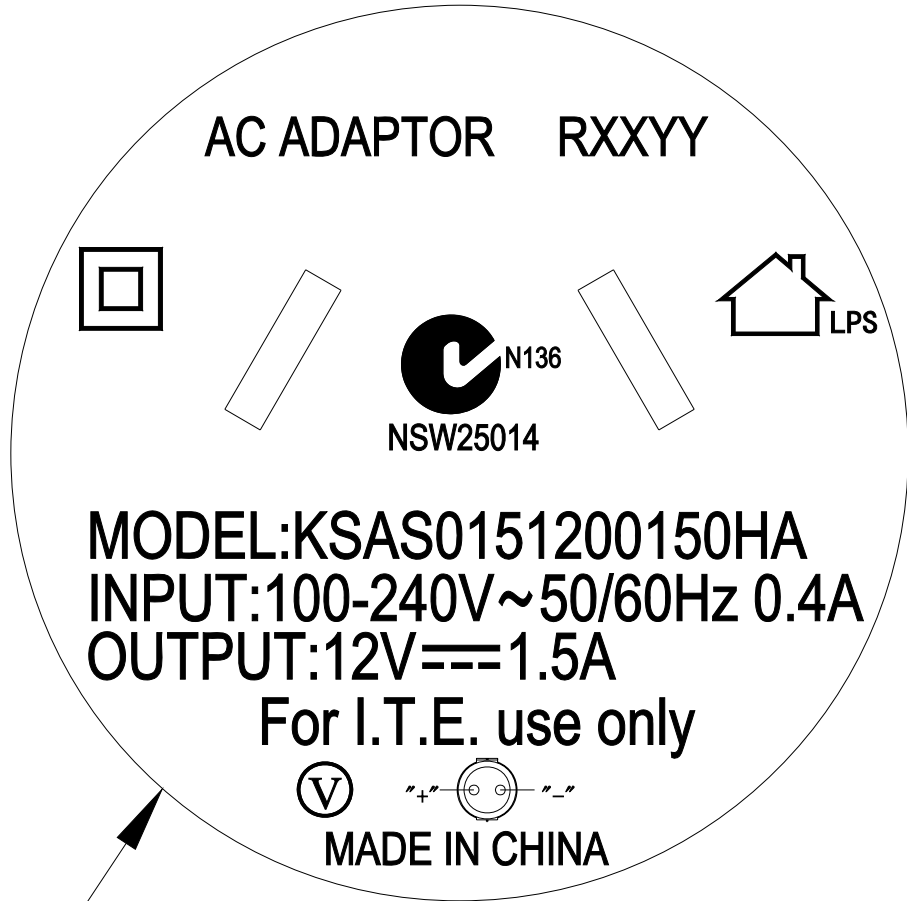


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Switching power supply specification(class B)

KUANTECH P/N:	PRODUCT NO:	CUSTOMER P/N:
KSAS0151200150HA	KS034591	

8 NAME PLATE:



Ø34.5

- Note: 1.  MATERIAL: POLYESTER+PVC; COATING:0.25+-0.05mm  
White characters Black background  
ROHS
2.  Laser (镭射)
3. RXXYY(R=ROHS XX=WEEK YY=YEAR) 按实际生产日期制作

TITLE:		REVISIONS: A	DRAWING NO.:	
DESIGN: 陈娴	CHECK: 李云松	APPROVE: 宋军	DATE: 2011-10-11	PAGE: 8 OF 11





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Switching power supply specification(class B)

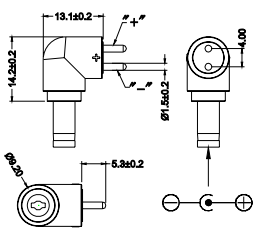
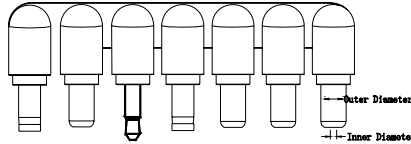
KUANTECH P/N:  
KSAS0151200150HA

PRODUCT NO:  
KS034591

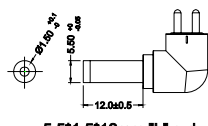
CUSTOMER P/N:

9 DIMENSION OF OUTPUT PLUG & DC CORD (Unit: mm)

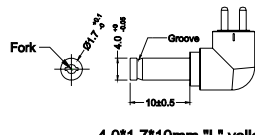
G F E D C B A



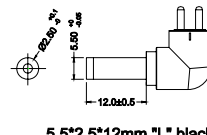
活动头尺寸图



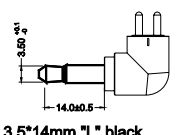
5.5\*1.5\*12mm "L" red



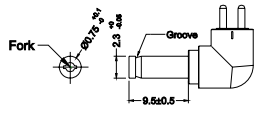
4.0\*1.7\*10mm "L" yellow



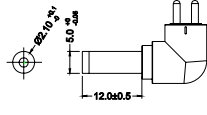
5.5\*2.5\*12mm "L" black



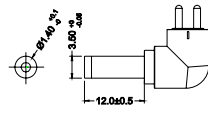
3.5\*14mm "L" black



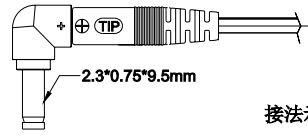
★ 2.3\*0.75\*9.5mm "L" yellow  
(此头直接插在ADT输出插座上)



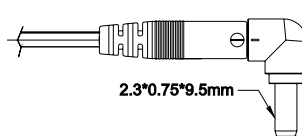
5.5\*2.1\*12mm "L" black



3.5\*1.4\*12mm "L" orange

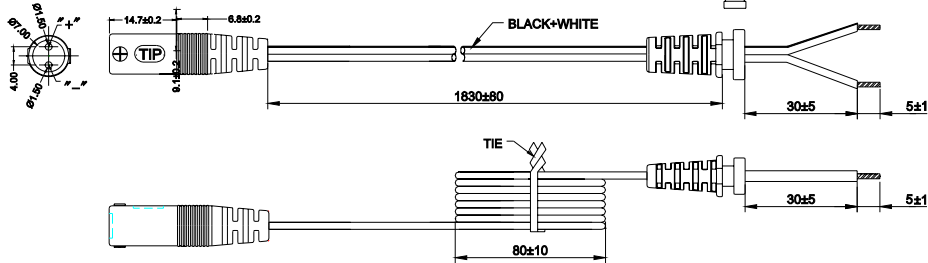


2.3\*0.75\*9.5mm



2.3\*0.75\*9.5mm

接法示意图



NOTE: (unit:mm)

1). WIRE TYPE: 6FT VW-1 80°C 300V 2468 22WG BLACK+WHITE

BLACK and WHITE—Positive BLACK—Negative

2). THE POLARITY: (插头极性) (ADT输出插座极性)

TITLE:

REVISIONS: A

DRAWING NO.:

DESIGN: 陈娴

CHECK: 李云松

APPROVE: 宋军

DATE: 2011-10-11

PAGE: 9 OF 11

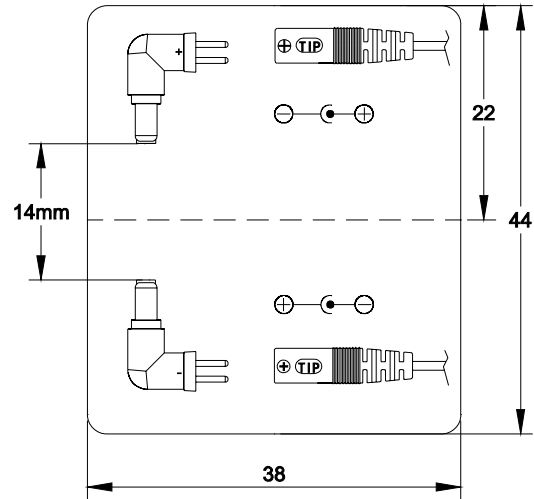


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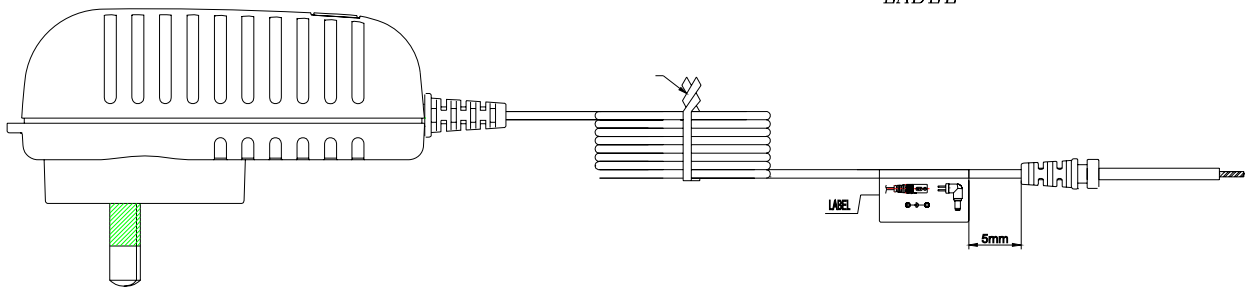
Switching power supply specification(class B)

KUANTECH P/N:	PRODUCT NO:	CUSTOMER P/N:
KSAS0151200150HA	KS034591	

10 DC cord(Label)(Unit: mm)



*LABEL*



TITLE:		REVISIONS: A	DRAWING NO.:	
DESIGN: 陈娴	CHECK: 李云松	APPROVE: 宋军	DATE: 2011-10-11	PAGE: 10 OF 11



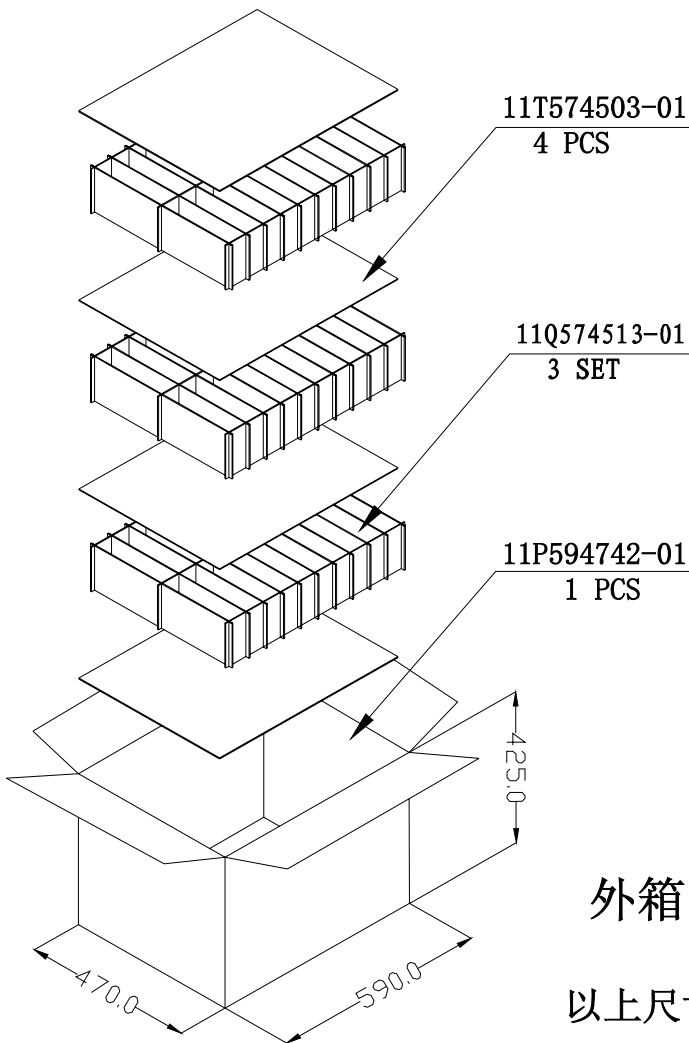
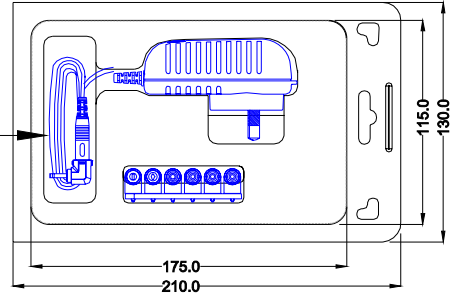
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Switching power supply specification(class B)

KUANTECH P/N:	PRODUCT NO:	CUSTOMER P/N:
KSAS0151200150HA	KS034591	

11 PACKING(Unit: mm)

05V211305-01  
60 PCS



一层20PCS  
三层60PCS

外箱: 60pcs/箱

以上尺寸均为外框尺寸

TITLE:		REVISIONS: A		DRAWING NO.:	
DESIGN: 陈娴	CHECK: 李云松	APPROVE: 宋军	DATE: 2011-10-11	PAGE: 11	OF 11



# KTEC

## External Power Supply Efficiency

**Manufacturer:** KUANTECH (BEIHAI) CO., LTD  
**Model No.:** KSAS0151200150HA S57223 **Cord Length (cm):** 183  
**DC Cable Description:** 2468VW-1 22AWG 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	0.4	A
Rated Input Volt-Amperes		VA
Rated Input AC Frequency	50-60	Hz
Rated Output Voltage	12	V
Rated Output Current	1500	mA
Input and Output Method	AC/DC	
Efficiency Level Mark	V	
Manufactured Date	2011-10-12	

### MEPS High Efficiency Products - Performance mark V

<b>Minimum Average Efficiency in Active Mode:Low Voltage Models</b>	
0 to ≤ 1 watt	≥ 0.497*Nameplate Output+0.067
> 1 to ≤ 49 watts	≥ 0.075 * Ln (Nameplate Output)+ 0.561
> 49 to ≤ 250 watts	≥ 0.86
<b>Minimum Average Efficiency in Active Mode:Standard Models</b>	
0 to ≤ 1 watt	≥ 0.480*Nameplate Output+0.140
> 1 to ≤ 49 watts	≥ 0.0626 * Ln (Nameplate Output)+ 0.622
> 49 to ≤ 250 watts	≥ 0.87
<b>Maximum Energy Consumption in No Load Mode:</b>	
AC-DC 0 to <50W, 0.3W	50W to ≤250W, 0.5W
AC-AC 0 to <50W, N/A	50W to ≤250W, N/A
<b>Test Method:</b> EPA Test Method for Calculating the Energy Efficiency of Single-Voltage External Ac-Dc and Ac-Ac Power Supplies - August 11, 2004	
<b>Effective Date:</b>	Manufactured On or After 4/1/2010

### MEPS V Standards for This Power Supply

Rated Output Power (Voltage * Current):	18.00 W
Maximum Energy Consumption - No Load:	0.3 W
Minimum Average Efficiency in Active Mode:	0.803                      80.3%

115 VAC / 60 Hz External Power Supply Results Summary				
	Sample #1	Sample #2	Sample #3	Average
100% Load Efficiency	78.86%	78.85%	78.99%	78.9%
75% Load Efficiency	79.94%	79.72%	80.01%	79.9%
50% Load Efficiency	81.00%	80.92%	81.07%	81.0%
25% Load Efficiency	82.27%	81.82%	82.42%	82.2%
Average Active Mode Efficiency	80.5%	80.3%	80.6%	80.5%
No Load Input Power (W)	0.07	0.07	0.07	0.07

**This Power Supply Meets Level V Efficiency Standards At 115VAC / 60Hz**

Test Lab: KUANTECHLAB Date: 2011-10-12  
 Technician: WEN ZHAO LAN 1.0

## Sample #1 Test Results - 115 VAC / 60 Hz

### Output Measurements

### AC Input Measurements

<b>Load Condition #1: 100%</b>			
Set Output Current to	1500 mA	Measured Input Power	22.16 W
Min Output Current	1470 mA	Measured Input Voltage	115 VAC
Max Output Current	1530 mA	Measured Frequency	60 Hz
Measured Output Current	1500 mA	True Power Factor	0.574
Measured Output Voltage	11.65 V	Total Harmonic Distortion (THD)	%
Calculated Output Power	17.48 W	Calculated Power Consumed	4.69 W
		Calculated Efficiency (Output/Input)	<b>78.86%</b>
<b>Load Condition #2: 75%</b>			
Set Output Current to	1125 mA	Measured Input Power	16.55 W
Min Output Current	1095 mA	Measured Input Voltage	115 VAC
Max Output Current	1155 mA	Measured Frequency	60 Hz
Measured Output Current	1125 mA	True Power Factor	0.547
Measured Output Voltage	11.76 V	Total Harmonic Distortion (THD)	%
Calculated Output Power	13.23 W	Calculated Power Consumed	3.32 W
		Calculated Efficiency (Output/Input)	<b>79.94%</b>
<b>Load Condition #3: 50%</b>			
Set Output Current to	750 mA	Measured Input Power	11 W
Min Output Current	720 mA	Measured Input Voltage	115 VAC
Max Output Current	780 mA	Measured Frequency	60 Hz
Measured Output Current	750 mA	True Power Factor	0.515
Measured Output Voltage	11.88 V	Total Harmonic Distortion (THD)	%
Calculated Output Power	8.91 W	Calculated Power Consumed	2.09 W
		Calculated Efficiency (Output/Input)	<b>81.00%</b>
<b>Load Condition #4: 25%</b>			
Set Output Current to	375 mA	Measured Input Power	5.47 W
Min Output Current	345 mA	Measured Input Voltage	115 VAC
Max Output Current	405 mA	Measured Frequency	60 Hz
Measured Output Current	375 mA	True Power Factor	0.490
Measured Output Voltage	12 V	Total Harmonic Distortion (THD)	%
Calculated Output Power	4.50 W	Calculated Power Consumed	0.97 W
		Calculated Efficiency (Output/Input)	<b>82.27%</b>
<b>Average Active Mode Efficiency:</b>		<b>80.5%</b>	
<b>Sample #1 Meets The Level V Active Efficiency Standard</b>			

<b>Load condition #5: No Load</b>		<b>AC Input Measurements</b>	
Set the Output to No Load		Measured Input Power	0.07 W
		Measured Input Voltage	115 VAC
		Measured Frequency	60 Hz
		True Power Factor	0.284
		Total Harmonic Distortion (THD)	%
<b>Sample #1 Meets The Level V No Load Standard</b>			

### Sample #2 Test Results - 115 VAC / 60 Hz

#### Output Measurements

#### AC Input Measurements

<b>Load Condition #1: 100%</b>			
Set Output Current to	1500 mA	Measured Input Power	22.20 W
Min Output Current	1470 mA	Measured Input Voltage	115 VAC
Max Output Current	1530 mA	Measured Frequency	60 Hz
Measured Output Current	1500 mA	True Power Factor	0.579
Measured Output Voltage	11.67 V	Total Harmonic Distortion (THD)	%
Calculated Output Power	17.51 W	Calculated Power Consumed	4.70 W
		Calculated Efficiency (Ouput/Input)	<b>78.85%</b>
<b>Load Condition #2: 75%</b>			
Set Output Current to	1125 mA	Measured Input Power	16.61 W
Min Output Current	1095 mA	Measured Input Voltage	115 VAC
Max Output Current	1155 mA	Measured Frequency	60 Hz
Measured Output Current	1125 mA	True Power Factor	0.554
Measured Output Voltage	11.77 V	Total Harmonic Distortion (THD)	%
Calculated Output Power	13.24 W	Calculated Power Consumed	3.37 W
		Calculated Efficiency (Ouput/Input)	<b>79.72%</b>
<b>Load Condition #3: 50%</b>			
Set Output Current to	750 mA	Measured Input Power	11.02 W
Min Output Current	720 mA	Measured Input Voltage	115 VAC
Max Output Current	780 mA	Measured Frequency	60 Hz
Measured Output Current	750 mA	True Power Factor	0.523
Measured Output Voltage	11.89 V	Total Harmonic Distortion (THD)	%
Calculated Output Power	8.92 W	Calculated Power Consumed	2.10 W
		Calculated Efficiency (Ouput/Input)	<b>80.92%</b>
<b>Load Condition #4: 25%</b>			
Set Output Current to	375 mA	Measured Input Power	5.50 W
Min Output Current	345 mA	Measured Input Voltage	115 VAC
Max Output Current	405 mA	Measured Frequency	60 Hz
Measured Output Current	375 mA	True Power Factor	0.496
Measured Output Voltage	12 V	Total Harmonic Distortion (THD)	%
Calculated Output Power	4.50 W	Calculated Power Consumed	1.00 W
		Calculated Efficiency (Ouput/Input)	<b>81.82%</b>
<b>Average Active Mode Efficiency:</b>		<b>80.3%</b>	
<b>Sample #2 Meets The Level V Active Efficiency Standard</b>			

<b>Load condition #5: No Load</b>		<b>AC Input Measurements</b>	
Set the Output to No Load		Measured Input Power	0.07 W
		Measured Input Voltage	115 VAC
		Measured Frequency	60 Hz
		True Power Factor	0.284
		Total Harmonic Distortion (THD)	%
<b>Sample #2 Meets The Level V No Load Standard</b>			

### Sample #3 Test Results - 115 VAC / 60 Hz

#### Output Measurements

#### AC Input Measurements

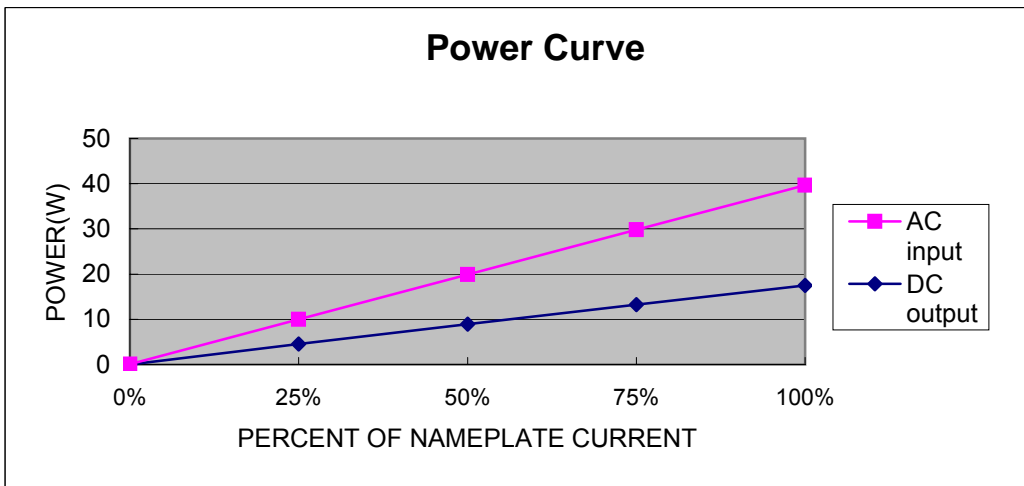
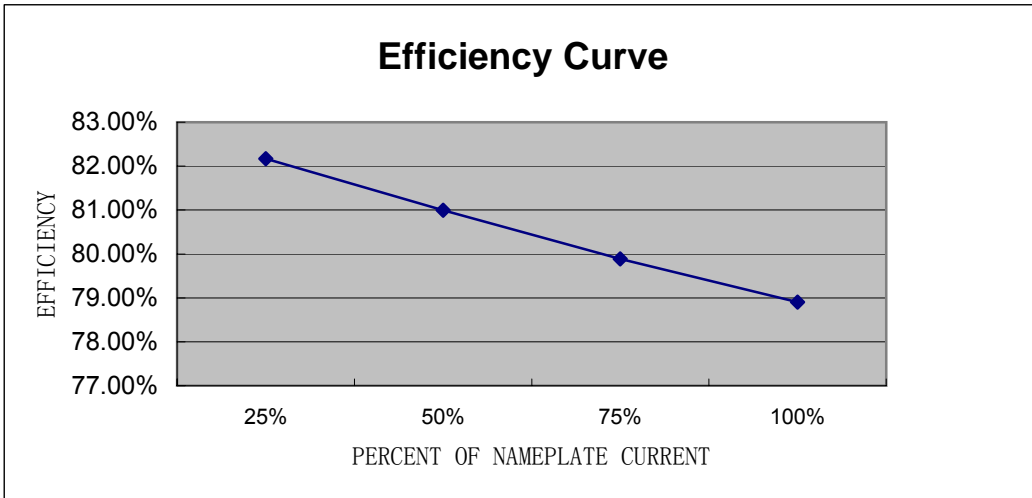
<b>Load Condition #1: 100%</b>			
Set Output Current to	1500 mA	Measured Input Power	22.16 W
Min Output Current	1470 mA	Measured Input Voltage	230 VAC
Max Output Current	1530 mA	Measured Frequency	60 Hz
Measured Output Current	1500 mA	True Power Factor	0.573
Measured Output Voltage	11.67 V	Total Harmonic Distortion (THD)	%
Calculated Output Power	17.51 W	Calculated Power Consumed	4.66 W
		Calculated Efficiency (Output/Input)	<b>78.99%</b>
<b>Load Condition #2: 75%</b>			
Set Output Current to	1125 mA	Measured Input Power	16.55 W
Min Output Current	1095 mA	Measured Input Voltage	115 VAC
Max Output Current	1155 mA	Measured Frequency	60 Hz
Measured Output Current	1125 mA	True Power Factor	0.546
Measured Output Voltage	11.77 V	Total Harmonic Distortion (THD)	%
Calculated Output Power	13.24 W	Calculated Power Consumed	3.31 W
		Calculated Efficiency (Output/Input)	<b>80.01%</b>
<b>Load Condition #3: 50%</b>			
Set Output Current to	750 mA	Measured Input Power	11 W
Min Output Current	720 mA	Measured Input Voltage	115 VAC
Max Output Current	780 mA	Measured Frequency	60 Hz
Measured Output Current	750 mA	True Power Factor	0.513
Measured Output Voltage	11.89 V	Total Harmonic Distortion (THD)	%
Calculated Output Power	8.92 W	Calculated Power Consumed	2.08 W
		Calculated Efficiency (Output/Input)	<b>81.07%</b>
<b>Load Condition #4: 25%</b>			
Set Output Current to	375 mA	Measured Input Power	5.46 W
Min Output Current	345 mA	Measured Input Voltage	115 VAC
Max Output Current	405 mA	Measured Frequency	60 Hz
Measured Output Current	375 mA	True Power Factor	0.488
Measured Output Voltage	12 V	Total Harmonic Distortion (THD)	%
Calculated Output Power	4.50 W	Calculated Power Consumed	0.96 W
		Calculated Efficiency (Output/Input)	<b>82.42%</b>
<b>Average Active Mode Efficiency:</b>		<b>80.6%</b>	
<b>Sample #3 Meets The Level V Active Efficiency Standard</b>			

<b>Load condition #5: No Load</b>		<b>AC Input Measurements</b>	
Set the Output to No Load		Measured Input Power	0.07 W
		Measured Input Voltage	115 VAC
		Measured Frequency	60 Hz
		True Power Factor	0.283
		Total Harmonic Distortion (THD)	%
<b>Sample #3 Meets The Level V No Load Standard</b>			



# KTEC

## Power and Efficiency Curve



# KTEC

## External Power Supply Efficiency

**Manufacturer:** KUANTECH (BEI HAI) CO., LTD  
**Model No.:** KSAS0151200150HA S57223 **Cord Length (cm):** 183  
**DC Cable Description:** 2468 VW-1 22AWG 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	0.4	A
Rated Input Volt-Amperes		VA
Rated Input AC Frequency	50-60	Hz
Rated Output Voltage	12	V
Rated Output Current	1500	mA
Input and Output Method	AC/DC	
Efficiency Level Mark	V	
Manufactured Date	2011-10-12	

### MEPS High Efficiency Products - Performance mark V

<b>Minimum Average Efficiency in Active Mode: Low Voltage Models</b>	
0 to ≤ 1 watt	≥ 0.497*Nameplate Output+0.067
> 1 to ≤ 49 watts	≥ 0.075 * Ln (Nameplate Output)+ 0.561
> 49 to ≤ 250 watts	≥ 0.86
<b>Minimum Average Efficiency in Active Mode: Standard Models</b>	
0 to ≤ 1 watt	≥ 0.480*Nameplate Output+0.140
> 1 to ≤ 49 watts	≥ 0.0626 * Ln (Nameplate Output)+ 0.622
> 49 to ≤ 250 watts	≥ 0.87
<b>Maximum Energy Consumption in No Load Mode:</b>	
AC-DC 0 to <50W, 0.3W	50W to ≤250W, 0.5W
AC-AC 0 to <50W, N/A	50W to ≤250W, N/A
<b>Test Method:</b> EPA Test Method for Calculating the Energy Efficiency of Single-Voltage External Ac-Dc and Ac-Ac Power Supplies - August 11, 2004	
<b>Effective Date:</b> Manufactured On or After 4/1/2010	

### MEPS V Standards for This Power Supply

Rated Output Power (Voltage * Current):	18.00 W
Maximum Energy Consumption - No Load:	0.3 W
Minimum Average Efficiency in Active Mode:	0.803      80.3%

### 230 VAC / 50 Hz External Power Supply Results Summary

	Sample #1	Sample #2	Sample #3	Average
100% Load Efficiency	79.86%	80.11%	79.86%	79.9%
75% Load Efficiency	80.35%	80.76%	80.76%	80.6%
50% Load Efficiency	81.07%	81.44%	81.36%	81.3%
25% Load Efficiency	81.52%	81.82%	81.82%	81.7%
Average Active Mode Efficiency	80.7%	81.0%	80.9%	80.9%
No Load Input Power (W)	0.14	0.13	0.14	0.14

### This Power Supply Meets Level V Efficiency Standards At 230VAC / 50Hz

Test Lab: KUANTECH LAB  
 Technician: WEN ZHAO LAN

Date: 2011-10-12

### Sample #1 Test Results - 230 VAC / 50 Hz

#### Output Measurements

#### AC Input Measurements

<b>Load Condition #1: 100%</b>			
Set Output Current to	1500 mA	Measured Input Power	21.90 W
Min Output Current	1470 mA	Measured Input Voltage	230 VAC
Max Output Current	1530 mA	Measured Frequency	50 Hz
Measured Output Current	1500 mA	True Power Factor	0.455
Measured Output Voltage	11.66 V	Total Harmonic Distortion (THD)	%
Calculated Output Power	17.49 W	Calculated Power Consumed	4.41 W
		Calculated Efficiency (Ouput/Input)	<b>79.86%</b>
<b>Load Condition #2: 75%</b>			
Set Output Current to	1125 mA	Measured Input Power	16.48 W
Min Output Current	1095 mA	Measured Input Voltage	230 VAC
Max Output Current	1155 mA	Measured Frequency	50 Hz
Measured Output Current	1125 mA	True Power Factor	0.436
Measured Output Voltage	11.77 V	Total Harmonic Distortion (THD)	%
Calculated Output Power	13.24 W	Calculated Power Consumed	3.24 W
		Calculated Efficiency (Ouput/Input)	<b>80.35%</b>
<b>Load Condition #3: 50%</b>			
Set Output Current to	750 mA	Measured Input Power	11 W
Min Output Current	720 mA	Measured Input Voltage	230 VAC
Max Output Current	780 mA	Measured Frequency	50 Hz
Measured Output Current	750 mA	True Power Factor	0.422
Measured Output Voltage	11.89 V	Total Harmonic Distortion (THD)	%
Calculated Output Power	8.92 W	Calculated Power Consumed	2.08 W
		Calculated Efficiency (Ouput/Input)	<b>81.07%</b>
<b>Load Condition #4: 25%</b>			
Set Output Current to	375 mA	Measured Input Power	5.52 W
Min Output Current	345 mA	Measured Input Voltage	230 VAC
Max Output Current	405 mA	Measured Frequency	50 Hz
Measured Output Current	375 mA	True Power Factor	0.406
Measured Output Voltage	12 V	Total Harmonic Distortion (THD)	%
Calculated Output Power	4.50 W	Calculated Power Consumed	1.02 W
		Calculated Efficiency (Ouput/Input)	<b>81.52%</b>
<b>Average Active Mode Efficiency:</b>		<b>80.7%</b>	
<b>Sample #1 Meets The Level V Active Efficiency Standard</b>			

<b>Load condition #5: No Load</b>		<b>AC Input Measurements</b>	
Set the Output to No Load		Measured Input Power	0.14 W
		Measured Input Voltage	230 VAC
		Measured Frequency	50 Hz
		True Power Factor	0.263
		Total Harmonic Distortion (THD)	%
<b>Sample #1 Meets The Level V No Load Standard</b>			

## Sample #2 Test Results - 230 VAC / 50 Hz

### Output Measurements

### AC Input Measurements

<b>Load Condition #1: 100%</b>			
Set Output Current to	1500 mA	Measured Input Power	21.87 W
Min Output Current	1470 mA	Measured Input Voltage	230 VAC
Max Output Current	1530 mA	Measured Frequency	50 Hz
Measured Output Current	1500 mA	True Power Factor	0.452
Measured Output Voltage	11.68 V	Total Harmonic Distortion (THD)	%
Calculated Output Power	17.52 W	Calculated Power Consumed	4.35 W
		Calculated Efficiency (Output/Input)	<b>80.11%</b>
<b>Load Condition #2: 75%</b>			
Set Output Current to	1125 mA	Measured Input Power	16.41 W
Min Output Current	1095 mA	Measured Input Voltage	230 VAC
Max Output Current	1155 mA	Measured Frequency	60 Hz
Measured Output Current	1125 mA	True Power Factor	0.434
Measured Output Voltage	11.78 V	Total Harmonic Distortion (THD)	%
Calculated Output Power	13.25 W	Calculated Power Consumed	3.16 W
		Calculated Efficiency (Output/Input)	<b>80.76%</b>
<b>Load Condition #3: 50%</b>			
Set Output Current to	750 mA	Measured Input Power	10.95 W
Min Output Current	720 mA	Measured Input Voltage	230 VAC
Max Output Current	780 mA	Measured Frequency	50 Hz
Measured Output Current	750 mA	True Power Factor	0.419
Measured Output Voltage	11.89 V	Total Harmonic Distortion (THD)	%
Calculated Output Power	8.92 W	Calculated Power Consumed	2.03 W
		Calculated Efficiency (Output/Input)	<b>81.44%</b>
<b>Load Condition #4: 25%</b>			
Set Output Current to	375 mA	Measured Input Power	5.50 W
Min Output Current	345 mA	Measured Input Voltage	230 VAC
Max Output Current	405 mA	Measured Frequency	50 Hz
Measured Output Current	375 mA	True Power Factor	0.405
Measured Output Voltage	12 V	Total Harmonic Distortion (THD)	%
Calculated Output Power	4.50 W	Calculated Power Consumed	1.00 W
		Calculated Efficiency (Output/Input)	<b>81.82%</b>
<b>Average Active Mode Efficiency:</b>		<b>81.0%</b>	
<b>Sample #2 Meets The Level V Active Efficiency Standard</b>			

<b>Load condition #5: No Load</b>		<b>AC Input Measurements</b>	
Set the Output to No Load		Measured Input Power	0.13 W
		Measured Input Voltage	230 VAC
		Measured Frequency	50 Hz
		True Power Factor	0.256
		Total Harmonic Distortion (THD)	%
<b>Sample #2 Meets The Level V No Load Standard</b>			

### Sample #3 Test Results - 230 VAC / 50 Hz

#### Output Measurements

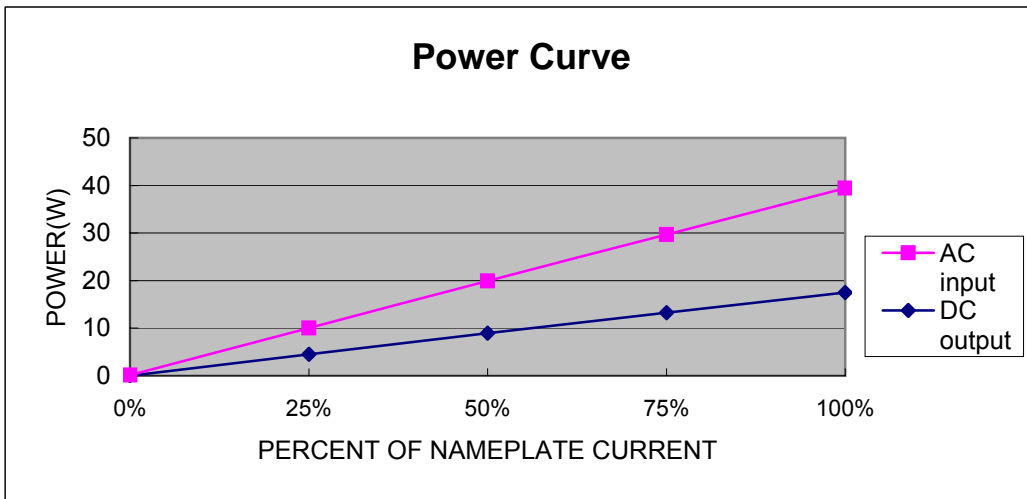
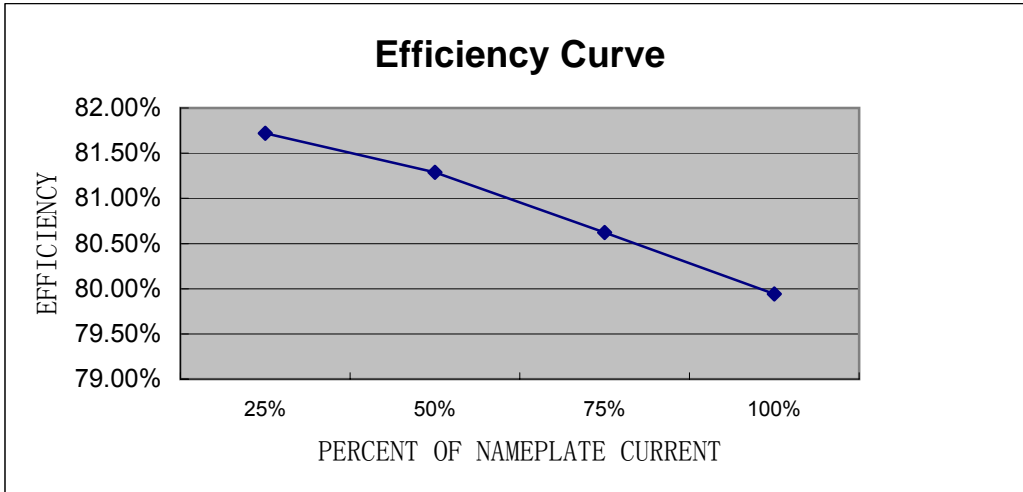
#### AC Input Measurements

<b>Load Condition #1: 100%</b>			
Set Output Current to	1500 mA	Measured Input Power	21.92 W
Min Output Current	1470 mA	Measured Input Voltage	230 VAC
Max Output Current	1530 mA	Measured Frequency	50 Hz
Measured Output Current	1500 mA	True Power Factor	0.453
Measured Output Voltage	11.67 V	Total Harmonic Distortion (THD)	%
Calculated Output Power	17.51 W	Calculated Power Consumed	4.42 W
		Calculated Efficiency (Ouput/Input)	<b>79.86%</b>
<b>Load Condition #2: 75%</b>			
Set Output Current to	1125 mA	Measured Input Power	16.41 W
Min Output Current	1095 mA	Measured Input Voltage	230 VAC
Max Output Current	1155 mA	Measured Frequency	50 Hz
Measured Output Current	1125 mA	True Power Factor	0.434
Measured Output Voltage	11.78 V	Total Harmonic Distortion (THD)	%
Calculated Output Power	13.25 W	Calculated Power Consumed	3.16 W
		Calculated Efficiency (Ouput/Input)	<b>80.76%</b>
<b>Load Condition #3: 50%</b>			
Set Output Current to	750 mA	Measured Input Power	10.97 W
Min Output Current	720 mA	Measured Input Voltage	230 VAC
Max Output Current	780 mA	Measured Frequency	50 Hz
Measured Output Current	750 mA	True Power Factor	0.417
Measured Output Voltage	11.90 V	Total Harmonic Distortion (THD)	%
Calculated Output Power	8.93 W	Calculated Power Consumed	2.05 W
		Calculated Efficiency (Ouput/Input)	<b>81.36%</b>
<b>Load Condition #4: 25%</b>			
Set Output Current to	375 mA	Measured Input Power	5.50 W
Min Output Current	345 mA	Measured Input Voltage	115 VAC
Max Output Current	405 mA	Measured Frequency	50 Hz
Measured Output Current	375 mA	True Power Factor	0.404
Measured Output Voltage	12 V	Total Harmonic Distortion (THD)	%
Calculated Output Power	4.50 W	Calculated Power Consumed	1.00 W
		Calculated Efficiency (Ouput/Input)	<b>81.82%</b>
<b>Average Active Mode Efficiency:</b>		<b>80.9%</b>	
<b>Sample #3 Meets The Level V Active Efficiency Standard</b>			

<b>Load condition #5: No Load</b>		<b>AC Input Measurements</b>	
Set the Output to No Load		Measured Input Power	0.14 W
		Measured Input Voltage	230 VAC
		Measured Frequency	50 Hz
		True Power Factor	0.261
		Total Harmonic Distortion (THD)	%
<b>Sample #3 Meets The Level V No Load Standard</b>			

# KTEC

## Power and Efficiency Curve





Fair  
Trading

Mr Victor Meng  
Kuantech [Shenzhen] Co Ltd  
C/- I-Test Laboratory  
1-2 floor, South Block, Building A2, No 3  
Keyan Lu  
SCIENCE CITY  
GUANGZHOU 510630  
China 510630

File Ref: NSW25014  
Contact: Admin Clerk  
Telephone: 02 9895 0722  
Fax: 02 9895 0735

Dear Sir/Madam

CERTIFICATE OF APPROVAL: NSW25014 AND MODIFICATION/S.

Power Supply or Charger

---

Please find enclosed a Certificate of Approval and addendum as sought by your application.

Articles of the approved type/s may now be marketed in any State or Territory of Australia, provided they are marked with –

- (a) the mark (or marks) shown on the Certificate; or
- (b) the Regulatory Compliance Mark (RCM) provided that the requirements of all relevant parts of AS/NZS 4417 applicable to the article are fulfilled.

THE APPROVAL EXPIRES ON THE DATE SHOWN ON THE CERTIFICATE unless it is renewed, extended, suspended or cancelled.

Any sample/s held by this Office should be collected within fifteen (15) days of this letter or the sample/s will be destroyed.

Yours faithfully,

for Deputy Commissioner, Fair Trading Operations  
20 December 2010

# Certificate of Approval

ISSUED PURSUANT TO THE ELECTRICITY (CONSUMER SAFETY) ACT 2004

ISSUED TO: Kuantech [Shenzhen] Co Ltd

CLASS OF ARTICLE: Power Supply or Charger

DESCRIPTION OF ARTICLE:

Switched Mode Power Supplies

(Plug-mounted switched mode power supplies housed in a thermoplastic enclosure with a detachable plug, where 'xxx' in the model number may be the numerals 030-240 to indicate a rated output voltage range of 3.0 - 24.0Vdc, 'yyyy' may be the numerals 0001-0300 to indicate a rated output current range of 10-3000 mA and 'zz' may be an alpha numeric coding indicating the plug configuration)

Trade Name or Mark: 'Ktec'

Volts: 100-240V

Amperes: 0.4A

Watts:

Hertz: 50/60 Hz

Other Name Plate Particulars: Output: 3.0V-24.0V, dc, 10-3000mA  
Class II

EXAMINED FOR COMPLIANCE WITH: AS/NZS 60950.1 : 2003 A1-3

TYPE REFERENCE CODE: KSAS015XXXYYYYD5 Series

APPROVAL MARK:

Each electrical article of the abovementioned type shall be marked with Approval Number NSW25014;

or the Regulatory Compliance Mark (RCM) provided that the requirements of all relevant parts of AS/NZS 4417 applicable to the article are fulfilled.

DATE OF APPROVAL: 20/12/2010

This approval expires 20/12/2015 unless suspended, cancelled, renewed or extended.



For Deputy Commissioner, Fair Trading Operations





Fair  
Trading

Ref: NSW25014/1

ADDENDUM TO CERTIFICATE OF APPROVAL NSW25014

Particulars of Modification(s)

1. Model No. KSAS015XXXYYYYVA Series being similar to Model No. KSAS015XXXYYYYD5 Series except for:-
  - (a) The use of an integral plug portion; and
  - (b) A change in orientation of the PCB.
  
2. Model No. KSAS015XXXYYYYHA Series being similar to Model No. KSAS015XXXYYYYVA Series except for:-
  - (a) The PCB is in the horizontal position; and
  - (b) A change in the enclosure shape.

Approved: 20 December 2010

A handwritten signature in black ink, appearing to be 'R.L.' with a flourish at the end.

for Deputy Commissioner, Fair Trading Operations