PowerPax UK

Part number SW4366

24vdc 500mA UK

APPROVAL SHEET

FOR

AC/DC Adaptor

MODEL NO.

24V DC 500mA

MANUFACTURER			
EDIT	CONFIRM	CHECK	APPROVAL
Wang		Dan	Eric

CUSTOMER APPROVAL		
CONFIRM	CHECK	APPROVAL

CONTENTS NOTE

1. SCOPE

1.1 DESCRIPTION

This document introduces the electrical,mechanical and environmental specifications of a switching power supply.

2. INPUT CHARACTERISTICS

2.1 INPUT VOLTAGE & FREQUENCY

Input voltage	Minimum	Nominal	Maximum
Input Voltage	90Vac	120/230Vac	264Vac
Input Frequency	47Hz	50Hz/60Hz	63Hz

2.2 INPUT CURRENT

The maximum input current is 0.30A at 100Vac at full load.

2.3 INRUSH CURRENT

The inrush current will not exceed 30A at 264Vac input for a cold start at 25°C.

2.4 STATIC LOSS

The static loss is less than 0.3W at normal input voltage.

3. OUTPUT CHARACTERISTICS

3.1 OUTPUT VOLTAGE & CURRENT

Output Item	Minimum	Nominal	Maximum
Vout	22.80Vdc	24.0Vdc	25.20Vdc
Current	100mA	500mA	1000mA

3.2 RIPPLE AND NOISE

The ripple and noise is less than 100mV measured by 20MHz bandwidth oscilloscope and terminated each output with a 0.1uF ceramic capacitor and a 10uF aluminum electrolytic capacitor.

3.3 TURN ON DELAY

During turn on,output voltage shall not exceed its nominal voltage by more than 10% and all output shall reach their steady state values within 3 seconds of trun on

3.4 HOLD UP TIME

When the power supply turns off,the output voltage shall hold up more than 10 msec.

3.5 EFFICIENCY

The efficiency shall be higher than 77.0% while measuring at nominal line and maximum load.

4. PROTECTION REQUIREMENT

4.1 OVER VOLTAGE PROTECTION

The power supply shall be hiccupped when output voltage reaches its over-voltage condition trigger point,and when the fault condition is removed,the power supply shall not be sef-recovering

4.2 OVER CURRENT PROTECTION

The power supply shall be hiccupped when operating any output in over-load condition trigger point,and when the fault condition is removed,the power supply shall be self-recovering

4.3 OVER TEMPERATURE PROTECTION

The power supply shall go into latch-off mode when the IC's temperature is over its trigger point(140°C) ,and when IC comperature is lower than regulation value the power supply shall be self-recovering.

4.4 SHORT CIRCUIT PROTECTION

The power supply shall withstand continuous current of short circuit on output any damage,and when the fault condition is removed,the power supply shall be self-recovering

5. ENVIRONMENTAL REQUIREMENTS

5.1 OPERATING CONDITION

The power supply shall be compliant with each item in this specification for the following environmental conditions.

Ambient Temperature	0°C ~ 40°C
Relative Humidity	20% ~90%

5.2 STORAGE CONDITION

Ambient Temperature	-20° C ~ 85° C
Relative Humidity	20% ~90%

5.3 COOLING METHOD

Free convection

6. ELECTROMAGNETIC COMPATIBILITY

6.1 EMC SPECIFICATIONS

The external power supply must meet all specification in this section. It is reqired that the external power supply work closely with the ***in order to get the best EMC

solution.Radiated and Conducted Emission. The power supply shall complied to:
FCC part 15:Class B for radiated and conducted emissions.
EN55022,1992,Class B for radiated and conducted emissions.
6.2 ELECTROSTATIC DISCHARGE(ESD)
The power supply is capable to withstand ESD test voltage at any point around the enclosure as below,herein refer to IEC61000-4-2.After applied +/-4kV contact discharge and the power supply is no function error.After applied +/-8kV air discharge and the power supply is no function error.

7. MTBF

The power supply shall have a minimum predicted MTBF(MIL-STD-217F)of 30000 hours0°C TO 40°C at normal operation condition and normal use.

8. MECHANICAL

8.1 OUTPUT CORD TYPE

AC Input	attached drawing
DC Output	AGW#22/2C 80℃ 2468 1500mm 2.5* 5.5*12mm /C+/black

8.2 PHYSICAL DIMENSIONS
The dimension of the power supply is drawing attached page #6
8.3 LABEL
The label of the power supply is drawing attached page #7
8.4 WEIGHT
The weight of the power supply shall be about 90g

9. SAFETY

9.1 SAFETY STANDARD
The power supply is designed for indoor use to meet IEC60950 and EN60950 standards,and meet the following safety regulations

Comply	ITEM	Country	Standard
	UL/cUL	America	UL60950
√	CE	Euro	EN60950
	GS	Germany	EN60950
√	BS	UK	EN60950
	C-Tick	Australia	AS/NZS60950

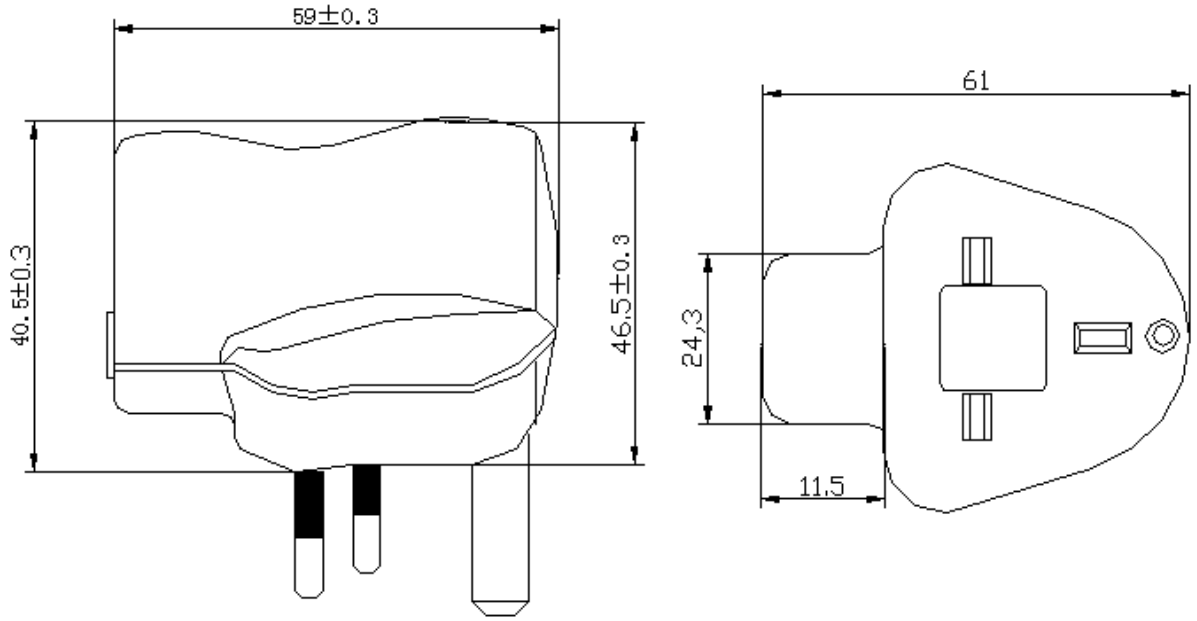
	CB	Universal	IEC60950

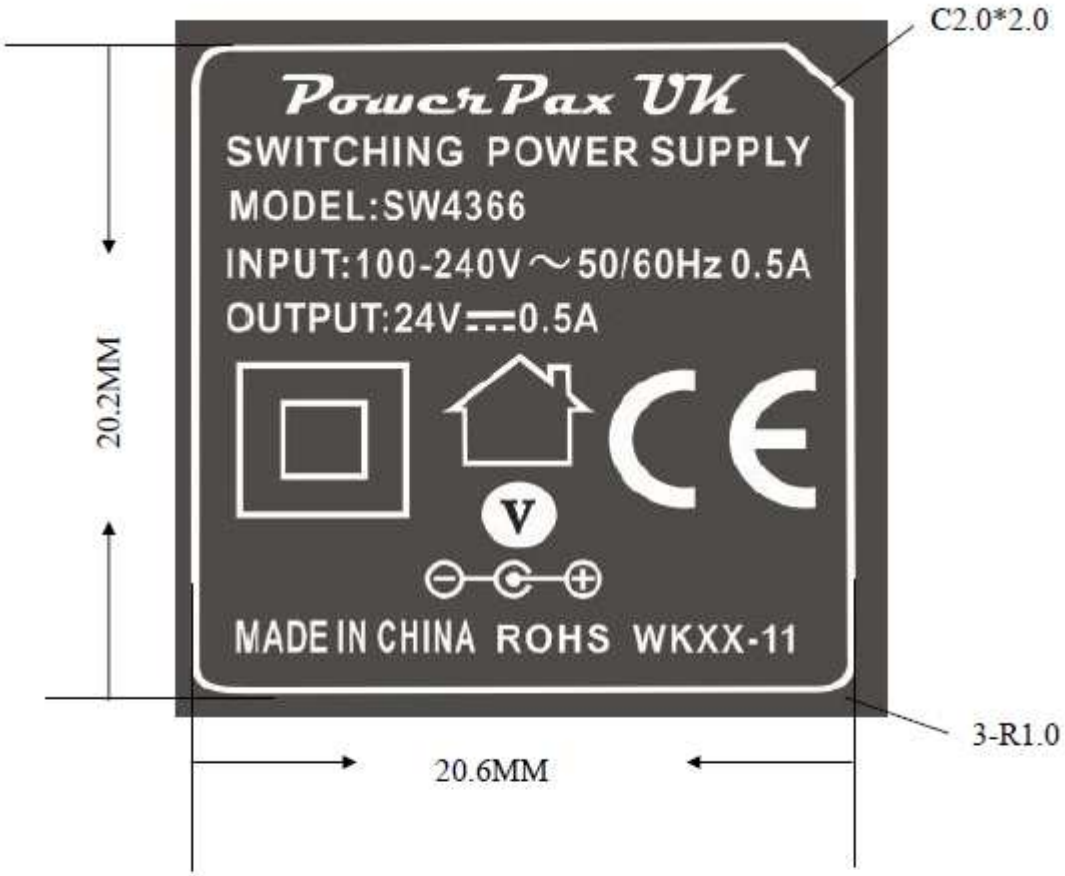
9.2 DIELECTRIC WITHSTAND VOLTAGE
Primary to Secondary: 3kVac 5mA for 60 seconds
9.3 INSULATION RESISTANCE
Insulation Resistance: 500Vdc/1 Sec,100MΩ min, between primary and secondary.

10. Test Equipment List

No.	Name	Made by	Model No.
1	Variable-frequency power	艾诺	AN97001HSS
2	Oscillograph	TEK	TDS1012B
3	Electric load-meter	Chroma	63103
4	Multimeter	Fluke	Fluke 187
5	power meter	威博	PF1200
6	Thermometer	CENTER	304
7	Electromagnetic interference machine	BEI JINGKEHJAW	KH3925
8	constant temperature and humidity machine	爱斯佩克	EL-04KA
9	vibration measurement instrument	重力	NY2001D
10	data acquisition unit;	Agilent	34970A
11	Plug wrapping tester	奥斯达	CM-817
12	Thruster	ALGOL	20KGF 200N
13	Digital Calipers	上工	200mm

11. OUTLINE AND LABEL ARTWORK

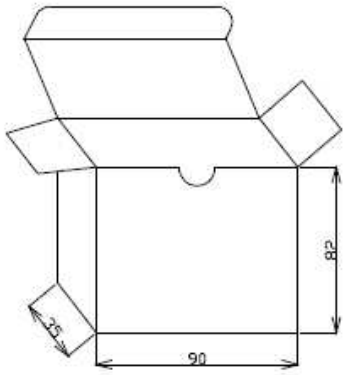

59±0.3
40.5±0.3
46.5±0.3
61
24,3
11.5

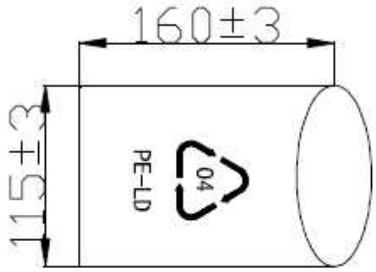


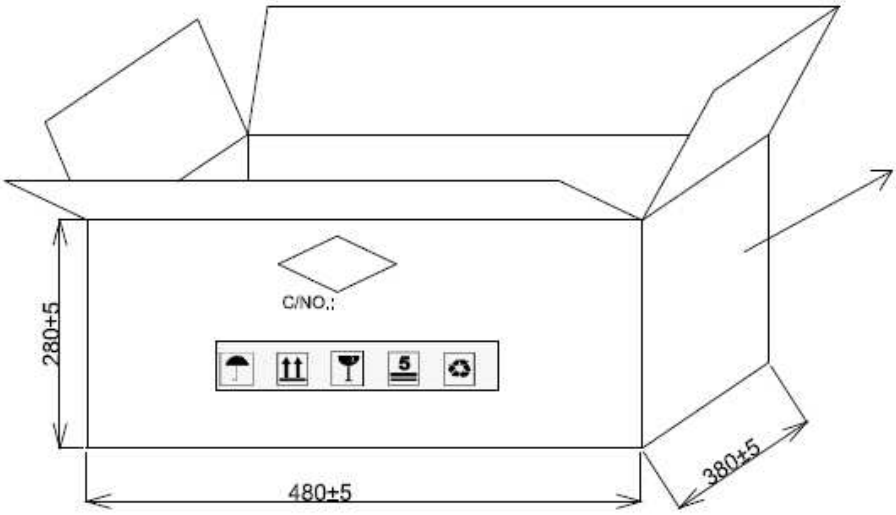
备注：

1. 印刷：黑底白字，光面
2. 尺寸：(W) 20.6MM+0/-0.2MM(H)20.2MM+0/-0.2
3. 厚度：0.1
4. 背胶须 UL 承认

WKXX-11 表示周期，例如：2011 年第一周为 WK01-11







PO:
ITEM NO.:
QTY: 150 SETS
N.W.: K.G.
G.W.: K.G.
MEAS: 48.0 *38.0* 28.0 CM

REMARK:

1. STORAGE CONDITION
   TEMPERATURE: -10℃ ~ +60℃
   RELATIVE HUMIDITY: 30% ~ 80%
2. STORAGE PERIOD: 6 MONTHES
3. ANLISTATIG: NO REQUIREMENT
4. PLEASE ADVISE IF ANY COMMENTS ABOUT THE PACKING INFORMATION.
   OTHERWISE,THIS INFORMATION IS DEFAULTED AS CUSTOMER APPROVAL,
   AND WILL BE APPLIED TO PRODUCTION.

Test Items.	Test Condition	Unit	Sample Number and Test Result										Pass/Fail
			1#	2#	3#	4#	5#	6#	7#	8#	9#	10#	
Unload output voltage/ (0.0A) 22.8Vdc - 25.2dc	90Vac	V	24.58										Pass
	132Vac	V	24.60										Pass
	180Vac	V	24.50										Pass
	264Vac	V	24.48										Pass
Rated load output voltage/ (0.5A) 22.8Vdc - 25.2dc	90Vac	V	24.14										Pass
	132Vac	V	24.2										Pass
	180Vac	V	24.2										Pass
	264Vac	V	24.27										Pass
Output ripple & noise voltage ⩽ 240mV (test at full loading)	90Vac	mV	82										Pass
	132Vac	mV	84										Pass
	180Vac	mV	88										Pass
	264Vac	mV	98										Pass
Short-circuit protection test (Short at end of DC plug)	90Vac	W	1.3										Pass
	264Vac	W	1.4										Pass
Over current protection (Ocp ⩽ A)	90Vac	A	0.75										Pass
	264Vac	A	0.7										Pass
Hi-pot test	4242Vdc/3.5mA/ 1Minute		OK										Pass

1.1 Test Results: Measured Diagram at:115V 60Hz

Measured and Calculated at:115V 60Hz						
	No Load	Active Power Values				Average
Percent of Nameplate Current	0%	25%	50%	75%	100%	
Output Current(A)	0	0.125	0.25	0.375	0.5	
Output Voltage(V)	24.6	23.99	24	24.032	24.045	
Output Power(W)		2.99875	6	9.012	12.0225	
Ac Input Voltage(V)			115			
Ac Input Powet(W)	0.1	3.76	7.4	11.1	14.8	
Total Harmonic Distortion(THD)						
True Power Factor(w/VA)						
Ac Input Frequency						
Power Consumed by UUT(W)						
Efficiecy		0.7975399	0.8108108	0.8118919	0.8123311	80.81%
Limited efficiency						77.76%

1.2 Test Results: Measured Diagram at:230V 50Hz

Measured and Calculated at:230V50Hz						
	No Load	Active Power Values				Average
Percent of Nameplate Current	0%	25%	50%	75%	100%	
Output Current(A)	0	0.125	0.25	0.375	0.5	
Output Voltage(V)	24.58	24.04	24.042	24.057	24.06	
Output Power(W)		3.005	6.0105	9.021375	12.03	
Ac Input Voltage(V)			230			
Ac Input Powet(W)	0.24	3.85	7.55	11.1	14.8	
Total Harmonic Distortion(THD)						
True Power Factor(w/VA)						
Ac Input Frequency						
Power Consumed by UUT(W)						
Efficiecy		0.7805195	0.7960927	0.8127365	0.8128378	80.05%
Limited efficiency						77.76%
Output Cord Length(150cm):						