

# 承認書

## Specification For Approval

---

COMPANY NAME	
CUSTOMER P/N	
PRODUCT NAME	AC/DC ADAPTER
PARTS P/N	CP-1240
DATE	2009-8-4

APPROVED BY	CHECKED BY	PREPARED BY	CUSTOMER APPROVAL SIGNATURE

### 寶三電子有限公司 POWSUN CO.,LTD.

一厂:

工厂地址: 广东省东莞市清溪镇渔梁围朱屋村

TEL: (0769) 86814578

FAX: (0769) 86814576

二厂:

工厂地址: 广东东莞清溪镇长山头村康怡路 180 号

TEL: (0769) 86814698

FAX: (0769) 86814697

<http://www.powsun.com>

E-mail:powsun@powsun.com

**TABLE OF CONTENTS**

1. <b>FEATURE</b> -----	2
2. <b>INPUT</b> -----	2
INPUT VOLTAGE-----	2
INPUT FREQUENCY-----	2
INPUT CURRENT-----	2
INRUSH CURRENT-----	2
EFFICIENCY-----	2
INPUT POWER DISSIPATION-----	2
3. <b>OUTPUT</b> -----	2
OUTPUT VOLTAGE-----	2
OUTPUT CURRENT-----	2
REGULATION-----	2
RIPPLE & NOISE-----	2
TOTAL POWER-----	2
4. <b>PROTECTION</b> -----	2
OVER VOLTAGE PROTECTION-----	2
SHORT CIRCUIT PROTECTION-----	2
OVER POWER PROTECTION-----	2
5. <b>SAFETY AND EMI REQUIREMENT</b> -----	3
SAFETY REQUIREMENT-----	3
EMI REQUIREMENT-----	3
LEAKAGE CURRENT-----	3
6. <b>OPERATION &amp; ENVIRONMENT PERFORMANCE</b> -----	3
TEMPERATURE RANGE-----	3
HUMIDITY RANGE(NON CONDENSING)-----	3
7. <b>M.T.B.F</b> -----	3
8. <b>SAMPLE TEST REPORT</b> -----	4、5
9. <b>OUTLINE DRAWING</b> -----	6

# **POWSUN CO.,LTD SPECIFICATION FOR APPROVAL**

## **1. FEATURE:**

- INPUT :UNIVERSAL 100-240 Vac/47-63 Hz INPUT, WITHOUT ANY SLIDE SWITCH
- OUTPUT :+12V /0-4A
- DIMENSION :127(D)\*48(W)\*32(H)
- EFFICIENCY :83% TYPICAL
- SAFETY :UL/BSMI/CB/CE/ C-Tick/DOFT/KE/CCC
- EMI :CISPR 22/FCC/VCCI CLASS B; CONDUCTED & RADIATED MEETED
- HIGH FREQUENCY DESIGN, LESS POWER CONSUMPTION
- OVER VOLTAGE PROTECTION, SHORT CIRCUITED PROTECTION, OVER POWER PROTECTION
- CAN BE USED AT TEL COMMUNICATION, COMPUTER, INDUSTRIAL CONTORLLER & OA SYSTEM

## **2. INPUT:**

2.1 VOLTAGE	UNIVERSAL 100~240Vac,SINGLE PHASE
2.2 FREQUENCY	47HZ~63HZ
2.3 CURRENT	1.0A Max
2.4 INRUSH CURRENT	40A Max/100Vac;80A Max/240Vac (COLD STABT AT 25°C FULL LOAD)
2.5 EFFICIENCY	83% TYPICAL (AT NOMINAL LINE VOLTAGE FULL LOAD)
2.6 INPUT POWER DISSIPATION	UNDER 0.5W < ZERO LOAD 115V/60HZ INPUT
	UNDER 0.5W < ZERO LOAD 230V/50HZ INPUT

## **3. OUTPUT:**

3.1 DC OUTPUT	VOLTAGE	+12.00V
	CURRENT	4.0A Max
	REGULATION	11.40V Min~12.00V Typ.~12.60V Max
	RIPPLE & NOISE	120mV Max
	TOTAL POWER	48W Max

NOTE: FOR RIPPLE & NOISE MEASUREMENT, USE A 20MHZ BAND WIDTH FREQUENCY OSCILLOSCOPE, AND ADD A 0.1uF MULTILAYER CAP. AND A LOW ESR ELECTROLYTICCAP. (10uF) AT OUTPUT CONNECTOR TERMINALS. (AT NOMINAL LINE VOLTAGE FULL LOAD)

## **4. PROTECTION:**

4.1 OVER VOLTAGE PROTECTION	$V_{out}*(110\%-140\%)$
4.2 SHORT CIRCUIT PROTECTION	AUTOMATIC RECOVERY AFTER SHORT-CIRCUIT FAULT REMOVED
4.3 OVER POWER PROTECTION	THE ADAPTER PROVIDE PROTECTION AT 110-140% OF RATED OUTPUT POWER

NOTE: WHEN PROTECTION CIRCUIT IS WORKING THE POWER SUPPLY WILL SHUTDOWN, ONCE THE ABNORMAL CONDITIONS ARE REMOVED. THE POWER SUPPLY WILL RESTART AUTOMATICALLY.

# **POWSUN CO.,LTD SPECIFICATION FOR APPROVAL**

---

## **5. SAFETY AND EMI REQUIREMENT:**

### 5.1 SAFETY REQUIREMENT

- a. SAFETY : UL/BSMI/CB/CE//C-Tick/DOFT/KE/CCC
- b. DIELECTRIC STRENGTH :10mA Max. CUT OFF CURRENT

(1):PRIMARY TO SECONDARY	: 1500Vac FOR 1 Min
(2):PRIMARY TO FRAME GROUND	: 1500Vac FOR 1 Min

### c. INSULATION RESISTANCE:

(1):PRIMARY TO SECONDARY	: 10 M OHMS FOR 500Vdc
(2):PRIMARY TO FRAME GROUND	: 10 M OHMS FOR 500Vdc

5.2 EMI REQUIREMENT MEET CISPR 22/FCC/VCC1, CLASS B

5.3 LEAKAGE CURRENT LESS THAN 3.5mA

## **6.OPERATION & ENVIRONMENT PERFORMANCE:**

### 6.1 TEMPERATURE RANGE

OPERATING	0°C ~ +40°C
STORAGE	-40°C ~+70°C

### 6.2 HUMIDITY RANGE (NON CONDENSING)

OPERATING	10% ~ 90% RH
STORAGE	5% ~ 95% RH

### 6.3 COOLING

SHOULD OPERATE WITHOUT FAN

## **7.M.T.B.F.:**

50000 HOURS Min ; 40°C SEE CONDITION

# **TEST REPORT**

## **( I ). LINE REGULATION TEST**

Test result:

Test condition	Spec.	Reading
90Vac / 50% load	11.40~12.60V	12.13V
115Vac / 50% load	11.40~12.60V	12.13V
132Vac / 50% load	11.40~12.60V	12.13V
180Vac / 50% load	11.40~12.60V	12.13V
230Vac / 50% load	11.40~12.60V	12.13V
264Vac / 50% load	11.40~12.60V	12.13V

## **(II). EFFICENCY TEST**

Test result:

Test condition	Spec.	Reading
115Vac / 100% load	83% Typical	83%
230Vac / 100% load	83% Typical	82%

## **(III). LOAD REGULATION TEST**

Test result:

Test condition	Spec.	Reading
115Vac / 0% load	11.40~12.60V	12.47V
115Vac / 50% load	11.40~12.60V	12.13V
115Vac / 100% load	11.40~12.60V	11.75V
230Vac / 0% load	11.40~12.60V	12.47V
230Vac / 50% load	11.40~12.60V	12.13V
230Vac / 100% load	11.40~12.60V	11.75V

## **(IV).RIPPLE & NOISE TEST**

Test result:

Test condition	Spec.	Reading
115Vac / 100% load	120mV Max	100mV
230Vac / 100% load	120mV Max	90mV

# ***POWSUN CO.,LTD SPECIFICATION FOR APPROVAL***

---

## **(VI). OVER VOLTAGE PROTECTION**

Test result:

Test condition	Spec.	Reading
115Vac / 100% load	Vout*(110%~140%)	118%
230Vac / 100% load	Vout*(110%~140%)	125%

## **(VII). RISE TIME**

Test result:

Test condition	Spec.	Reading
115Vac / 100% load	50mS Max	OK
230Vac / 100% load	50mS Max	OK

## **(VIII). OVER CURRENT PROTECTION**

Test result:

Test condition	Spec.	Reading
115Vac / 100% load	Iout*(110%~140%)	120%
230Vac / 100% load	Iout*(110%~140%)	122%

## **(IX). SHORT CIRCUIT PROTECTION**

Test result:

Test condition	Spec.	Reading
115Vac / 100% load	Under 1W	OK
230Vac / 100% load	Under 1W	OK

**POWSUN CO.,LTD SPECIFICATION FOR APPROVAL**

