

SPECIFICATION FOR APPROVAL  
AC/DC ADAPTOR

CUSTOMER SPEC: INPUT: 100-240V AC 50/60Hz OUTPUT: 24.0V DC 5.0A

CUSTOMER DWG./PART NO. \_\_\_\_\_

KTEC PART NO. KSA-120W-240500M3 (PAHS 6P NP REACH ROHS PROP65)

SAMPLE NO: S99306 REV.: B ISSUE DATE: 2024-08-22

PRODUCT NO: KS240365

Unit Color: Black  White

APPROVED SIGNATURES/客户确认		
核准/APPROVED BY	审核/CHECKED BY	检测/TESTED BY

Manufacturer/制造商			
业务/SALES	品管/QE	核准/APPROVED BY	制样/MADE BY
FRANK	徐海鑫	贺洪明	冯连连

KTEC GLOBAL CO., LTD.  
KTEC 冠德国际科技股份有限公司

深圳研发中心地址: 中国广东省深圳市光明新区马田街道办合水口社区第四工业区中鹏程大厦四楼  
ADD: 4F Zhong PengCheng Building, No.4 Industrial Park, He shuikou Community, Matian street,  
Guangming New Zone, Shenzhen City, guangdong province, China

台北总部地址: 235024 新北市中和区中板路 23 号 9 楼  
ADD: 9F., No. 23, Zhongban Rd., Zhonghe Dist., New Taipei City 235024

柬埔寨制造据点: 柬埔寨茶胶省当谷县本布乡站波村(三号公路 66 公里处)  
ADD: Phum Chormpul, Khum P'pel, Srok Tramkork, Takeo Province, Kingdom  
of Cambodia(66KM,National Broad Road)

TEL:86-755-27160388 FAX:86-755-27160145  
[Http://www.twktec.com](http://www.twktec.com)





KTEC 冠德國際科技  
KTEC GLOBAL CO., LTD.

**Switching power supply specification(class A)**

<b>KTEC P/N:</b>	<b>PRODUCT NO.:</b>	<b>CUSTOMER P/N:</b>
KSA-120W-240500M3	KS240365	

<b>1 GENERAL</b> .....	<b>4</b>
1.1 Description.....	4
<b>2 INPUT REQUIREMENTS</b> .....	<b>4</b>
2.1 Input Conditions.....	4
2.2 AC Inrush Current.....	4
<b>3 OUTPUT REQUIREMENTS</b> .....	<b>4</b>
<b>4 MECHANICAL</b> .....	<b>5</b>
4.1 Enclosure And Layout.....	5
4.2 Input and Output Configuration .....	5
<b>5 REGULATORY COMPLIANCE</b> .....	<b>6</b>
5.1 EMC Specifications.....	6
5.1.1 Radiated and Conducted Emission.....	6
5.2 Immunity .....	6
5.2.1 Electrostatic Discharge Immunity.....	6
5.2.2 Radiated Field Immunity.....	6
5.2.3 Fast Transient Immunity.....	6
5.2.4 Surge Immunity .....	6
<b>6 REGULATORY COMPLIANCE</b> .....	<b>7</b>
6.1 Safety Requirements and Certification.....	7
6.1.1 Additional Safety Requirements.....	7
<b>7 ENVIRONMENTAL REQUIREMENTS</b> .....	<b>7</b>
7.1 Temperature.....	7
7.2 Humidity .....	7
<b>8 APPEARANCE DRAWING: (UNIT: MM)</b> .....	<b>8</b>
<b>9 NAME PLATE:</b> .....	<b>9</b>
<b>10 DIMENSION OF OUTPUT PLUG &amp; DC CORD (UNIT: MM)</b> .....	<b>10</b>
<b>11 PACKING (UNIT: MM)</b> .....	<b>11</b>

<b>TITLE:</b>		<b>REVISION: B</b>	<b>DRAWING NO.:</b>	
<b>PREPARED : GUO</b>	<b>CHECKED: 吴尧 吴清雄</b>	<b>APPROVED : 贺洪明</b>	<b>DATE: 2024-08-22</b>	<b>PAGE: 3 OF 11</b>



**Switching power supply specification(class A)**

<b>KTEC P/N:</b>	<b>PRODUCT NO.:</b>	<b>CUSTOMER P/N:</b>
<b>KSA-120W-240500M3</b>	<b>KS240365</b>	

**1 GENERAL**

1.1 Description

This specification defines the performance characteristics for a class I adapter, single-phase 120.0 watts. Single output level power supply.

- Simple design philosophy.
- Reliability level of 50K hours MTBF @ 25°C(rated input voltage and using the Telcordia SR-332 issue 3 method).
- DC output voltage must be Safe Extra Low Voltage (SELV) & Limited Power as defined by IEC62368-1.
- Cooling: natural convection.

**2 INPUT REQUIREMENTS**

2.1 Input Conditions

The supply shall operate over the voltage ranges as follows:

Rated input voltage	100-240Vac
Operating range	90-264Vac
Rated input frequency	50/60Hz +/- 3Hz
Rated input current	1.6A Max.
Power consumption (no-loading)	0.21W Max. at 230Vac
Primary current protection	An adequate internal fuse on the AC input line is provide.
Configuration	<u>3</u> Conductor

2.2 AC Inrush Current

No damage shall be occurred and the input fuse shall not be blown up nominal input voltage at 230Vac, full load, 25°C cold start.

**3 OUTPUT REQUIREMENTS**

3.1	Nominal DC output voltage	+24.0V
3.2	Minimum load current	0.05A
3.3	Rating load current	5.0A
3.4	Peak load current	/
3.5	Rating output power	120.0W
3.6	Line regulation	The line regulation is less than <u>±5%</u> while measuring at rated load and +/-10% of input voltage changing.
3.7	Load regulation	The load regulation for <u>+24.0V</u> is less than <u>+/-5%</u> , at measured output load from 10% to 100% rated load.



KTEC 冠德國際科技  
KTEC GLOBAL CO., LTD.

**Switching power supply specification(class A)**

<b>KTEC P/N:</b>	<b>PRODUCT NO.:</b>	<b>CUSTOMER P/N:</b>
<b>KSA-120W-240500M3</b>	<b>KS240365</b>	

3.8	Peak load regulation	/
3.9	Ripple and noise	300mVp-p maximum
		Add 0.1Uf/50V ceramic capacitor and 10UF/50V aluminum electrolytic capacitor across the output terminal. Measured with 20MHz Bandwidth Oscilloscope.
3.10	Average efficiency	<u>88%</u> minimum
		115V/60Hz and 230V/50Hz, output current from 100%, 75%, 50%, 25%.
3.11	Turn on delay time	<u>3000ms</u> max at nominal input AC voltage and full load
3.12	Rise time	The supply shall have a start-up rise time of less than <u>40ms</u> to rise to within regulation limits for all DC outputs.
3.13	Hold up time	<u>8 ms</u> minimum at nominal input 100VAC minimum voltage and full load.
3.14	Output over-shoot	Less than <u>10%</u> of nominal voltage value
3.15	LED indication function	Green LED
3.16	Protection function	
	Over-voltage protection	150% maximum at latch mode.
	Over current protection	170% maximum, output shut down, auto recovery.
	Short-circuit protection	Output shut down, auto recovery.

**4 MECHANICAL**

4.1 Enclosure and Layout

Plastic case: UL94V-0  
 Weight :  /g (Max.)  
 Dimensions: 168\*68.5\*35.5mm  
 Colour : WHITE(WT-07)

4.2 Input and Output Configuration

Input pin: Mini 3PIN  
 Output connector : DC plug type: 5.5\*2.5\*10mm  
 Polarity: Center"+"  
 Cable: 1.5M VW-1 80°C 300V 2464 16AWG 5.5Q WT-07(add core)  
(PAHS 6P NP REACH ROHS PROP65)

<b>TITLE:</b>		<b>REVISION: B</b>	<b>DRAWING NO.:</b>	
<b>PREPARED : GUO</b>	<b>CHECKED: 吴尧 吴清雄</b>	<b>APPROVED : 贺洪明</b>	<b>DATE: 2024-08-22</b>	<b>PAGE: 5 OF 11</b>



**Switching power supply specification(class A)**

<b>KTEC P/N:</b>	<b>PRODUCT NO.:</b>	<b>CUSTOMER P/N:</b>
<b>KSA-120W-240500M3</b>	<b>KS240365</b>	

**5 REGULATORY COMPLIANCE**

5.1 EMC Specifications

The external power supply must meet all specification in this section. It is recommended that the external power supply be tested with the customer’s equipment in order to get the best EMC solution.

5.1.1 Radiated and Conducted Emission

FCC part 15: Class B for radiated and conducted emissions.  
EN55032, Class B for radiated and conducted emissions.

5.2 Immunity

5.2.1 Electrostatic Discharge Immunity

EN 55035, EN 61000-4-2

- Air Discharge: ±8kv
- Contact Discharge: ±4kv
- Performance Criteria B

Electrostatic-discharge test by contact or air should be conducted with Static-discharge tester, energy storage capacitance of 150PF, and discharge resistance of 330Ω, 8kv air discharge, 4kv contact discharge.

5.2.2 Radiated Field Immunity

EN 55035, EN 61000-4-3

- Frequency Range: 80-1000MHz,still need test singly 1800MHz, 26000MHz,3500MHz,5000MHz
- Field Strength: 3 V/m with 80% amplitude modulation of 1kHz
- Performance Criteria A

Radio-frequency electromagnetic field susceptibility test, RS 80-1000MHz, 3V/m, 80%AM(1KHz).

5.2.3 Fast Transient Immunity

EN 55035, EN 61000-4-4

- Power line: 1kv
- Signal line: 0.5kv
- Performance Criteria B

5.2.4 Surge Immunity

EN 55035, EN 61000-4-5

- Line to line: 1kv
- Line to earth: 2kv
- +90° / -270°

Lightning surge voltage shall be applied in differential and common mode to AC input lines and cross primary AC input and secondary GND.

<b>TITLE:</b>		<b>REVISION: B</b>	<b>DRAWING NO.:</b>	
<b>PREPARED : GUO</b>	<b>CHECKED: 吴尧 吴清雄</b>	<b>APPROVED : 贺洪明</b>	<b>DATE: 2024-08-22</b>	<b>PAGE: 6 OF 11</b>



KTEC 冠德國際科技  
KTEC GLOBAL CO., LTD.

**Switching power supply specification(class A)**

<b>KTEC P/N:</b>	<b>PRODUCT NO.:</b>	<b>CUSTOMER P/N:</b>
<b>KSA-120W-240500M3</b>	<b>KS240365</b>	

**6 REGULATORY COMPLIANCE**

6.1 Safety Requirements and Certification

The power supply shall comply with the following international regulatory standards:

for short	Country	Certified Status	Standard
UL	USA	/	UL 62368-1
CUL	Canada	/	CSA C22.2 NO.62368-1

6.1.1 Additional Safety Requirements

- ⊙ Dielectric Withstand Voltage, Primary(input AC short)-to-Secondary(output DC short): 1500Vac, 5m A, 1 minute.
- ⊙ Insulation Resistance, Input to output: 10MΩ(MIN.) at 500VDC.
- ⊙ Reinforced insulation system, Primary-to-Ground and Primary-to-Secondary.
- ⊙ The leakage current shall not exceed 0.5mA.

**7 ENVIRONMENTAL REQUIREMENTS**

7.1 Temperature

- ⊙ Operating: 0 °C +40 °C
- ⊙ Non-Operating: -20 °C +80 °C

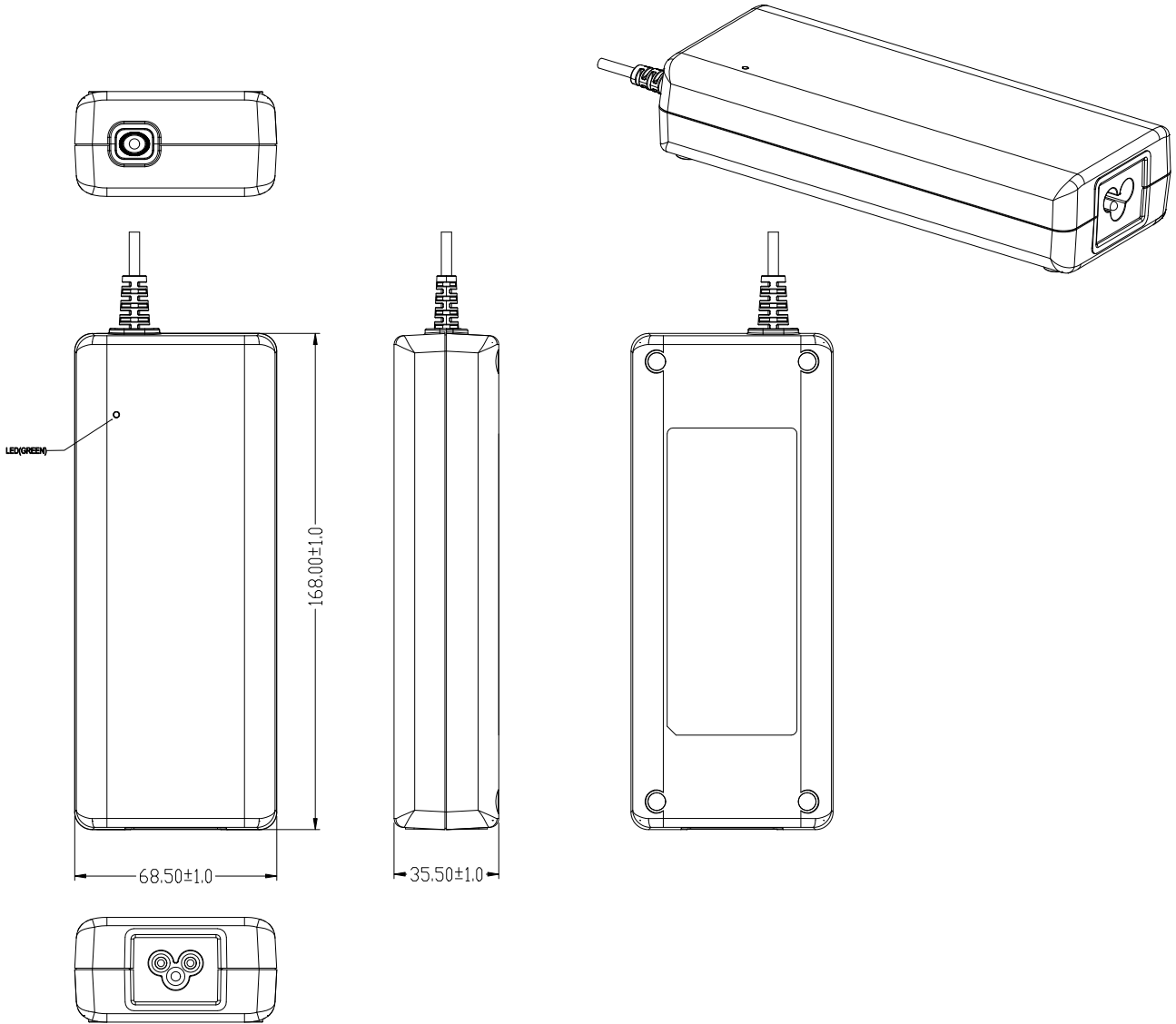
7.2 Humidity

- ⊙ Operating: 10%~90% (Non Condensing)
- ⊙ Non-Operating: 10%~90% (Non Condensing)

<b>TITLE:</b>		<b>REVISION: B</b>	<b>DRAWING NO.:</b>	
<b>PREPARED : GUO</b>	<b>CHECKED: 吴尧 吴清雄</b>	<b>APPROVED : 贺洪明</b>	<b>DATE: 2024-08-22</b>	<b>PAGE: 7 OF 11</b>

KTEC P/N:	PRODUCT NO.:	CUSTOMER P/N:
KSA-120W-240500M3	KS240365	

8 APPEARANCE DRAWING: (UNIT: MM)



- NOTE: 1. Case cover & chassis material:  
PC WT-07 (NO KTEC)  
2. AC PIN MATERIAL: BRASS (NI PLATED)  
3. PAHS 6P NP REACH ROHS PROP65  
4. Satin finish  
5. Top mold: MSS023054; Bottom mold:MSS023055

TITLE:		REVISION: B	DRAWING NO.:	
PREPARED : GUO	CHECKED: 吴尧 吴清雄	APPROVED : 贺洪明	DATE: 2024-08-22	PAGE: 8 OF 11





KTEC 冠德國際科技  
KTEC GLOBAL CO., LTD.

Switching power supply specification(class A)

KTEC P/N:

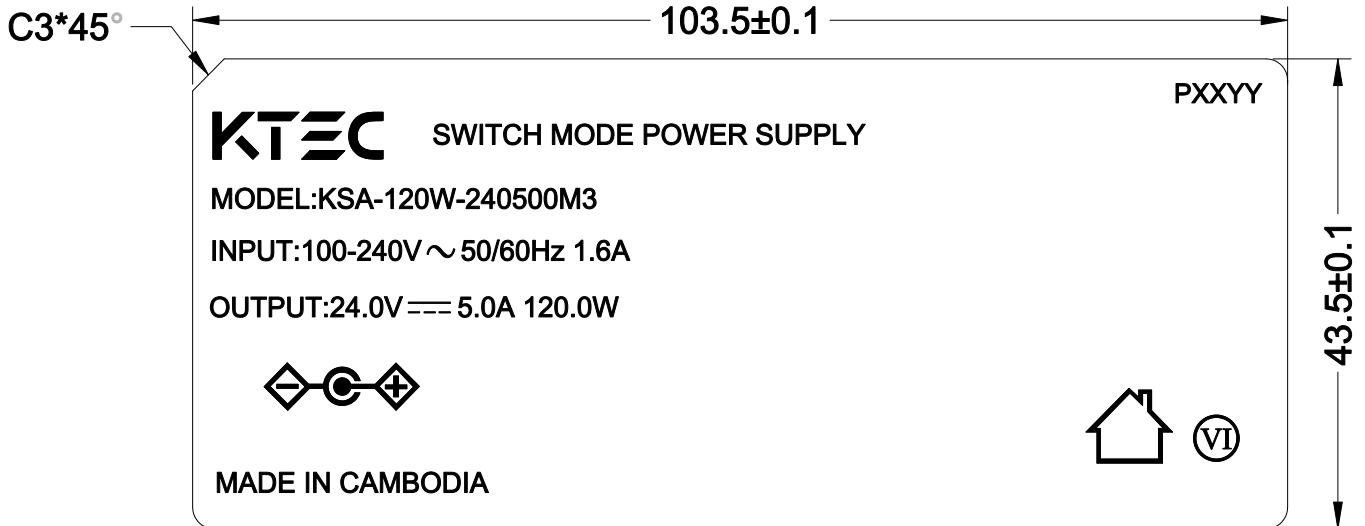
PRODUCT NO.:

CUSTOMER P/N:

KSA-120W-240500M3

KS240365

9 NAME PLATE:



Note:  1. Laser 鐳射

DATE CODE (PXXYY: P=PAHS,6P,NP, XX=WEEK, YY=YEAR)按实际生产日期

TITLE:

REVISION: B

DRAWING NO.:

PREPARED : GUO

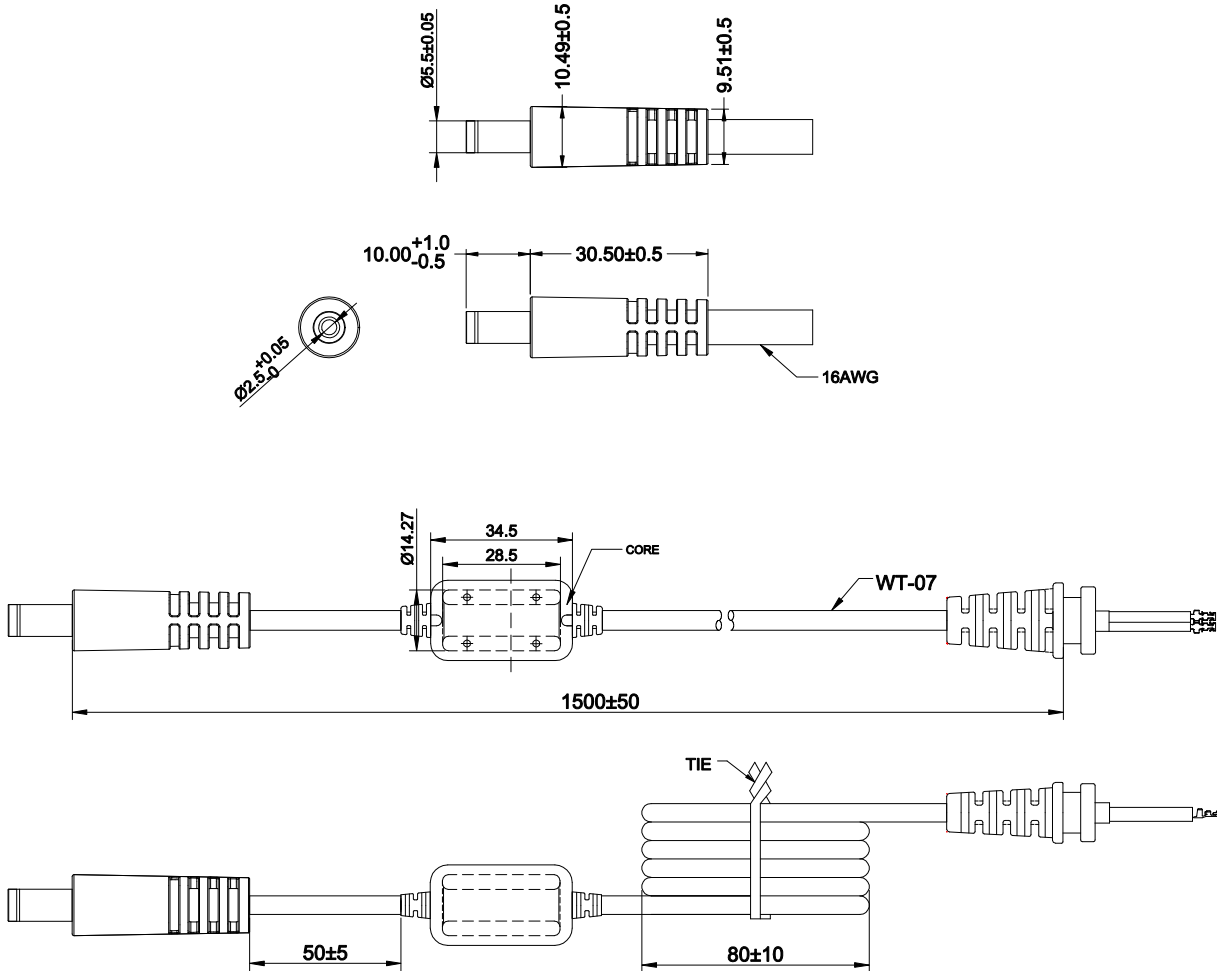
CHECKED: 吴尧 吴清雄

APPROVED : 贺洪明

DATE: 2024-08-22

PAGE: 9 OF 11

10 DIMENSION OF OUTPUT PLUG & DC CORD (UNIT: MM)



NOTE: (unit:mm)

- 1).WIRE TYPE:VW-1 2464 80°C 300V L=1500mm Ø5.5 16AWG WT-07(ADD CORE)
- 2).CORE:Ø14.3X7.0X28.5mm
- 2).THE POLARITY:
- 3).PAHS 6P NP REACH ROHS PROP65
- 4).DC PLUG MOLD: ML00480 SR MOLD: ML00513

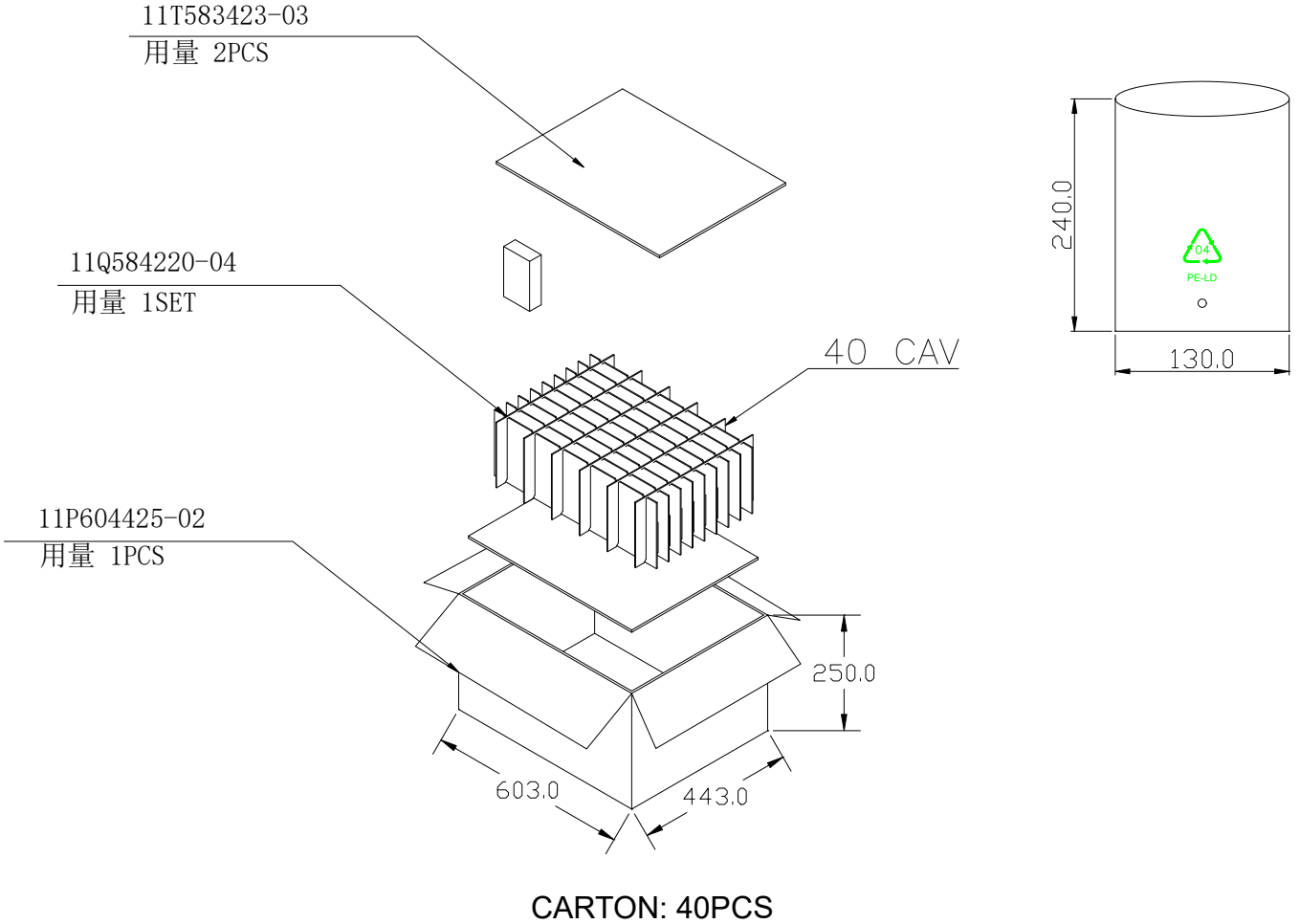


KTEC 冠德國際科技  
KTEC GLOBAL CO., LTD.

**Switching power supply specification(class A)**

<b>KTEC P/N:</b>	<b>PRODUCT NO.:</b>	<b>CUSTOMER P/N:</b>
<b>KSA-120W-240500M3</b>	<b>KS240365</b>	

**11 PACKING (UNIT: MM)**



<b>TITLE:</b>		<b>REVISION: B</b>		<b>DRAWING NO.:</b>	
<b>PREPARED : GUO</b>	<b>CHECKED: 吴尧 吴清雄</b>	<b>APPROVED : 贺洪明</b>	<b>DATE: 2024-08-22</b>	<b>PAGE: 11 OF 11</b>	