



SPECIFICATION FOR APPROVAL

CUSTOMER : 01061 REV.00
ARTICLE: SWITCHING MODE POWER SUPPLY
STANDARD :
MODEL NO. : 152-180100
OUR PART NO.: 152-180100
YOUR PART NO.:
INPUT : 100-240V AC 50/60Hz
OUTPUT: 18.0V DC 1.0A

SWITCHING MODE POWER SUPPLY SPECIFICATION

Model No.: 152-180100W

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1. Record of Revision:

REVSIO N	DESCRIPTIONS OF CHANGE	DATE	ACTOR
REV.00	New document	2015/03/13	Shi Pei

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2. Description:

This is a series of general purpose AC/DC adapters which convert 100Vac ~ 240Vac to a stabilized DC voltage of 18.0V with rated output current of 1000mA.

The adaptor meets the requirement of lead free and RoHS.

3. Input Feature:

3.1 Input Voltage and Frequency

Rating Voltage	Line Frequency	Minimum Voltage	Maximum Voltage
100-240V AC	50/60Hz	90V AC	264V AC

3.2 Efficiency

The minimum average efficiency shall be 80.41% at 115Vac/230Vac input and output full load after 30 minutes.

3.3 Input Current

The maximum input current shall be less than 0.45A.

3.4 Stand-By Power

No Load Power Consumption 0.3W Max.

3.5 Input In-rush Current

Peak inrush current shall be limited to 50A.

3.6 Input Leakage Current

The leakage current shall not exceed 0.25mA., at 240Vac input.

4. Output Feature:

4.1 Output Voltage and Current and Ripple

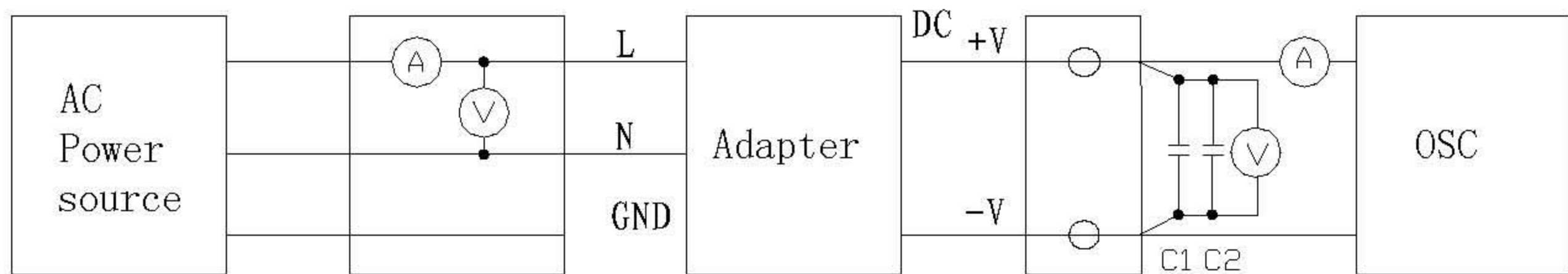
Output	Output Current Range		Output Voltage Range		Ripple & Noise
	Min.	Max.	Min.	Max.	
+18.0V	0.0A	1.0A	17.1V	18.9V	150mVpp

Ripple & Noise Test: Add 0.1uF/50V ceramic capacitor and 10uF/50V aluminum electrolytic capacitor across the output terminal. Measured with 20MHz Bandwidth Oscilloscope.

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4.2 Dynamic Response

The load current of the output is changed between 20% and 80% of full load at 10ms .The excursion of the output shall not exceed 10% of the nominal output voltage.

4.3 Turn- on Delay Time

3 Second Max,at 90Vac input and output Max.Load.

4.4 Hold up time

10mS Min. at 90Vac input and output Max.Load.

5. Protection Feature:

The power supply will self-protect any output to ground ,and auto recovery when abnormal circuit faults remove.

5.1 Over-Voltage Protection

Over-voltage protection shall be included in the adaptor circuit.a single component failure must not cause an over voltage

5.2 Over-Current Protection

The power supply will be auto recovered when over current faults remove.

5.3 Short Output Protection

The power supply will be auto recovered when short output faults remove.

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6. Safety Standard:

6.1 Safety

The switching power supply has approved by the following safety standards:

Item	Country	Certified	Standard
GS	Europe	Meet	EN60950

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6.2 EMC Standards

Item	Country	Certified	Standard
FCC	USA/ Canada	Meet	FCC Part 15
CE	Europe	Meet	EN55013/EN55020 EN61000-3-2/EN61000-3-3 EN 61204-3
C-tick	Australia	Meet	AS/NZS CLSPR 13:2004

6.2.1 EMS Standards

The switching power supply has approved by the following EMI standards:

6.2.1.1 IEC61000-4-2 Electrostatic Discharge(ESD)

Static-discharge test by contract or air should be conducted with Static-discharge teeter,energy storage capacitance of 150Pf,and discharge resistance or 330 Ω .

8KV air discharge, 4KV contact discharge, Performance Criterion B.

6.2.1.2 IEC61000-4-3 Radiated Electromagnetic Fields(RS)

Radio-frequency Electronagnetic Field Susceptibility Test,RS,80-1000MHz,3V/m, 80%AM(1KHz),Performance Criterion A.

6.2.1.3 IEC61000-4-4 Electrical Fast Transient/Burst(EFT)

Power Line to Line:1KV

Performance Criterion B

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6.2.1.4 IEC61000-4-5 Lightning Surge Attachment(Surge)

Lightning Surge voltage of differential and common modes shall be applied across AC input lines and across input and frame ground.

Power Line to Line:1KV.

Line to Earth:1KV.

Performance Criterion B.

6.2.1.5 IEC61000-4-6 Conducted Radio Frequency Disturbances(CS)

Conducted Radio Frequency Disturbances Test,CS,0.15-80MHz,3V/m,80%AM, 1KHz,Performance Criterion A.

6.2.1.6 IEC61000-4-11 Voltage Dips/Short Interruption/Variations

Voltage Dips,30% reduction-10ms,Performance Criterion B,60%

Reduction – 100ms,Performance Criterion C,Voltage Interruptions>95%

Reduction – 5000ms, Performance Criterion C.

6.3 Insulation Resistance

Input To Output : DC500V 100M Min

Input To Case : DC500V 100M Min

6.4 Dielectric Strength(HI-POT)

Input to Output Terminal: 4242Vdc 60Sec \leq 5mA.

Input to Case: 4242Vdc 60Sec \leq 5mA.

When DC voltage of 4.24KV is applied,and the voltage applied to the insulation under test is Gradually raised from zero to the prescribed voltage in 1s,and held at that value for 60s betweenThe input and output and between the input and housing,the current sensitivity shall be less than5mA,after this test ,the adapter shall exhibit no electrical and mechanical abnormalities.

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7. Reliability:

7.1 Burn-in

The burn-in test will be performed at least 3 hours at 25 centigrade degrees under full load condition.

7.2 MTBF

When the operation is complying with this specification, the switching power supply's MTBF will be 30K hours at 25 °C.

8. Mechanical Specifications:

Weight:	About 93.1g
Dimensions:	Refer Outline on page 11-12
Output cord:	DCD0167, 24AWG UL2464, 1.5M Black
Output Connector:	Lead O/P~OD: 5.5mm, ID: 2.1mm, Length: 12.0mm (H)

9. Environmental Conditions:

The power supply shall meet all of the requirements of this specification during any combination of operation ambient conditions and after exposure to any combination of non-operation ambient conditions specified in this section.

9.1 Temperature

Operating Temperature:	0°C~40°C
Storage Temperature:	-20°C~80°C

9.2 Humidity

Operating Humidity:	10%~90%(non condensing)
Storage Humidity:	5%~95%(non condensing)

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10. Vibration:

Sweep and resonance search

Frequency	Duration	Axis	Amplitude
5-20-500	30 Minutes	x,y,z	1G

11. Drop Test:

Take drop test from the height of 1.0M for each surface of case (total 6 surfaces) and then can pass function test.

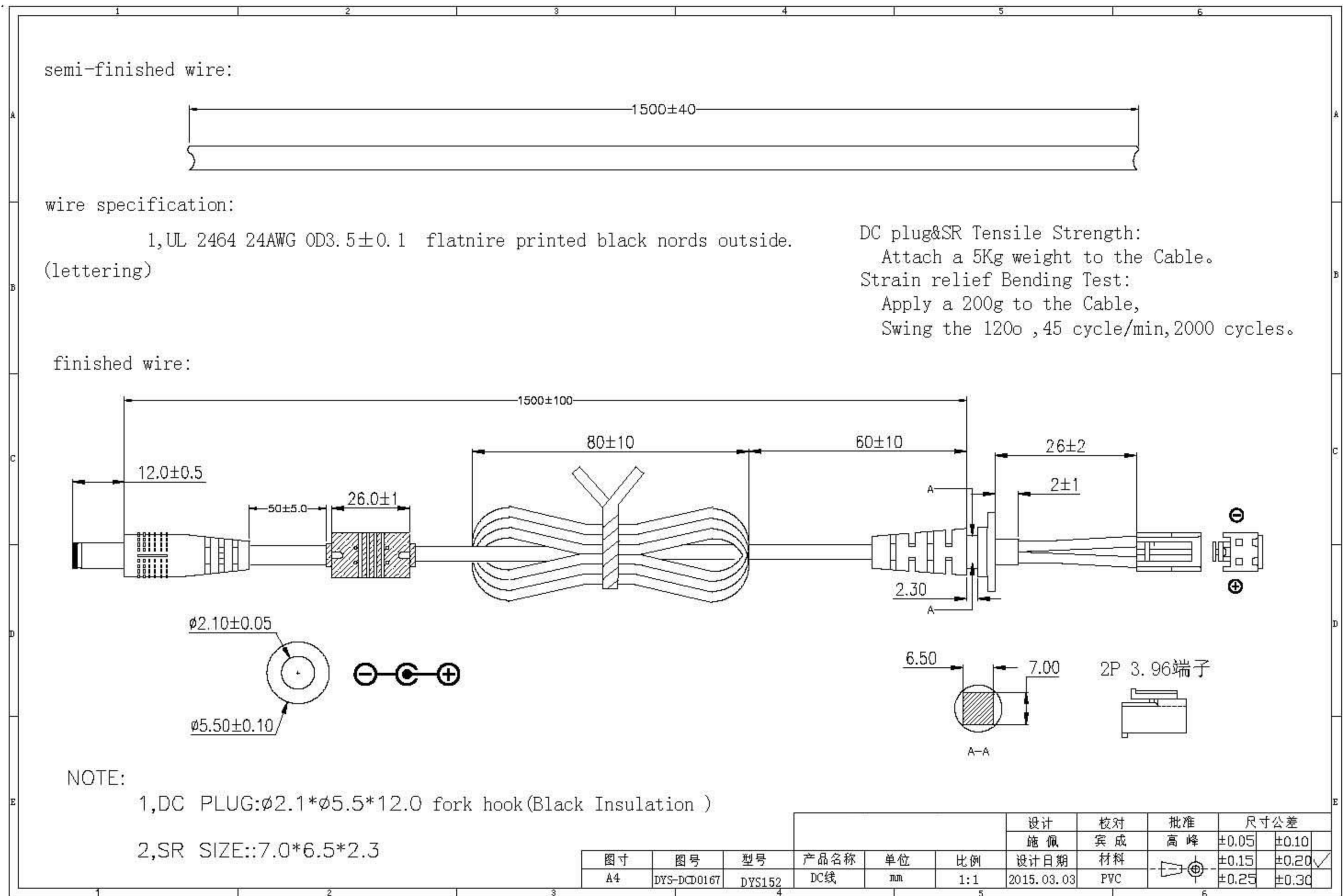
12. Major Measure Equipment:

A. AC Source :	YOKOGAWA JL-1005A-500W
B. Power Meter :	Everfine YF9901
C. Eelctronic Load :	Yokogawa IT8511
D. Oscilloscope :	Matrix Mos-620CH 20MHZ
E. Digital Multimeter :	Victor Vc890D
F. ATE Tester :	Chorma 6000 auto Test System
G. HI-POT Tester :	CHANGSHENG CS2670
H. Insulation Resistance Tester:	TRANST TR7122
I. leakage current Tester:	CHANGSHENG CS2675A
J. Constant temperature Tester:	SUNAN RT-5411
K Burn-in Equipments:	DONGSONG YS0365
L Temperature Tester:	JE JK-8/16

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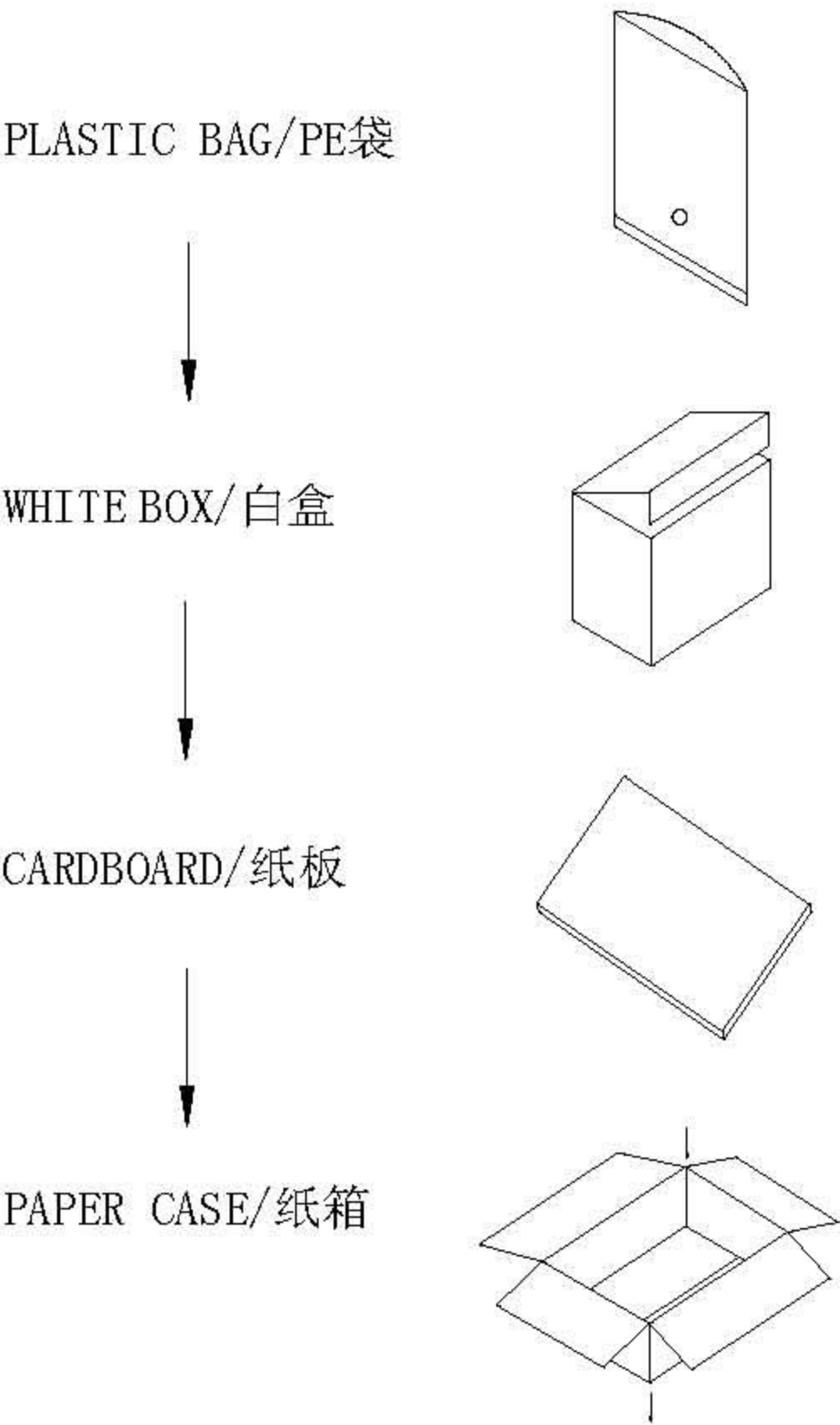
13. DC CORD Drawing:



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14. Package Drawing:



MECHANICAL DIMENSION:

	L(mm)	W(mm)	H(mm)
PLASTIC BAG	210	130	
WHITE Box	90.5	53.5	75.5
CARDBOARD	370	275	
Outside Box	380	285	320

PACKING METHOD:

PACKING METHOD	20PCS/LAYER * 4 LAYERS
QTY	80PCS
N.G	6.08 Kg
G.W	7.58Kg

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Customer:01061			Product Name: Swithing Mode Power Supply				P/N:DYS152-180100-15313B			
Product Specification: AC100-240V 50/60Hz DC 18.0V/1.0A							Safety: OPEN Board			
Item s	Testing Title		Test Result	Sample Number and Test Result						
	Items	Condition		1	2	3	4	5	PASS	
Basic Elec- trical Char- acter- istic	1、No load voltage	AC90V/50Hz	DC 18.0 V ± 0.9 V	18.16	18.28				PASS	
		AC180V/50Hz	DC 18.0 V ± 0.9 V	18.16	18.28				PASS	
		AC264V/50Hz	DC 18.0 V ± 0.9 V	18.16	18.28				PASS	
	2、Full Load voltage	AC90V/50Hz	DC 18.0 V ± 0.9 V	17.86	17.96				PASS	
		AC180V/50Hz	DC 18.0 V ± 0.9 V	17.86	17.96				PASS	
		AC264V/50Hz	DC 18.0 V ± 0.9 V	17.86	17.96				PASS	
	3、Full Load input power	AC90V/50Hz	FULL LOAD (W)	21.9	22.1				PASS	
		AC180V/50Hz	FULL LOAD (W)	21.6	21.8				PASS	
		AC264V/50Hz	FULL LOAD (W)	22.2	22.4				PASS	
	4、Efficiency	AC115V/50Hz	≥80.41 % (Average Of 25/50/75/100% Loads)	83.18	83.37				PASS	
		AC230V/50Hz	≥80.41 % (Average Of 25/50/75/100% Loads)	80.76	80.84				PASS	
	5、Ripple & noise	AC90V/50Hz	≤ 150 mV(FULL LOAD)	60	60				PASS	
		AC180V/50Hz	≤ 150 mV(FULL LOAD)	60	60				PASS	
		AC264V/50Hz	≤ 150 mV(FULL LOAD)	60	60				PASS	
	6、Standby power			< 0.3 W	0.2	0.2				PASS
	7、Short-circuit test			No output when short circuit happens work normally after recovery (240Vac)	1.5	1.5				PASS
	8.over-current protection			1.3 - 2.5 A (240Vac)	2.2	2.2				PASS
	9、Noise test			40db MAX	OK	OK				PASS
	10、Hi-pot test			DC4242V 60S<5mA	OK	OK				PASS
	11、Temperature rise			At normal temperature 25℃, case surface temperature rise ≤55℃	OK	OK				PASS
	12、DC Cable size			Customer Request: 2.1* 5.5 * 12.0 L= 1.5M H	2.1* 5.5 * 12.0 L= 1.5M H					PASS
Test stat- us	1、High temperature		□ 60℃ ■80℃ ■48H □96H	OK	OK				PASS	
	2、Low temperature		■-20℃ □-40℃ ■48H □96H	OK	OK				PASS	
	3、Constant humidity		■ 40℃ 95%RH ■48H □96H	OK	OK				PASS	
	4.Plugfest(male to female)		3000 times Min	OK	OK				PASS	
	5、Burn-in test		≥8hours AC100/240V each 4H full load	OK	OK				PASS	