

ELECTRICAL REQUIREMENTS

DESIGNED NO.	YDS-9323-R	DATE.	2020/8/3
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1. SCOPE :

1-1. This specification describes the physical, functional and electrical characteristics of the 36 watts, single output 24 V 1.5 A switching power supply.

Description

Wall Mount

Desk-Top

Open Frame

Others

2. INPUT CHARACTERISTICS:

2-1. Input Voltage & Frequency

Item	Min.	Normal.	Max.	unit
Input voltage range	90	100-240	264	Vac
Input frequency range	47	50/60	63	Hz

2-2. Input current

Input current should be lower than 1.2 Arms full-load at 100-240 Vac input voltage conditions.

2-3. Inrush Current

At Full Load ,25°C, Cold Start :

No Component Over Stress and No Fuse Blow No Damage To The Power Supply °

2-4. Stand-by Consumption & Average Efficiency In Active. Comply with following regulation:

Regulations		Efficiency Level	For		
<input checked="" type="checkbox"/>	U.S.DOE 10 CFR Part 430	Level VI		<input checked="" type="checkbox"/>	Basic Voltage model
<input checked="" type="checkbox"/>	EU Code of Conduct Version 5, Tier 2	Level VI		<input type="checkbox"/>	Low Voltage model
	(EU)2019/1782	Level VI			

Stand-by consumption 0.1 W Max.

Average Efficiency in active 87.403% % Min.

※ All test condition is based on input voltage 115/230Vac 60/50Hz at ambient 25°C after 30 minutes in full load.

3. OUTPUT CHARACTERISTICS:

3-1. Output Characteristics

Output voltage, load current, voltage regulation and output noise of power supply should meet the specifications, which defined on the tables below:

Item	Min.		Rated		Max.		Test conditions
Output Voltage	22.80	Vdc	24.00	Vdc	25.20	Vdc	NO Load
Output Voltage	22.80	Vdc	24.00	Vdc	25.20	Vdc	FULL Load
Output Load	0	A	/		1.5	A	
Turn on Delay Time	/				3	S	Full Load & 90Vac/63Hz and 264Vac /47Hz @ Ta=25°C
Hold Up Time	10	m S	/				Full Load & 115Vac/60Hz and 230V/50Hz, @Ta=25°C
Capacitance load	/		1000UF		/		100 ~240Vac, Full load
Ripple & Noise	Max.		240		mVp-p		Full Load & 115Vac/60Hz and 230V/50Hz, @Ta=25°C (Note 1)

Note 1: Ripple voltage measurement is tested with an oscilloscope set at a 20M Hz bandwidth & output wire 100 mm terminated with 0.1uF ceramic capacitor & parallel with 10uf low ESR electrolytic aluminum capacitor at full load.

4. Output Protection :

Item	Max.		Test conditions
Over current protection (OCP)	3.00	A	115Vac/230Vac 60Hz/50Hz, Full Load.
Over voltage protection (OVP)	48	V	
Short Circuit Protection(SCP)	The adapter will sustain a continuous short circuit at the output connector without damage or exceeding the case temperature limit defined in safety standard and when output short happened then should be down output voltage. Auto-recovery mode.		

5. Environment Section

Item	Min.		Max.		Remarks
Operating Temperature :	0	°C	40	°C	Unit shall comply electrical & mechanical requirements when it recovers to normal ambient temperature after removed from storage conditions.
Operating Humidity :	10	%RH	90	%RH	
Storage Temperature :	-10	°C	60	°C	
Storage Humidity :	5	%RH	95	%RH	

6. Dielectric Withstand Voltage(Hi-pot)

The Adapter shall be applied 3000 Vac for 60 seconds or 4242 Vdc for 60 seconds between AC input terminals and output terminals. The cut off current is specified \leq 10 mA.

(Note: In mass production, the Hi-pot voltage as above can be increased 20%, and the test time can be reduced to 3 seconds to test)

7. Insulation Resistance

Primary to secondary : \geq 10 M ohm. 500 VDC.

8. EMI Requirement

The adapter complies with :

<input checked="" type="checkbox"/>	FCC Part 15 Class B	<input checked="" type="checkbox"/>	EN55032 Class B	<input type="checkbox"/>	J55032 Class B
<input type="checkbox"/>	AS/NES 3548 Class B	<input type="checkbox"/>	CNS13438 Class B	<input checked="" type="checkbox"/>	ICES-003 Class B
<input type="checkbox"/>	GB/T9254 Class B	<input checked="" type="checkbox"/>	EN55035 Class B		

9 ESD: \pm 8 KV air discharge, \pm 4 KV contact discharge

10 PLD (lightning surge IEC 61000-4-5)

(1) Common Mode +/- 0 KV (12 ohm) . Class I (line to earth , neutral to earth , line to neutral)

(2) Differential Mode +/- 1 KV (2 ohm) . Class II (line to neutral)

11. Safety Conforming

Type	Standard
<input checked="" type="checkbox"/> UL	UL62368-1
<input type="checkbox"/> UL	UL1310
<input checked="" type="checkbox"/> cUL	CAN/CSA C22.2 No.62368-1
<input type="checkbox"/> cUL	CAN/CSA C22.2 No.223
<input type="checkbox"/> GS	EN62368-1
<input type="checkbox"/> PSE	J60950-1
<input type="checkbox"/> BSMI	CNS14336-1
<input type="checkbox"/> CB	IEC62368-1

Type	Standard
<input type="checkbox"/> SAA	AS/NZS: 62368-1
<input type="checkbox"/> CCC	GB4943
<input checked="" type="checkbox"/> CE	EN62368-1
<input type="checkbox"/> KETI	K 60950-1
<input type="checkbox"/> PSB	IEC62368-1
<input type="checkbox"/>	
<input type="checkbox"/>	

12. Mechanical:

12-1. Dimension

Body: 105 mm (L) \times 51 mm (W) \times 32 mm (H) reference only (Detail Refer Page 8).

12-2. Output Cord

Plug: 2.1*5.5*7.5 mm

Wire: UL 1185 22 AWG/2C 1500 mm

12-3. Weight

Net Weight (Approx): 165,660 \pm 5% mg.

12-4. AC Plug

Desk-Top Type.

Circuit Schematic Drawing

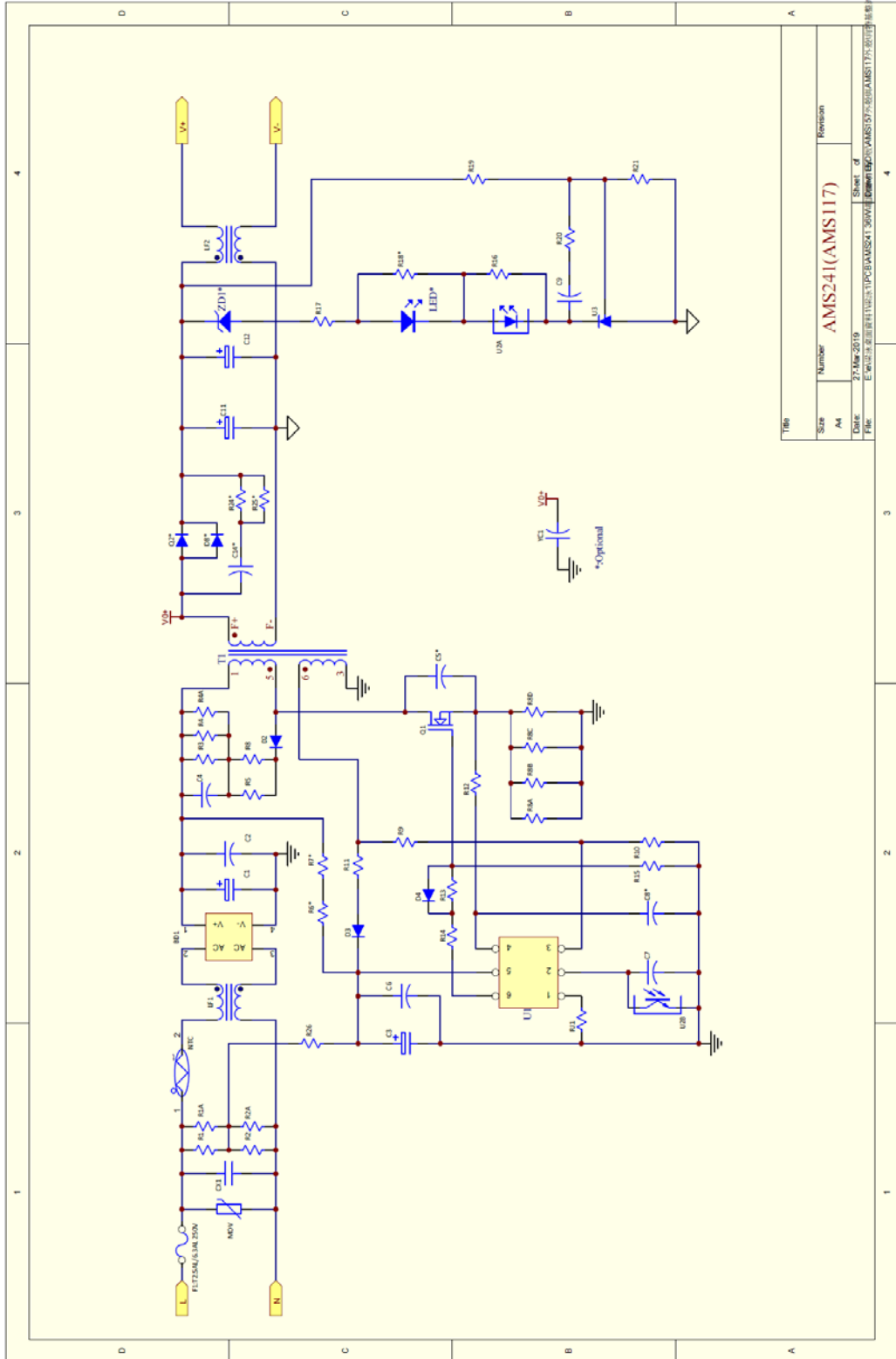
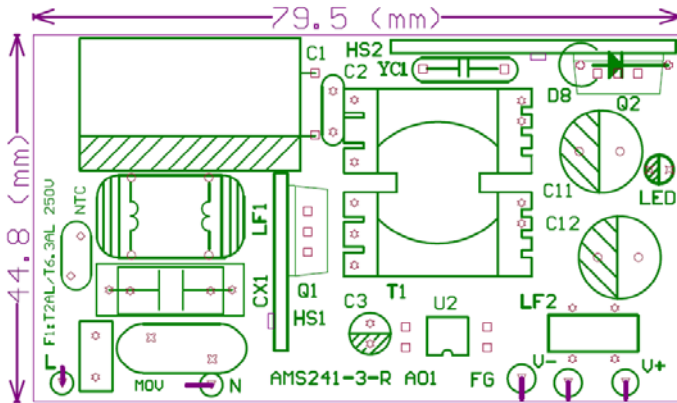


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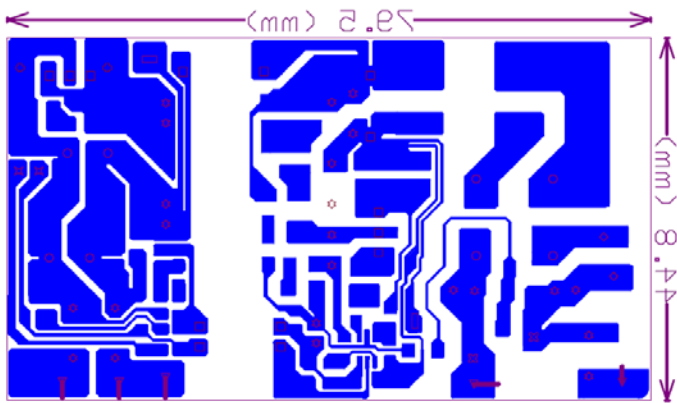
DESIGNED NO.	YDS-9323-R		
COLOR	—		
MATERIAL	—	To creating new drawing SPEC.	2020/8/3 吳翠萍
UNIT	—	DESCRIPTION	DATE REVISER

PCB VIEW

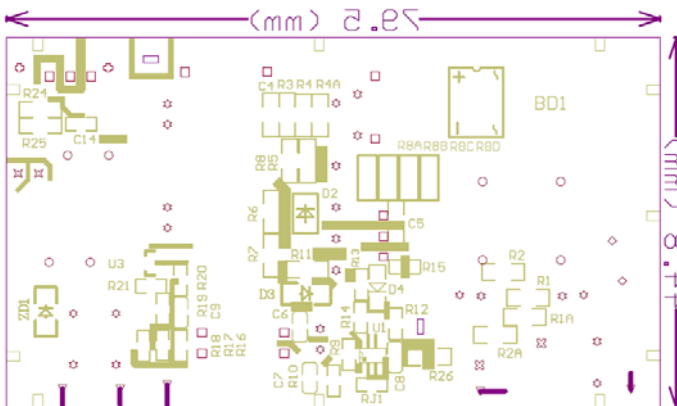
TOP LAYOUT



BOTTOM LAYOUT

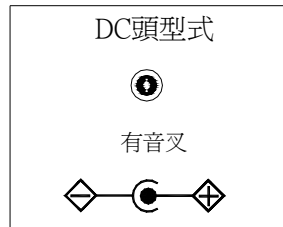
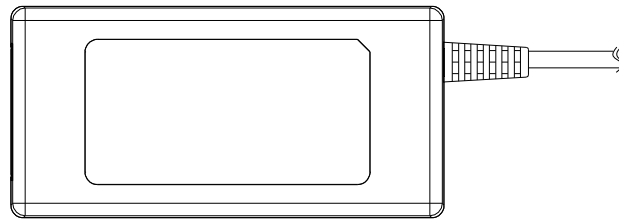
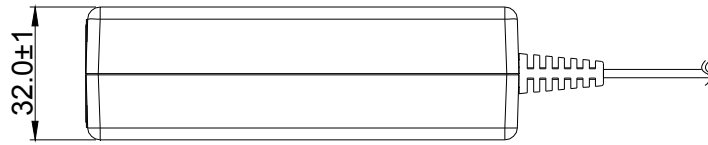
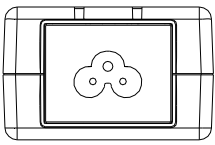
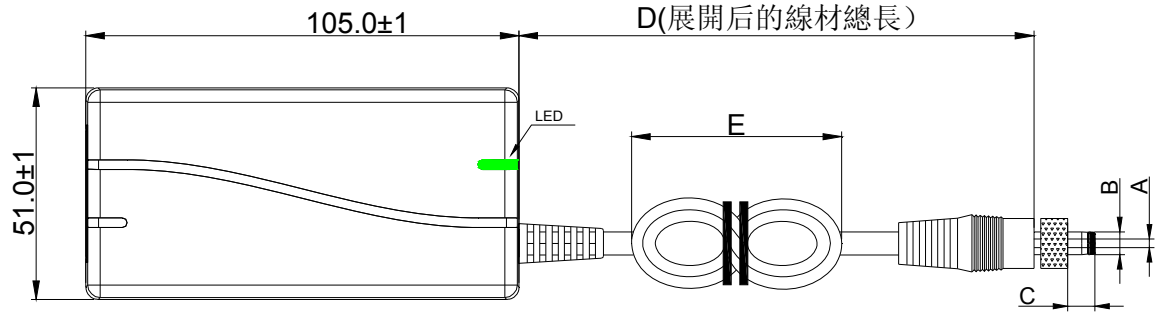


BOTTOM SILKSCREEN LAYOUT



DESIGNED NO.	YDS-9323-R			
COLOR	---			
MATERIAL	---	To creating new drawing SPEC.	2020/8/3	吳翠萍
UNIT	---	DESCRIPTION	DATE	REVISER

MECHANICAL REQUIREMENTS



線材尺寸對照表

序號	A	B	C	D	E
尺寸	2.1	5.5	7.5	1500	120
公差	±0.1	±0.1	±0.5	±30	±20

線材線號	UL 1185 22AWG
DC頭型式	黑色 音叉卡勾

DESIGNED NO.	YDS-9323-R			
COLOR	Black			
MATERIAL	PLASTIC	To creating new drawing SPEC.	2020/8/3	吳翠萍
UNIT	mm	DESCRIPTION	DATE	REVISER

NAMEPLATE

34.5⁺⁰_{-0.2}

R3.0*3

68.5⁺⁰_{-0.2}

SWITCHING ADAPTER
 Model No: AMS241-2401500F1
 Input: 100-240V~ 50/60Hz 1.2A Max
 Output: 24.0 V = 1.5 A 36.0 W



LISTED

29UK

E141650

Power Supply



LPS



Address : No.20, Qianyang First Road,
 Yun-Mao-Tsun, San Xiang,
 Zhongshan, Guangdong, China



Made in China

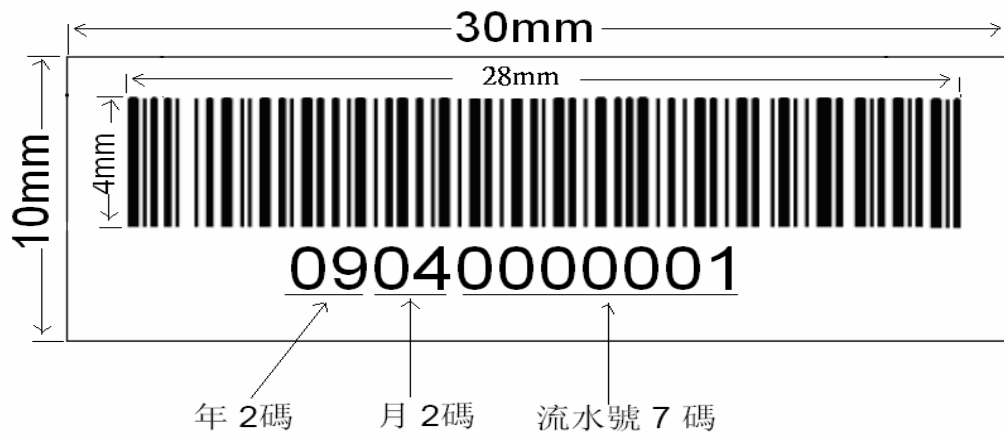
C3.0

Background: Black

Letters: White

DESIGNED NO.	YDS-9323-R			
COLOR	黑底白字	依2020/8/6郵件變更：更新銘板圖。	2020/8/6	吳翠萍
MATERIAL	0.16t PET	To creating new drawing SPEC.	2020/8/3	吳翠萍
UNIT	mm	DESCRIPTION	DATE	REVISER

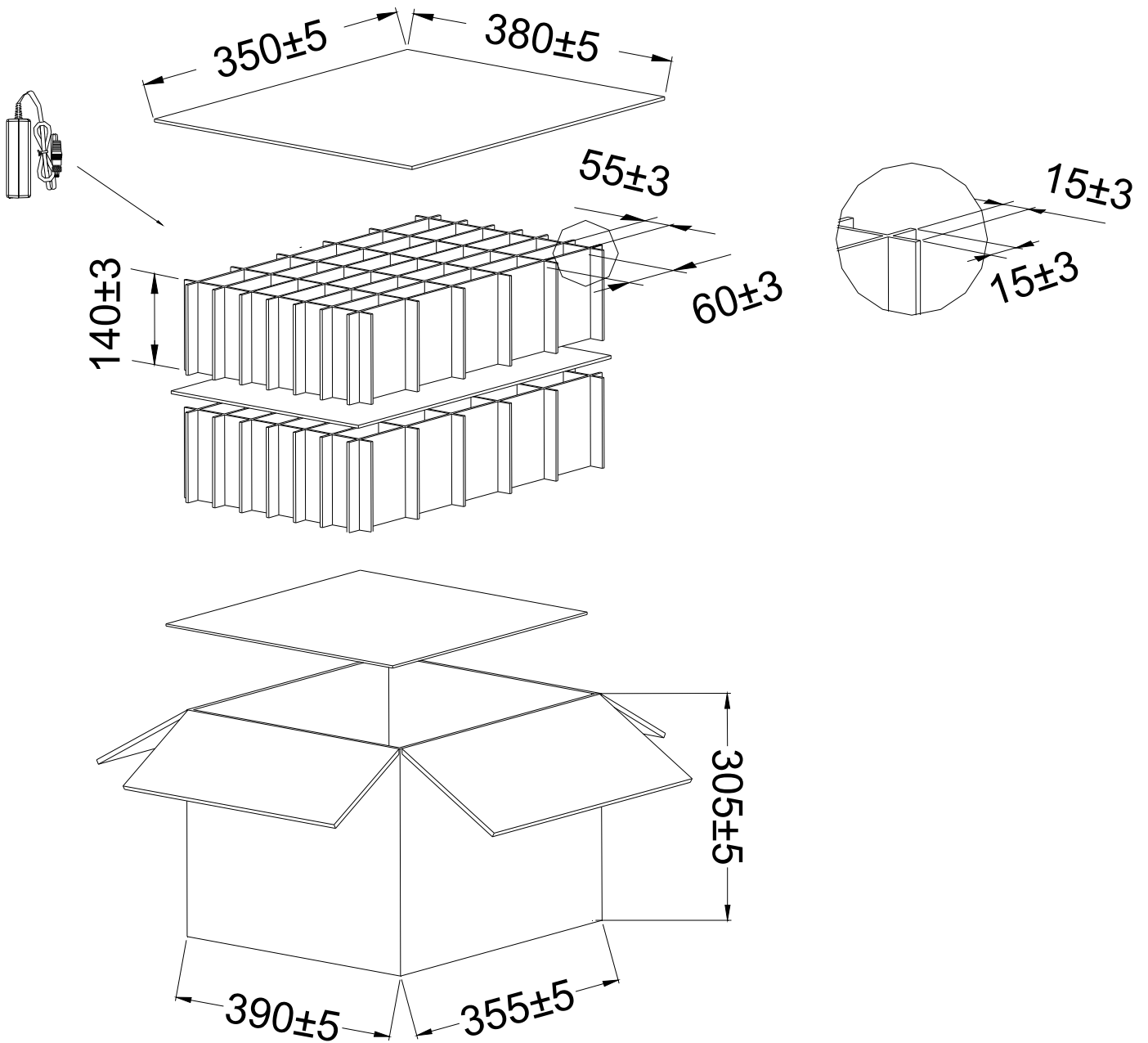
BAR CODE



- (1)菲林印刷
- (2)碼紋型號:CODE 128
- (3)字型:SWIS721BT
- (4)貼於成品上
- (5)未標公差±0.5mm

DESIGNED NO.	YDS-9323-R			
COLOR	白底黑字			
MATERIAL	PET	To creating new drawing SPEC.	2020/8/3	吳翠萍
UNIT	mm	DESCRIPTION	DATE	REVISER

PACKING



注：

1. 外箱尺寸: 390*355*305；
2. 隔板尺寸: 380*350；
3. 井字格：6*5格；
4. 一層裝30PCS, 共2層，一箱裝60PCS;
5. 單位：mm.

DESIGNED NO.	YDS-9323-R			
COLOR	----			
MATERIAL	----	To creating new drawing SPEC.	2020/8/3	吳翠萍
UNIT	mm	DESCRIPTION	DATE	REVISER

Electrical Test Report

Designed NO.		YDS-9323-R					Model NO.		AMS241-2401500F1					
Customer P/N		0					DATE		2020/8/3					
ITEM	Input current(rms)		Output voltage				Ripple		OCP		Short test	容性負載	Hi-pot	EMC
	100VA C/60H Z	240VA C/50H Z	100VA C/60H Z	240VA C/50H Z	100VA C /60HZ	240VA C /50HZ	100VA C /60HZ	240VA C /50HZ	90VAC /60HZ	264AC /50HZ	264VA C/50H Z	100VA C/ 60HZ	P-S: 3000V AC or 4242V DC 10mA 60Sec	115Vac/ 60Hz&2 30Vac/5 0Hz Full Load
SPEC.	1.2A Max (Full Load)		24V + -5% (No Load)		24V + -5% (Full Load)		240mV Max (Full Load)		3A Max		Comba ck	1000U F		
NO.	1	0.661	0.423	23.996	23.996	23.744	23.745	56.0	48.0	2.25	OK	OK	OK	OK
	2	0.667	0.425	24.042	24.042	23.800	23.802	52.0	52.0	2.28	OK	OK	OK	OK
	3	0.671	0.427	24.202	24.201	23.948	23.949	56.0	52.0	2.17	OK	OK	OK	OK
	4	0.668	0.427	24.002	24.001	23.760	23.759	56.0	52.0	2.35	OK	OK	OK	OK
	5													
	6													
	7													
	8													
	9													
	10													
Resule	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS	PASS

Efficiency Test Report

Designed NO.		YDS-9323-R					Model NO.		AMS241-2401500F1						
Customer P/N		0					DATE		2020/8/3						
ITEM	115V Efficiency					230V Efficiency					Stand by power	115V	230V		
	100% LOAD	25% LOAD	50% LOAD	75% LOAD	AVG	100% LOAD	25% LOAD	50% LOAD	75% LOAD	AVG	115VA C/60H Z	230VA C/50H Z	10% LOAD EFF		
SPEC.					87.403 %Min					87.403 %Min	0.1Max		/		
NO.	1	88.462	89.437	89.423	89.048	89.092	89.068	88.402	89.790	89.906	89.291	0.067	0.083	/	/
	2	88.421	89.383	89.475	89.006	89.071	89.139	88.256	89.797	89.926	89.280	0.068	0.082	/	/
	3	88.464	89.424	89.542	88.828	89.065	89.432	88.508	89.833	89.440	89.303	0.067	0.082	/	/
	4	88.544	89.446	89.698	89.240	89.232	89.017	88.171	89.766	89.841	89.199	0.068	0.084	/	/
	5														
	6														
	7														
	8														
	9														
	10														
Resule						PASS						PASS	PASS	PASS	PASS
										Prepared by	Reviewed by	Approved by			
										吳翠萍	梁泳	魯丁勝			