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1. GENERAL DESCRIPTION

The document defines the electrical, mechanical and environmental specifications of a *wall mount* Switch Mode Power Supply. The unit provides a filtered DC output voltage and offers 60W continuous output power with universal AC input.

2. KEY FEATURES

- ✧ Universal Input Voltage
- ✧ Less than 0.1W Standby Power
- ✧ Build-in EMI Filter

3. PARAMETERS SHEET

Symbol	Parameter	Conditions	Min	Typ	Max	Units
INPUT SECTION						
V_{IN}	Input Voltage Range	AC RMS	90	230	300	V
V_{IN_RATED}	Rated Input Voltage	AC RMS	100	230	240	V
F_{IN}	AC Input Frequency		47	50/60	63	Hz
I_{IN}	Steady State Input Current	Rated Input Voltage			1.5	A
I_{IN_RUSH}	Inrush Current	See Note 1			80	A
P_{IN}	Input Ture Power	Max output current			75	W
$P_{IN\_NO\_LOAD}$	No Load Power Consumption	Rated Input Voltage			0.21	W
$I_{IN\_LEAKAGE}$	AC Leakage Current	Input 230Vac/50Hz			0.25	mA
OUTPUT SECTION						
V_{OUT}	Output Voltage		22.8	24	25.2	V
I_{OUT}	Output Current			2.5		A
P_{out}	Output Power			60		W
Eff	Active Average Efficiency	115V/230V Vin		88		%
V_{PK_PK}	Output Ripple and Noise	See Note 2			240	mV
t_{HOLD_UP}	Hold up Time	115V/230V Vin; 2.5A Output	20			ms
t_{RISE}	Rise Time (10%-90%)	Rated Input Voltage			50	ms
t_{DELAY}	Turn on Delay	230V Full load			2	S
	Capacitive load	230V no load and full load	/	/	2500	F
V_{OUT}	The dynamic response	Load in the maximum load of 20%~80% change, change frequency100HZ,1A/us output voltage 21.4V~26.4V				
T_{OUT_OVP}	Over voltage protection	When overvoltage is output, the power supply will be protected, enter the burp mode, and the overvoltage will be eliminated. The power supply can automatically resume working, with a maximum value of 28.8V				

Symbol	Parameter	Conditions	Min	Typ	Max	Units
V_{OVER_SHOOT}	Output Overshoot Voltage	2.5A Output	±10% of typical output voltage			
I_{OUT_OCP}	Output OCP	100V264V Vin	2.75		4.0	A
	Short-circuit Protection		Protection with auto restart			
ENVIRONMENTAL SECTION						
$T_{OPERATION}$	Operating Temperature		-40	25	55 (70°C,65% load)	°C
T_{NON}	Storage Temperature		-40	25	70	°C
	Operating Humidity		5		95	%
	Storage Humidity		5		95	%
	Cooling		Natural convection cooling			
SAFETY SECTION						
	Dielectric strength	1500Vac/50Hz and 1minutes(Disconnection the ignitron)			10	mA
	Insulation Resistance	500V DC	100			MΩ
RELIABILITY SECTION						
	Burn In	220Vac/50Hz and maximum output current @35°C～45 °C ambient	2			Hours
	Drop test	76cm, wood floor, 3 times	No cracks or deformation to meet electrical characteristics			

Note 1: Inrush Current
Maximum inrush current, from power-on (with power on at any point on the AC sinewave) and including, but not limited to, three line cycles, shall be less than 80A after cooling the disconnected power supply long enough to ensure that all components are within the temperature range as specified $T_{OPERATION}$.

Note 2: Output Ripple and Noise
Maximum allowable peak-to-peak ripple and noise (as measured at the load with 110/230VAC Input) on the output channel shall be less than the data as specified V_{PK_PK} within 150 MHz bandwidth and max output power. The output shall be bypassed by 0.1 microfarad ceramic capacitor in parallel with 10 microfarad E-capacitor at the point of test.

4. ON/OFF CYCLING

The unit should not be damaged after 1000 times AC input on/off cycling. For each cycle, on time is 2 sec and off time is 1 sec.

5. DROP

The EPS must remain operational within specifications after being dropped twice on any side without its shipping carton from a height of 75 cm onto concrete floor. The EPS must not have any cracks or other deformations that could incur the risk of an electric shock.

6. VIBRATION

10-50-10Hz sweep at a constant acceleration of amplitude: 0.35mm for 1.5Hour for each of the perpendicular axes X, Y, Z@ No load. No permanent damage may occur during testing.

7. TENSILE STRENGTH OF THE CORD

A static load of 89N shall be applied to the input or output cord, and sustained for 1 minute without disconnection of the wire.

8. CORD FLEXIBILITY TEST

Test Condition	Criterion
Weight:200g, Cycle:1000times, Angle: ±60°,40times/min	Disconnected rate should be less than 30%

9. ENVIRONMENTAL CHARACTERISTICS

The EPS must be fully operational within specification after being subjected to the following humidity shock testing over ten complete cycles.

Items	Condition	Specification
High temperature storage test	The test samples are put into a constant oven of 70℃for 500 hours. After the test, left for 1hour under normal temperature and humidity, then measure.	Appearance should be no abnormal. Electric characteristic shall be satisfied.
Low temperature storage test	The test samples are put into a constant oven of -40℃ for 500 hours. After the test, left for 1hour under normal temperature and humidity, then measure.	Appearance should be no abnormal. Electric characteristic shall be satisfied.
High temperature & high humidity operation test	The test samples are put into a constant oven of -40℃, 90%RH. The rated input voltage shall be applied to the primary circuit and the full load shall be applied to the output. The adapter shall be operated continuously for 500 hours.	Appearance should be no abnormal. Electric characteristic shall be satisfied.
Low temperature operation test	The test samples are put into a constant oven of -40℃. The rated input voltage shall be applied to the primary circuit and the full load shall be applied to the output. The adapter shall be operated continuously for 500 hours.	Appearance should be no abnormal. Electric characteristic shall be satisfied.

Temperature shock test	Temperature -40℃/1hour and +70℃/1hour for 1cycle. Continue 10 cycles. This test is given under the non-operated state. After the test, left for 2hour under normal temperature and humidity, then measure.	Appearance should be no abnormal. Electric characteristic shall be satisfied.

10. HEIGHT ABOVE SEA LEVEL

The power supply can work normally at an altitude of 50000 meters or below.

11. PRODUCT SAFETY REQUIREMENTS

Type	Standard
GB 4943.1	信息技术设备安全第1部分:通用要求
UL/EN/IEC 62368-1	Audio/video, information and communication technology equipment - part 1:Safety requirements

12. EMI/EMS STANDARDS

12.1 EMC Standards

GB/T9254, GB/T17626 EN55032, EN 55035, FCC Part15B

12.2 EN 61000-4-2, electrostatic discharge (ESD) requirement

Discharge characteristic	Test level	Test criteria
Air discharge	±15KV	A
Contact discharge	±8KV	A

12.3 EN 61000-4-3, radiated electromagnetic field susceptibility (RS)

Test level	Test criteria
80-690MHz 3V/m 80-690MHz 10V/m 80%AM	A

12.4 EN 61000-4-4, electric fast transients (burst) immunity requirement

Coupling	Test level	Test criteria
AC-input	4KV	B

12.5 EN 61000-4-5,surge capability requirement:

Surge voltage	Test criteria
Common mode +/-8KV	A
Differential mode +/-6KV	

12.6 EN 61000-4-6, Induced radio frequency fields conducted disturbances immunity requirement：

Test level	Test criteria
3V	A
0.15-80 MHz,80%AM(1KHz)	

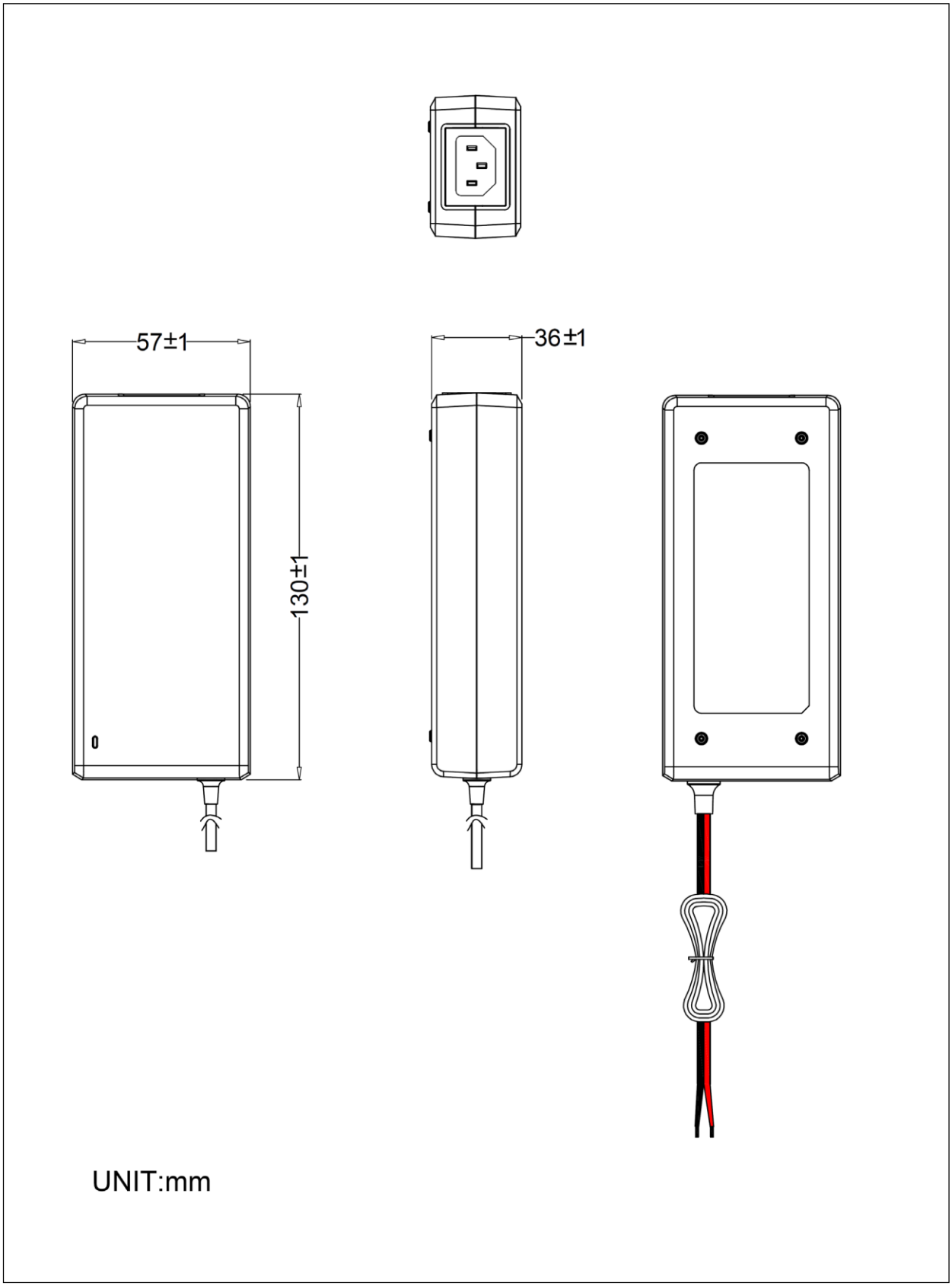
13. MTBF REQUIREMENT

The PSU shall have 500,000 hours MTBF at 25℃ 230 Vac/50Hz@ full-load .

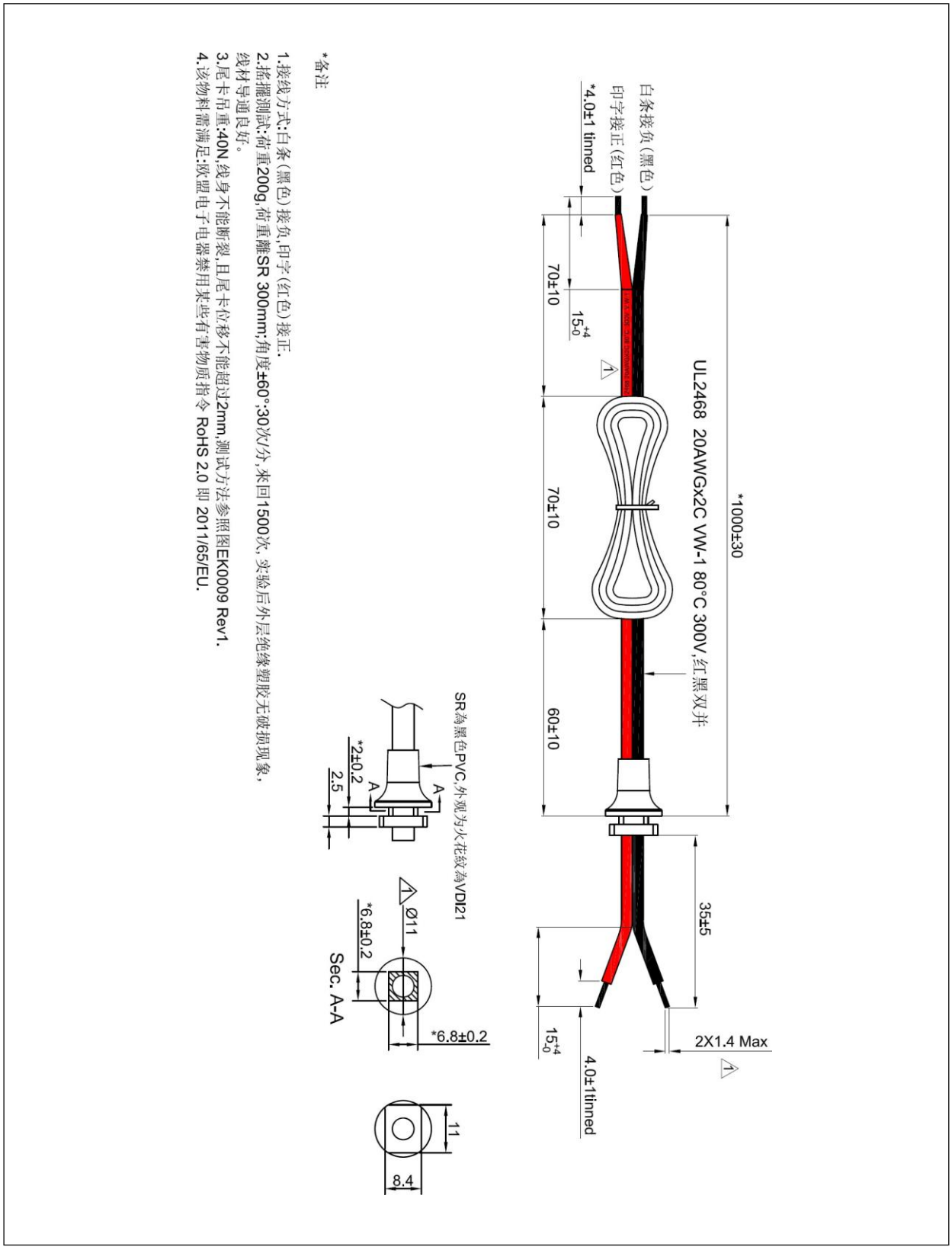
14. LIFETIME

Life: 6years min. @90V~264Vac,normal load,35℃

15. PHYSICAL DIMENSIONS



16. DC CORD DRAWING

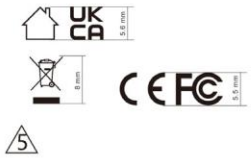


*备注

1.接线方式:白条(黑色)接负,印字(红色)接正.
2.摇摆测試:荷重200g,荷重離SR 300mm;角度±60°;30次/分,來回1500次, 实验后外层绝缘塑胶无破损现象,线材导通良好。
3.尾卡吊重:40N,线身不能断裂,且尾卡位移不能超过2mm,测试方法参照图EK0009 Rev1.
4.该物料需满足:欧盟电子电器禁用某些有害物质指令 RoHS 2.0 即 2011/65/EU.

17. RADIUM SCULPTURE

注：安规要求以下安规符号镭雕成品必须按以下要求
CE 高度 ≥5mm
垃圾桶 高度 ≥7mm



位置尺寸公差：±0.5
单位：mm

说明:

1.各认证、环保等图案要整齐，不可有变形等现象

2.条码格式：CODE 128，字体：Arial。条码需易读取，字体清晰可见。

3.镭雕需清晰完整，不可错雕，漏雕。

4.镭雕条码清晰可读。

客户料号	条码前段固定内容
1.2.19.07.10297	7102970AC

7102970AC A08A011234

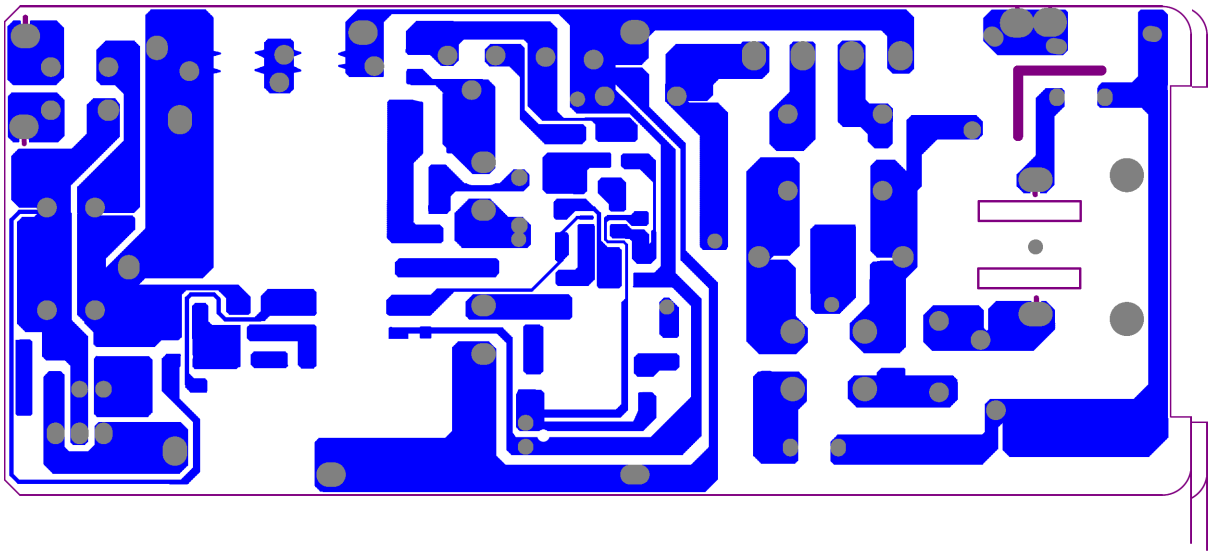
- 流水号(4位):0001-YYYY(32进制：0,1,2,3,4,5,6,7,8,9,A,B,C,D,E,F,G,H,J,K,L,M,N,P,R,S,T,U,V,W,X,Y. 注意，A-Y,去除I,O,Q)每周重置。
- 生产线代码(1位):1，2, 3...表示生产线。
- 版本编号（2位）：与规格书保持一致，如初始版本A0，变更后的版本A1，B0，B1等。
- 生产日期（3位）：A表示年份,如2017年用A表示，2018年用B表示....按照26个大写英文字母依序排列;08表示周,如18表示第18周。
- 条码前段固定内容

Note: due to the different color of shell material and the individuals of the our laser engraving machine, the actual production laser carving effect and the sample may have subtle differences, but to ensure that the text clear.

备注：因外壳材料色差以及我司镭雕机个体不同，实际生产镭雕效果与样品可能会产生细微的差异，但保证文字清晰

18. PCB

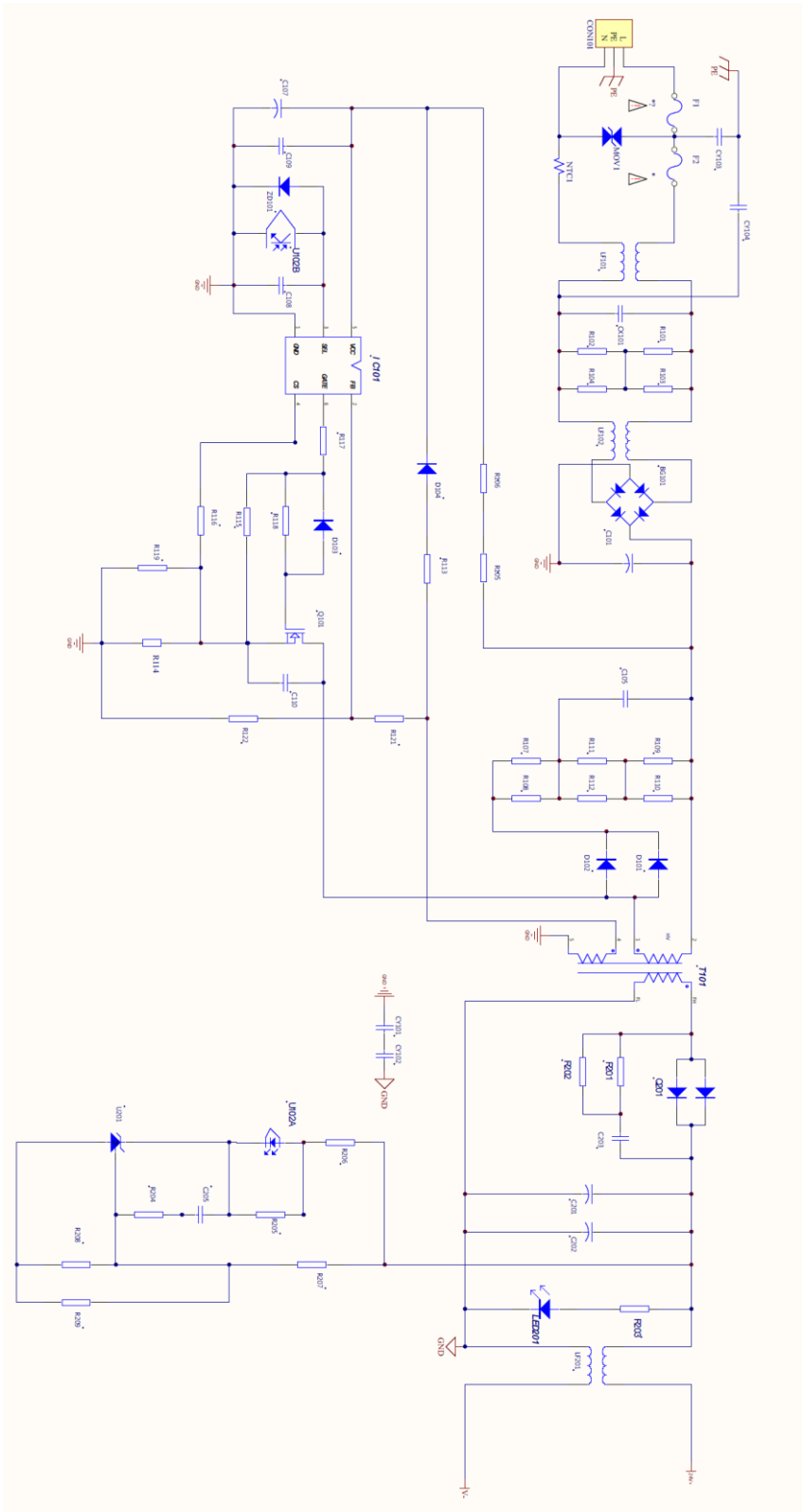
Top layer/零件面丝印图



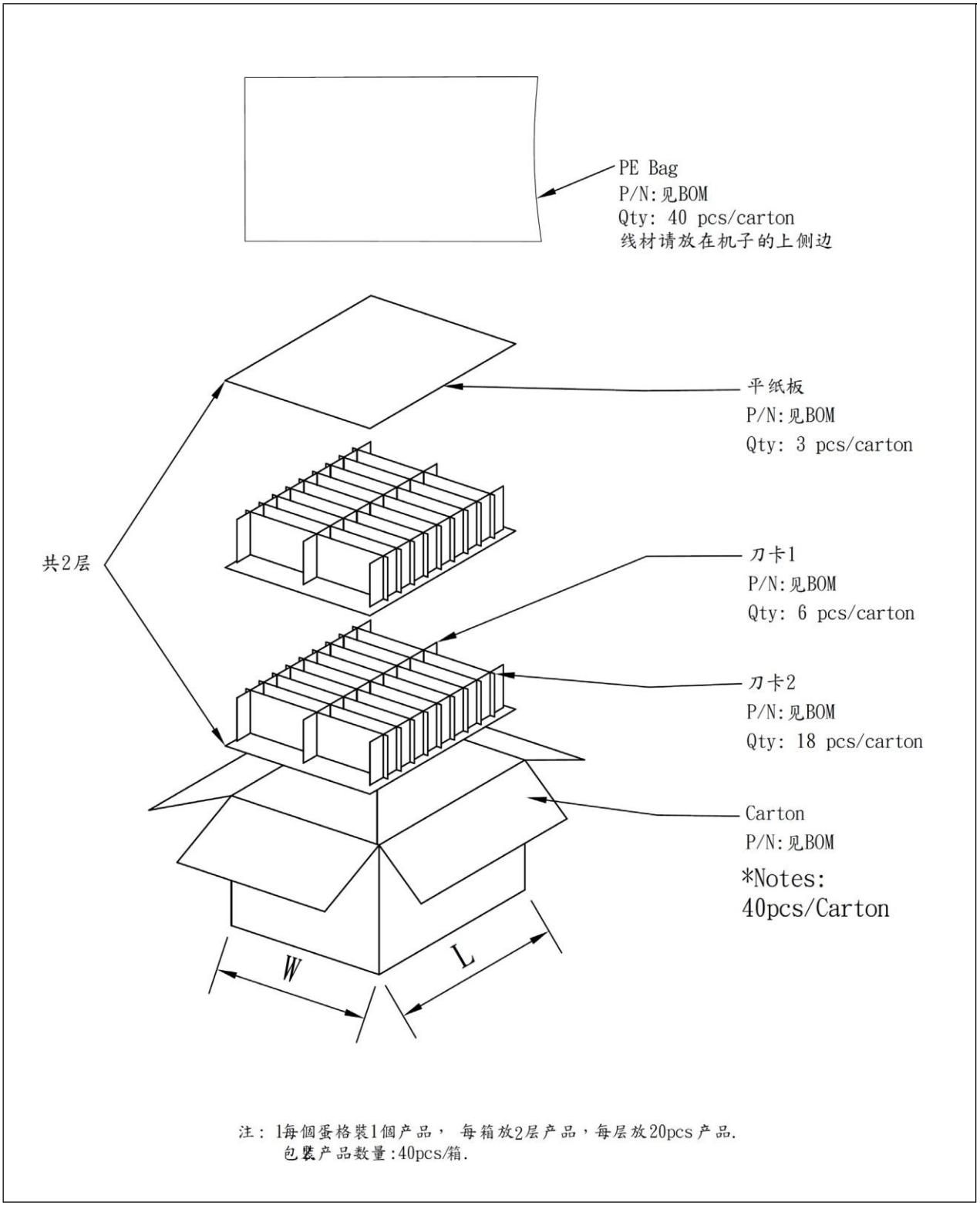
Bottom layer/底层走线图

S
H

19. SCH



21. PACKING


PE Bag
P/N:见BOM
Qty: 40 pcs/carton
线材请放在机子的上侧边
平纸板
P/N:见BOM
Qty: 3 pcs/carton
共2层
刀卡1
P/N:见BOM
Qty: 6 pcs/carton
刀卡2
P/N:见BOM
Qty: 18 pcs/carton
Carton
P/N:见BOM
*Notes:
40pcs/Carton
W
L
注：1每個蛋格裝1個产品， 每箱放2层产品，每层放20pcs产品.
包裝产品数量:40pcs/箱.

			SHEET 15 0F 15