



MODEL NO.: ADS0051-W 050080

SHEET NO. 1 OF 15

DESCRIPTION: Switching Power supply Unit

ISSUE DATE: 25/04/2007

SPECIFICATION FOR APPROVAL

APPROVAL SIGNATURE
DATE:

CUSTOMER : _____

PART NO.: _____ REV : 01

PLEASE SIGN AND RETURN ONE COPY.
ALL PRODUCTION UNITS WILL BE BUILT ACCORDING
TO THIS SPECIFICATIONS.

APPROVED	CHECKED	PREPARED
		吳 丹
DATE:	DATE:	DATE:07/04/25

MODEL NO.: ADS0051-W 050080

AGENCY APPROVAL: UL/CUL MEET RoHS

SAMPLE NO.: _____ DESIGN NO.: _____

PRESENTED BY: _____ FILE NO.: _____



MODEL NO.: **ADS0051-W 050080**

SHEET NO. 2 OF 15

DESCRIPTION: **Switching Power supply Unit**

ISSUE DATE: 25/04/2007

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NO. CONTENT	PAGE
1.0 REVISION HISTORY	4
2.0 GENERAL	5
3.0 ELECTRICAL SPECIFICATION	5
3.1 Input Requirement	
3.1.1 Input Frequency And Voltages	
3.1.2 Input Current	
3.1.3 Inrush Current	
3.1.4 Power Consumption	
3.2 Input Protection	
3.2.1 Input Current Protection	
3.3 Output Requirement	
3.3.1 Output Voltage And Current	
3.3.2 Short Circuit Protection And Over Current Protection	
3.3.3 Output Polarity	
3.4 Performance Requirement	
3.4.1 Efficiency	
3.4.2 Turn On Delay Time	
3.4.3 Hold-up Time	
4.0 ENVIRONMENTAL REQUIREMENTS	6
4.1 Temperature And Humidity	
4.2 Altitude	
5.0 REGULATION COMPLIANCE	6
5.1 EMC Specification	
5.1.1 FCC Requirements	
5.1.2 CISPR Requirements	
5.2 Product Safety	
5.2.1 Safety Approval	
5.2.2 Leakage Current	
5.2.3 Dielectric Voltage Withstand	



MODEL NO.: **ADS0051-W 050080**

SHEET NO. 3 OF 15

DESCRIPTION: **Switching Power supply Unit**

ISSUE DATE: 25/04/2007

6.0 RELIABILITY	7
6.1 MTBF (Mean-Time-Between-Failures) Calculation	
6.2 Burn-in	
7.0 MECHANICAL SPECIFICATION	7
7.1 Case Dimension	
7.2 Dc Cord	
8.0 LABEL SPECIFICATION	9
9.0 PACKING	10
10.0 PCB LAYOUT DIAGRAM	11
11.0 TEST RECORD	12
11.1 Electrical characteristic test record	
12.0 SAFETY FILE	
13.0 BOM AND RoHS SUMMARY REPORT	



MODEL NO.: **ADS0051-W 050080**

SHEET NO. 5 OF 15

DESCRIPTION: **Switching Power supply Unit**

ISSUE DATE: 25/04/2007

2.0 GENERAL DESCRIPTION

This specification defines the input, output characteristics and performance requirements for a 3.6 watts switching mode AC to DC adapter.



3.0 ELECTRICAL SPECIFICATION

3.1 Input Requirement

3.1.1 Input Voltages And Frequency

Normal Voltages	Voltage Variation Range	Normal Frequency	Frequency Variation Range
100-240VAC	90-264VAC	50-60Hz	47Hz to 63Hz

3.1.2 Input Current

AC input current shall not exceed 0.2A MAX, when operated at 100-240VAC with no load to full load.

3.1.3 Inrush Current

The inrush current must be limited to 50A when operated at 240VAC.

Inrush current is measured at an ambient temperature of 25 , with the test unit temperature stabilized in the power off condition until at ambient temperature.

3.1.4 Power Consumption

The power consumption shall not exceed 0.5W when operated at normal voltage 100-240VAC with no load.

3.2 Input Protection

3.2.1 Input Current Protection

A fuse with a rating of 0.5A shall be installed on the input line side near the input connector to provided protection to the power supply.

3.3 Output Requirement

3.3.1 Output Voltage、 Current And Ripple

Under any combinations of line and load variation and environmental conditions, output shall remain with in the tolerance defined in table 1

Input normal voltage	Output Nominal Voltage	Output Regulation	Minimum Load (A)	Maximum Load(A)	Ripple (mVp-p)	Output power(w)
100-240VAC	4.5VDC	±5%	0.0	0.8	100	3.6

Note: 1. output voltages shall be measured at output connector.

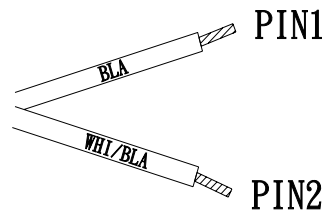
2.measurements shall be made with an oscilloscope of at least 20 MHz bandwidth. Output shall be bypassed at the connector with a 0.1uF ceramic disk capacitor and a 10uF electrolytic capacitor to simulate system loading.

3.3.2 Short Circuit Protection and Over Current Protection.

The power supply shall be protected from damage of accidentally shorting output for a long time period or over current and auto-recovery when the fault is removed.

3.3.3 Output Polarity

PIN#	Output Level
1	RTN(-)
2	+5V



3.4 Performance Requirement

3.4.1 Efficiency

Input voltage 100VAC/50Hz, It should provide an efficiency of 61.5% minimum, when measured at maximum load under 100VAC/50Hz.

3.4.2 Turn On Delay Time

The adapter shall switch on in less than 3.0 seconds at maximum load and 100VAC/50Hz input. The measurement shall be made from the point at which condition of input voltage start up to the point at which the output voltage goes up to the static regulation envelope specified.

3.4.3 Hold-up Time

The hold-up time shall be a minimum of 10 ms at 115VAC/50Hz and 90% full rated load. The measurement shall be made from the point at which condition of input current ceases, AC power interrupt, to the point at which the output voltage drops below the static regulation envelope specified.

4.0 ENVIRONMENTAL REQUIREMENTS

4.1 Temperature And Humidity

4.1.1 Operating Temperature and Humidity Range:

All operation requirements specified shall be meet the temperature range of 0°C to 40°C, 20% to 90% relative humidity.

4.1.2 Storage Temperature and Humidity Range:

The storage or transported specified shall be meet the temperature range of -20°C to 70°C, 20% to 90% relative humidity.

4.2 Altitude

The adapter shall operate properly at any altitude between 0~10,000 feet above sea level and withstand storage at 40,000 feet.

**5.0 REGULATION COMPLIANCE****5.1 EMC Specification****5.1.1 FCC Requirements**

Power supply shall comply with the radiated and conducted emission requirements for FCC Class B.

5.1.2 CISRP Requirements

Power supply shall comply with the radiated and conducted emission requirements for CISPR 22 Class B.

5.2 Product Safety

Unless otherwise specified, the supply is designed to meet IEC 60950-1 edition and/or equivalent safety standards for use in information technology equipment specific agency certifications will be applied at customer's request and cost.

5.2.1 Safety Approval

<input checked="" type="checkbox"/> UL/Cul	<input type="checkbox"/> TUV/GS	<input type="checkbox"/> CE	<input type="checkbox"/> BSMI
<input type="checkbox"/> T-license	<input type="checkbox"/> R-mark	<input type="checkbox"/> PSE	
<input type="checkbox"/> CCC	<input type="checkbox"/> FK-mark	<input type="checkbox"/> Doft	

5.2.2 Leakage Current

The AC leakage current is less than 0.25mA when the adapter is connected to 240VAC/50Hz

5.2.3 Dielectric voltage withstand

The adapter shall withstand for 1 minute without breakdown the application of a 50/60Hz 3000VAC for 10mA(or 1sec without breakdown the application of a 50/60Hz 3600Vac or 5090Vdc for 10mA)supply voltage applied between both input line and output

6.0 RELIABILITY**6.1 MTBF (Mean-Time-Between-Failures) Calculation**

The demonstrated MTBF shall be 50,000 hours of continuous operation at 25 , maximum load and worst-case line.

6.2 Burn-in

The power supply shall be burn-in for 2 hours under nominal input and 70%~80% load at ambient temperature of 40 degrees C.

7.0 MECHANICAL SPECIFICATION

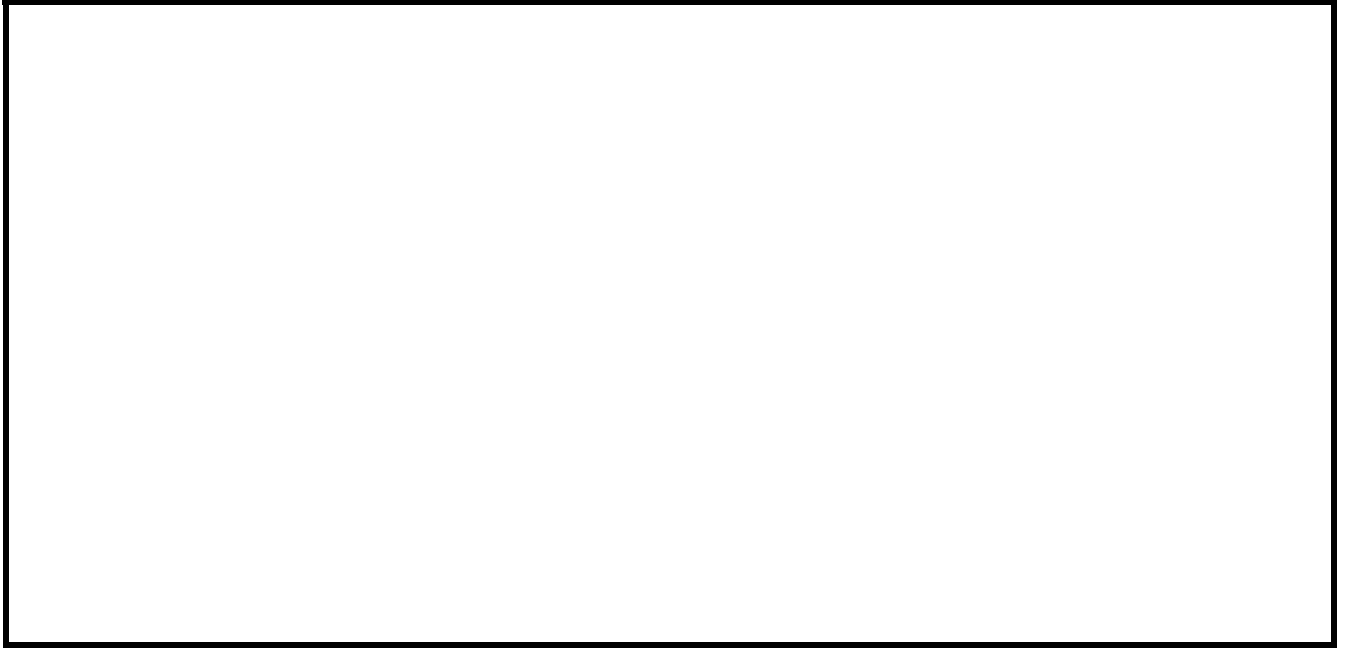


MODEL NO.: **ADS0051-W 050080**

SHEET NO. 9 OF 15

DESCRIPTION: **Switching Power supply Unit**

ISSUE DATE: 25/04/2007





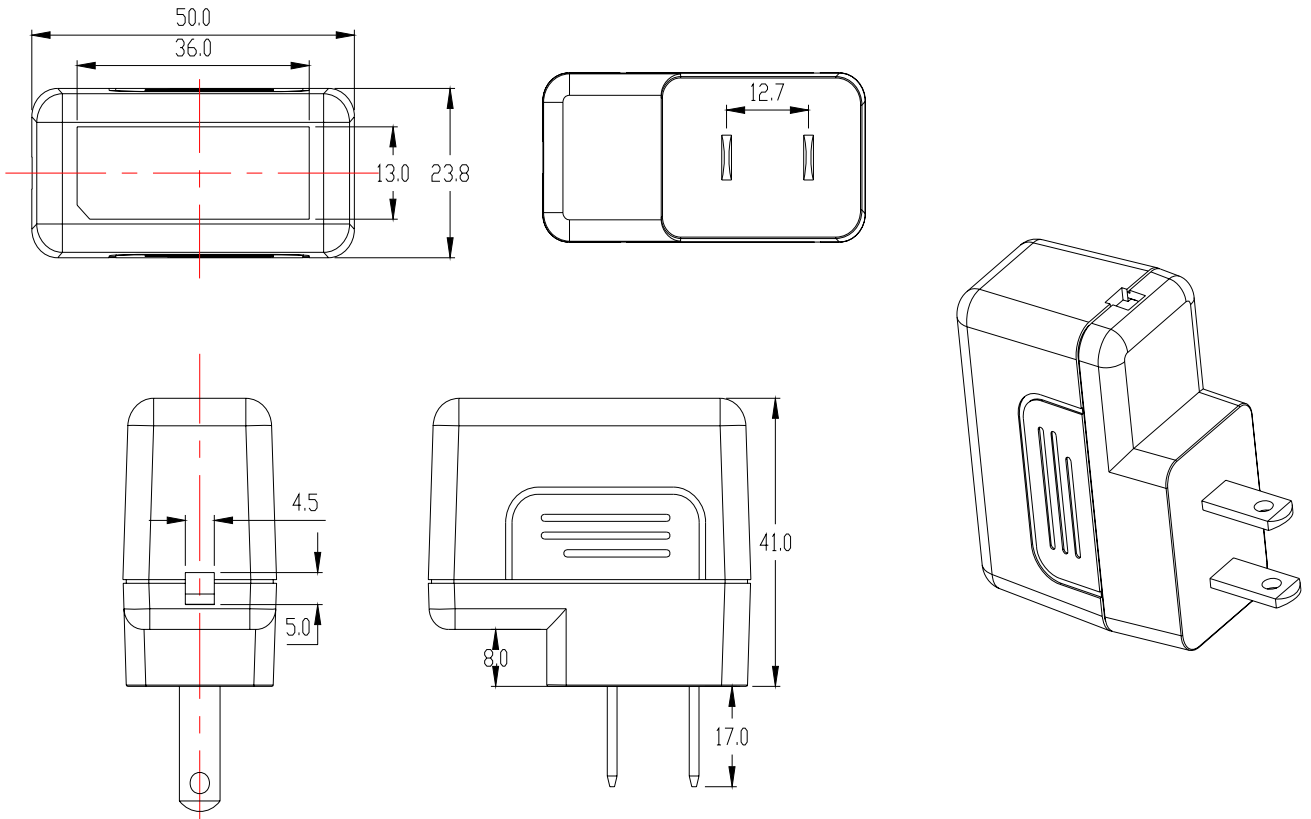
MODEL NO.: ADS0051-W 050080

SHEET NO. 10 OF 15

DESCRIPTION: Switching Power supply Unit

ISSUE DATE: 25/04/2007

7.1 CASE DIMENSION:





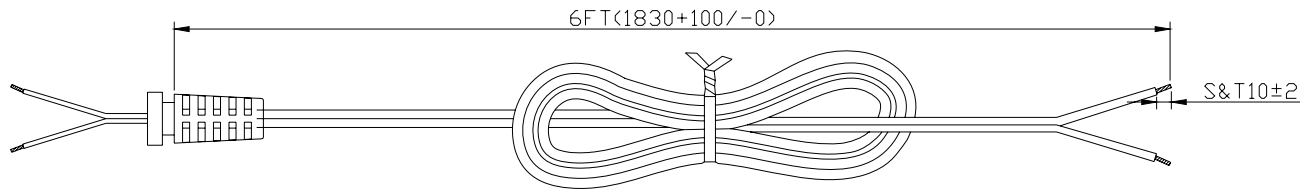
MODEL NO.: ADS0051-W 050080

SHEET NO. 11 OF 15

DESCRIPTION: Switching Power supply Unit

ISSUE DATE: 25/04/2007

7.2 DC CORD



NOTE:

- ① CABLE: 2468 ,80°C 300V 24AWG*2C
- ② PLUG: S&T10 black
- ③ UNIT: mm

8.0 LABEL SPECIFICATION



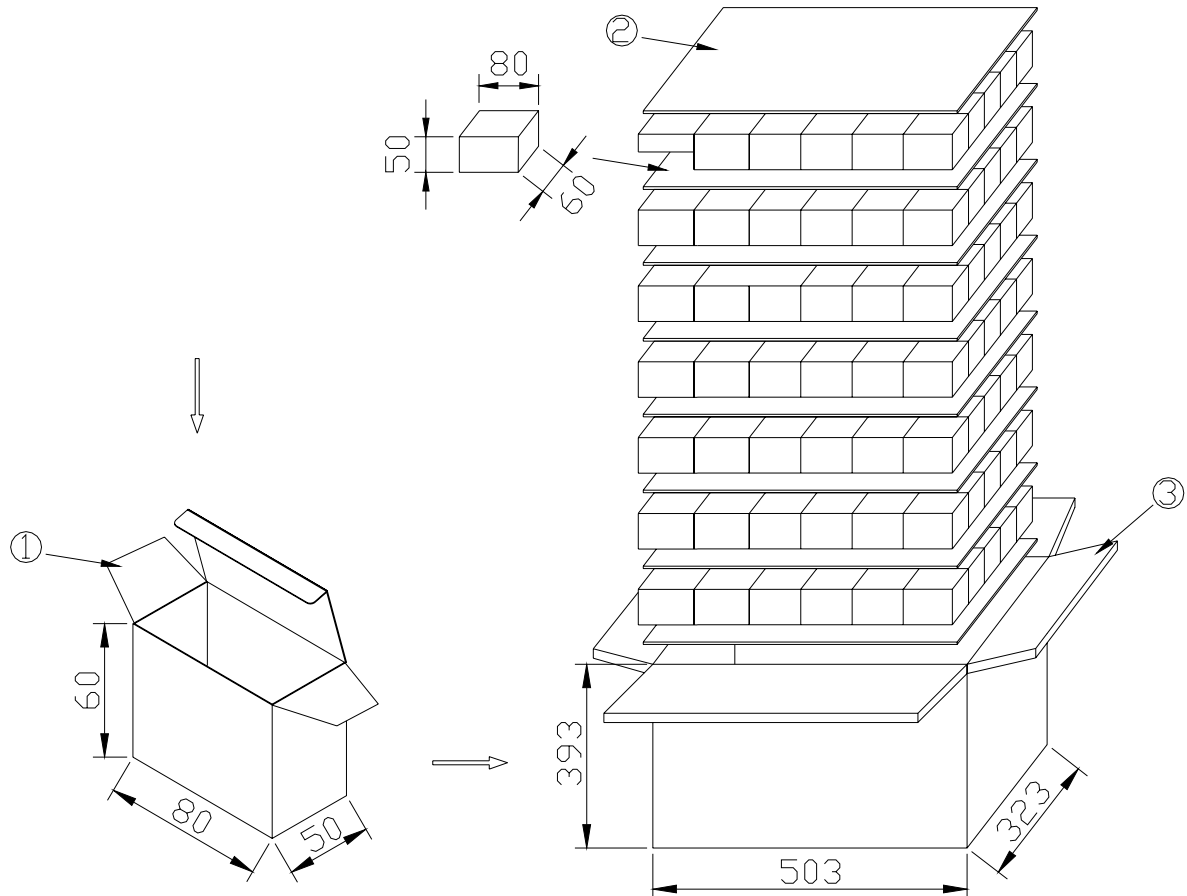
NOTE: LABEL

- ① SILVER CHARACTER ON A BLACK BACKGROUND WITH NON GLOSSY
- ② MATERIAL: METALIZED POLYESTER LABEL (SILVER MATTE)
- ③ SIZE: (12.5*35.5)+0/-0.3 THICK: 0.25
- ④ DATE CODE

<u>17</u>	<u>07</u>
WEEK	YEAR
- ⑤ UNIT: mm
- ⑥ "GP" SHOW : GREEN PRODUCTION

9.0 PACKING

產品

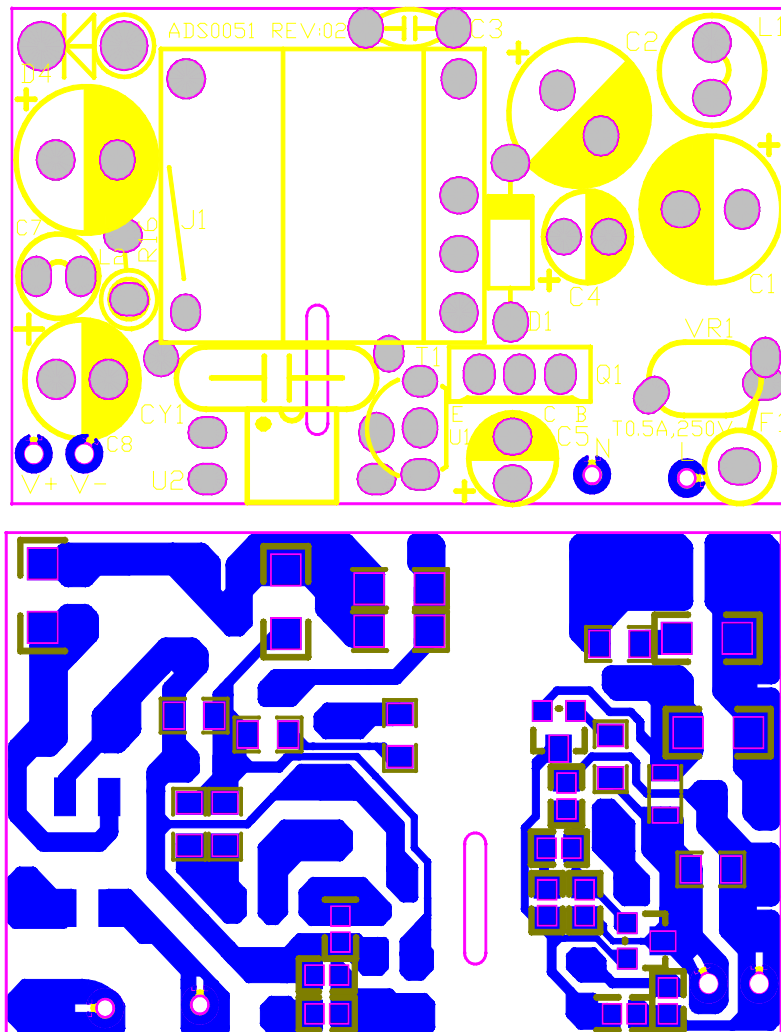


NOTE:

- ① BOX: L*W*H=(80*50*60)+/-2mm 450P
- ② CLAPBOARD:(480*300) *3 +/-3mm B33 8PCS
- ③ CARTON:L*W*H=(503*323*393)+/-5mm A=A
- ④ Q'TY:30*7=210PCS
- ⑤ NET WEIGHT:____(g)(ref)



10.0 PCB LAYOUT DIAGRAM:



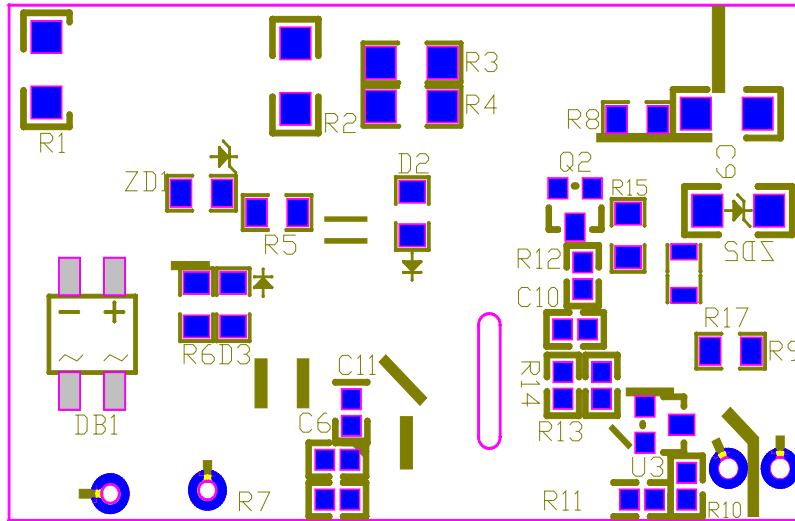


MODEL NO.: ADS0051-W 050080

SHEET NO. 14 OF 15

DESCRIPTION: Switching Power supply Unit

ISSUE DATE: 25/04/2007





11.0 TEST RECORD

11.1 Electrical characteristic test record

Sample	Date	Input: Volt / Freq								Ripple & Noise 115Vac/50Hz (mVp-p)	Efficiency 100Vac/50Hz (%)	Power Consumption 240Vac/50Hz
		90Vac/50Hz		115Vac/50Hz		230Vac/50Hz		264Vac/50Hz				
		No load	Full load	No load	Full load	No load	Full load	No load	Full load			
1										(100)mV max	(61.5)%min	(0.5)W max
2												
3												
4												
5												
6												
7												
8												
9												
10												

Sample	Date	SCP: Pass:√, Fail: X		OCP Pass:√, Fail: X		noise test(0 ~ full load) pass:√ Fail: ×				OTP: Pass:√ Fail: X	
		90Vac/50 Hz	264Vac/50 Hz	90Vac/50 Hz	264Vac/50 Hz	90Vac/60Hz	115Vac/60Hz	230Vac/50Hz	264Vac/50Hz		
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											

Hi-Pot : Pri.-Sec. 3600Vac or 5090Vdc 10mA 1s. (Pass:√, Fail: X)										Burn-in: 220Vac±10%/50Hz 40°C 2Hours. 70%~80% Rate load. (Pass:√, Fail: X)												
Sample	1	2	3	4	5	6	7	8	9	10	Sample	1	2	3	4	5	6	7	8	9	10	
Result											Result											
Test Equipment	√	AC power Source			√	Electronic Load			√	Multimeter	√	Oscilloscope			√	Power meter		√	Dielectric Analyzer			
Model No.	AFC-500W				Prodigit 3311 60V/60A 300W				Fluke 45		Tektronix TDS3032 300MHz 2.5GS/s			Chroma 2100		Extech 7410						