

SPECIFICATION FOR APPROVAL  
BATTERY CHARGER

CUSTOMER SPEC: INPUT: 100-240V AC 50/60Hz    OUTPUT: 24VDC 0.6A

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

KTEC PART NO.: KSD-18W-240060HU (PAHS+6P+NP+REACH+ROHS+PRO65)

SAMPLE NO.: S99399      REV.: A ISSUE      DATE: 2024-05-30

PRODUCT NO.: KS240440

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
TAI	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 Chornpul, 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 B)**

**KTEC P/N:**

**PRODUCT NO:**

**CUSTOMER P/N:**

**KSD-18W-240060HU**

**KS240440**

**Project Modify List**

Item	Content	Rev.	Date	Prepared By	Checked By
1	First REV.	A	2024-05-30	Yu guojuan	Yang chuntang



KTEC 冠德國際科技  
KTEC GLOBAL CO., LTD.

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

<b>KTEC P/N:</b>	<b>PRODUCT NO:</b>	<b>CUSTOMER P/N:</b>
<b>KSD-18W-240060HU</b>	<b>KS240440</b>	

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

<b>TITLE:</b>		<b>REVISION:A</b>	<b>DRAWING NO.:</b>	
<b>PREPARED:</b> 廖小艳	<b>CHECKED:</b> 杨淳棠 林英青	<b>APPROVED:</b> 贺洪明	<b>DATE:</b> 2024-05-30	<b>PAGE:</b> 3 OF 11



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

KTEC P/N:	PRODUCT NO:	CUSTOMER P/N:
KSD-18W-240060HU	KS240440	

**1 GENERAL**

**1.1 Description**

This specification defines the performance characteristics for a class II adapter, single-phase 14.4watts. 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 UL1310.
- 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	0.5A max.
Power consumption (no-loading)	0.1W max. @ 230V AC
Primary current protection	An adequate internal fuse on the AC input line is provided.
Configuration	<u>2</u> Conductor

**2.2 AC Inrush Current**

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

**3 OUTPUT REQUIREMENTS**

3.1	output voltage	+24.0V ±5%
3.2	Minimum load current	0.00A
3.3	Rating load current	0.6A
3.4	Rating output power	14.4W
3.5	Ripple and noise	200 mVp-p
		Add 0.1uF/50V ceramic capacitor and 10uF/50V aluminum electrolytic capacitor across the output terminal. Measured with 20MHz Bandwidth Oscilloscope.
3.6	Average efficiency	83.92% minimum,
		115V/60Hz and 230V/50Hz, output current from 100%, 75%, 50%, 25%.
3.7	Turn on delay time	4000 ms max at nominal input 115V AC voltage and full load.

TITLE:		REVISION:A	DRAWING NO.:	
PREPARED: 廖小艳	CHECKED: 杨淳棠 林英青	APPROVED: 贺洪明	DATE: 2024-05-30	PAGE: 4 OF 11



KTEC 冠德國際科技  
KTEC GLOBAL CO., LTD.

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

KTEC P/N:

PRODUCT NO:

CUSTOMER P/N:

**KSD-18W-240060HU**

**KS240440**

3.8	Rise time	The supply shall have a start-up rise time of less than <u>50 ms</u> to rise to within regulation limits for all DC outputs.
3.9	Hold up time	<u>8 ms</u> minimum at nominal input 100V AC minimum voltage and full load.
3.10	Output over-shoot	Less than <u>10%</u> of nominal voltage value.
3.11	LED indication function	/
3.12	Protection function	
	Short-circuit protection	The adapter shall not be damaged by short the DC output to Ground. The adapter shall resume normal operation when a short circuited fault condition is removed.
	Over current protection	The output shall be protected against the over current conditions.
	Over current protection	The power supply will be protection when output power at <u>110-200%</u> of all rated DC output

**4 MECHANICAL**

**4.1 Enclosure and Layout**

Plastic case: UL94V-0  
 Weight: /g (max)  
 Dimensions: 73.3\*41\*29mm  
 Color: WHTIE(WT-07)

**4.2 Input and Output Configuration**

Input pin: UL Pin  
 Output connector: DC plug type: 5.5\*2.1\*10mm  
 Polarity: Center “+”  
 Cable: 1.83M VW-1 80°C 300V 2464 24AWG 3.0Q WHITE(WT-07)  
(PAHS+6P+NP+REACH+ROHS+PRO65)

TITLE:		REVISION:A	DRAWING NO.:	
PREPARED: 廖小艳	CHECKED: 杨淳棠 林英青	APPROVED: 贺洪明	DATE: 2024-05-30	PAGE: 5 OF 11



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

**KTEC P/N:**

**PRODUCT NO:**

**CUSTOMER P/N:**

**KSD-18W-240060HU**

**KS240440**

**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**

The power supply shall comply to:  
FCC part 15: Class B for radiated and conducted emissions.  
EN55014, Class B for radiated and conducted emissions.

**5.2 Immunity**

**5.2.1 Electrostatic Discharge Immunity**

EN 55014, EN 61000-4-2  
- Air Discharge: ±15kv  
- Contact Discharge: ±8kv  
- 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, 15kv air discharge, 8kv contact discharge.

**5.2.2 Radiated Field Immunity**

EN 55014, EN 61000-4-3  
- Frequency Range: 80-1000MHz  
- 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 55014, EN 61000-4-4  
- Power line: 1kv  
- Signal line: 0.5kv  
- Performance Criteria B

**5.2.4 Surge Immunity**

EN 55014, EN 61000-4-5  
- 1.2/50 μs Open Circuit voltage  
- 8/20 μs Short Circuit current  
- Power line: 1kv  
- Line to earth: 2kv  
Lightning surge voltage shall be applied in differential and common mode to AC input lines and cross primary AC input and secondary GND.

**TITLE:**

**REVISION:A**

**DRAWING NO.:**

**PREPARED:** 廖小艳

**CHECKED:** 杨淳棠 林英青

**APPROVED:** 贺洪明

**DATE:** 2024-05-30

**PAGE:** 6 OF 11



KTEC 冠德國際科技  
KTEC GLOBAL CO., LTD.

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

KTEC P/N:

PRODUCT NO:

CUSTOMER P/N:

KSD-18W-240060HU

KS240440

**5.3 Safety Requirements and Certification**

**5.3.1 Regulatory Standard**

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

for short	Country	Certified Status	Standard
UL/CUL	USA	Meet	UL1310

**5.3.2 Additional Safety Requirements**

- ⊙ Dielectric Withstand Voltage, Primary(input AC short)-to-Secondary(output DC short): 3600 Vac, 10m A, 1minute.
- ⊙ Insulation Resistance, Input to output: 10M Ω (MIN.) at 500 VDC.
- ⊙ Reinforced insulation system, Primary-to-Ground and Primary-to-Secondary.
- ⊙ The leakage current shall not exceed 0.25mA.

**6 ENVIRONMENTAL REQUIREMENTS**

**6.1 Temperature**

- ⊙ Operating: 0 °C +45 °C
- ⊙ Non-Operating: -20 °C +70 °C

**6.2 Humidity**

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

TITLE:

REVISION:A

DRAWING NO.:

PREPARED: 廖小艳

CHECKED: 杨淳棠 林英青

APPROVED: 贺洪明

DATE: 2024-05-30

PAGE: 7 OF 11

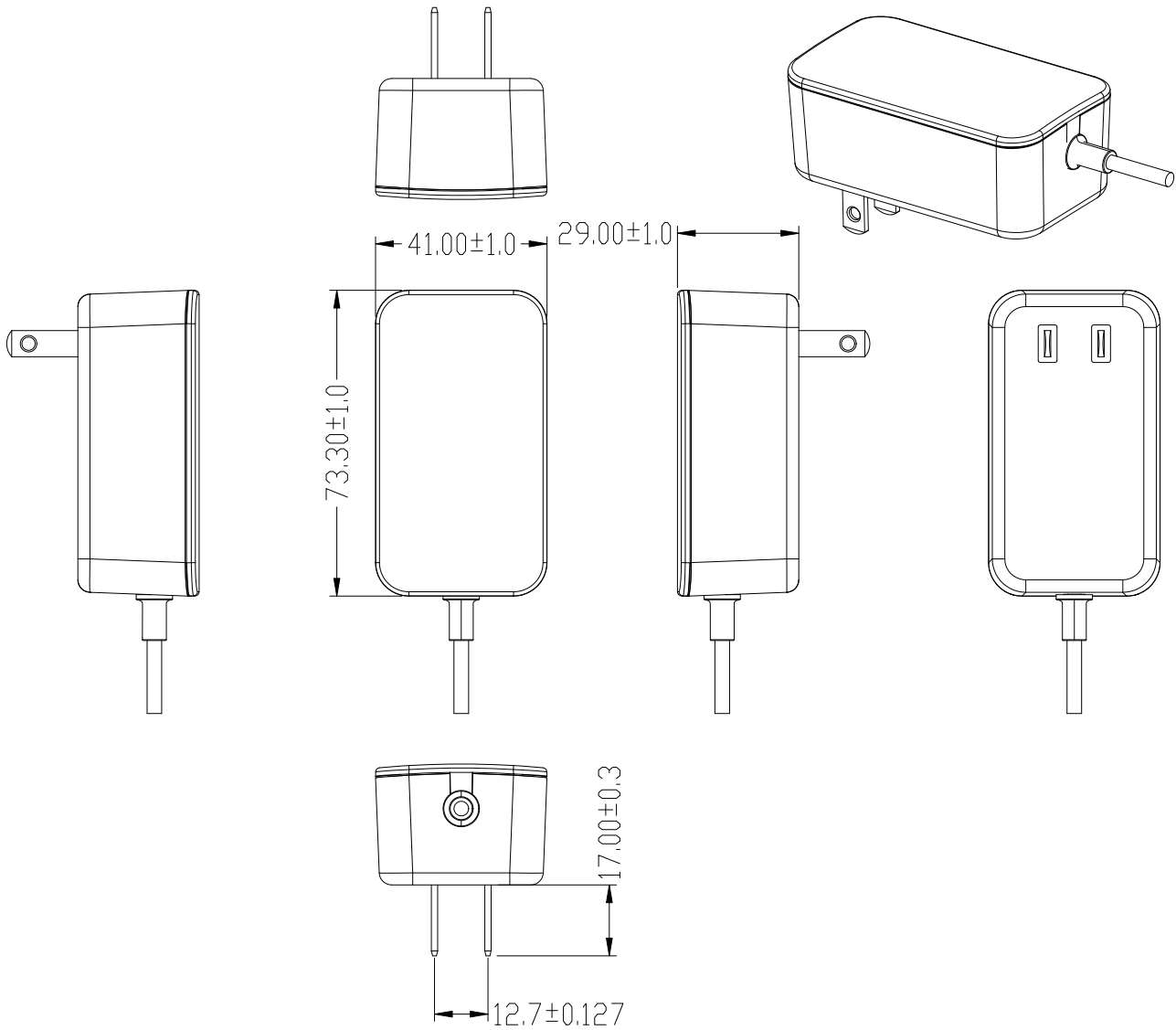


KTEC 冠德國際科技  
KTEC GLOBAL CO., LTD.

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

KTEC P/N:	PRODUCT NO:	CUSTOMER P/N:
KSD-18W-240060HU	KS240440	

**7 APPEARANCE DRAWING: (Unit: mm)**



- NOTE: 1. Case cover & chassis material:  
PC WHITE(WT-07) (NO KTEC)
2. AC PIN MATERIAL: BRASS (NI PLATED)
3. PAHS+6P+NP+REACH+ROHS+PRO65
4. Satin Finish
5. Top Model: MSS023035      Bottom Model: MSS023037

TITLE:		REVISION:A	DRAWING NO.:	
PREPARED: 廖小艳	CHECKED: 杨淳棠 林英青	APPROVED: 贺洪明	DATE: 2024-05-30	PAGE: 8 OF 11



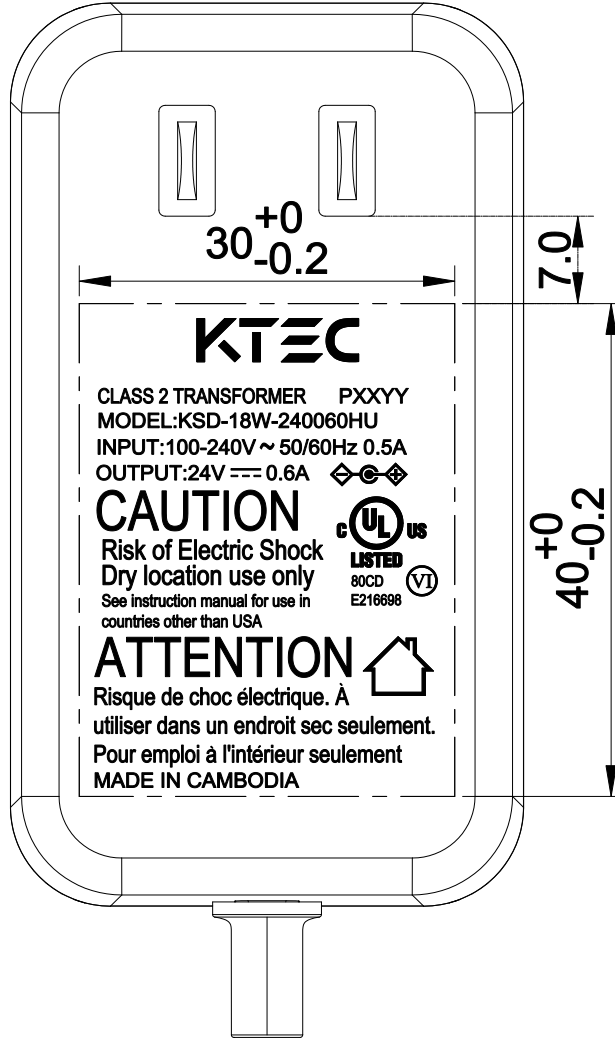


KTEC 冠德國際科技  
KTEC GLOBAL CO., LTD.

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

KTEC P/N:	PRODUCT NO:	CUSTOMER P/N:
KSD-18W-240060HU	KS240440	

**8 NAME PLATE:**

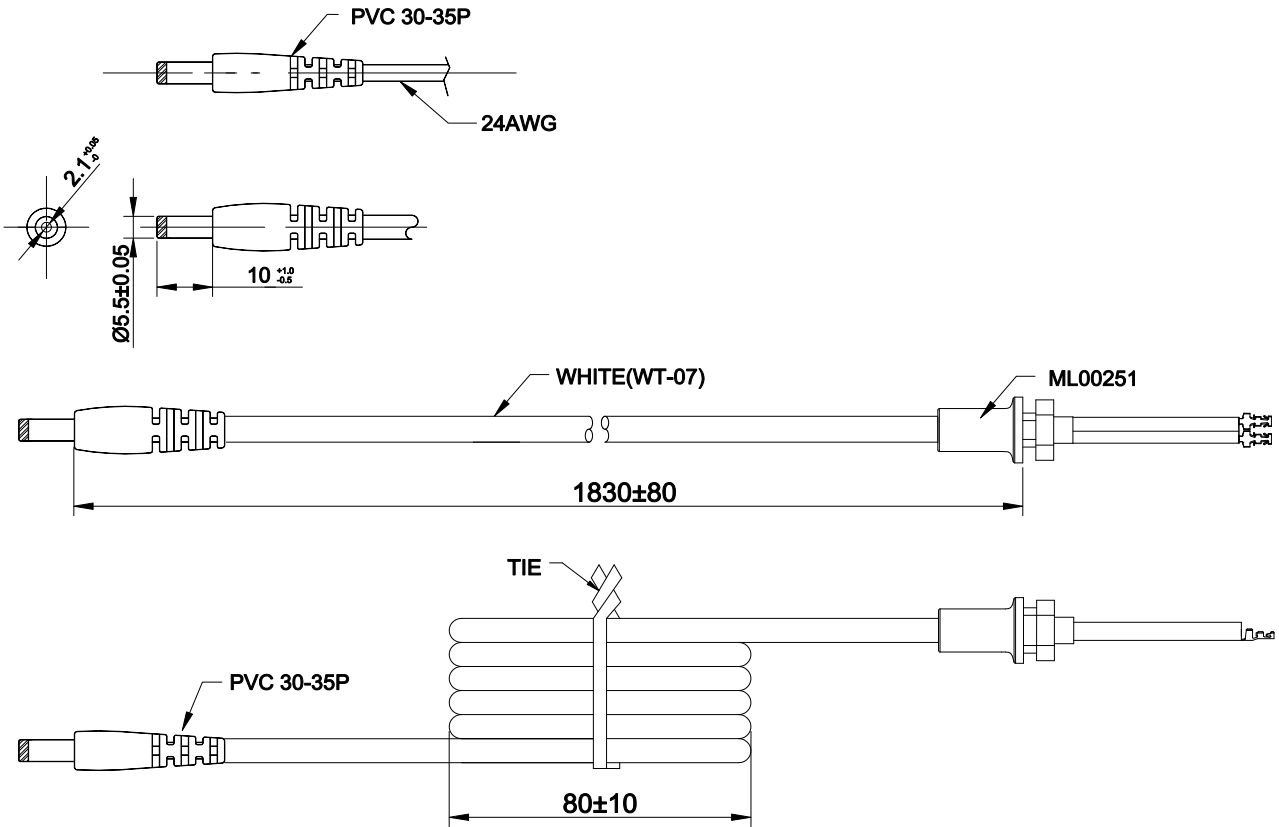


Note: 1.  Laser (鐳射)

PXXYY(P=PAHS+6P+NP XX=WEEK YY=YEAR),按实际生产日期制作

TITLE:		REVISION:A	DRAWING NO.:	
PREPARED: 廖小艳	CHECKED: 杨淳棠 林英青	APPROVED: 贺洪明	DATE: 2024-05-30	PAGE: 9 OF 11

9 DIMENSION OF OUTPUT PLUG & DC CORD (Unit: mm)



NOTE: (unit:mm)

- 1). WIRE TYPE: VW-1 2464 3.0Ø 80°C 24AWG 300V L=1830mm WHITE(WT-07)
- 2). THE POLARITY:
- 3). PAHS+6P+NP+REACH+ROHS+PRO65

TITLE:

REVISION:A

DRAWING NO.:

PREPARED: 廖小艳

CHECKED: 杨淳棠 林英青

APPROVED: 贺洪明

DATE: 2024-05-30

PAGE: 10 OF 11



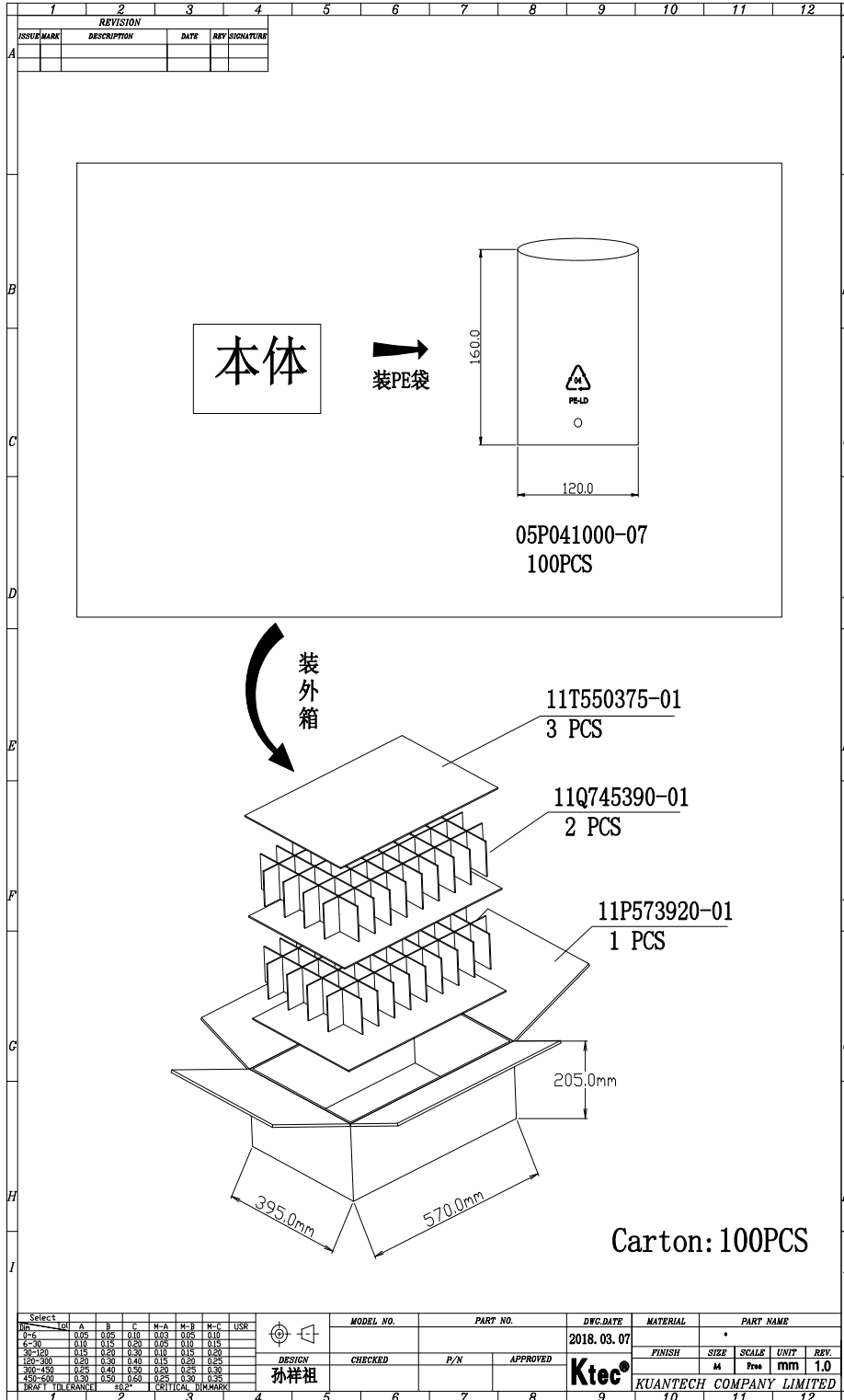
KTEC 冠德國際科技  
KTEC GLOBAL CO., LTD.

Switching power supply specification (class B)

KTEC P/N:	PRODUCT NO:	CUSTOMER P/N:
KSD-18W-240060HU	KS240440	

10 PACKING (Unit: mm)

此为公司标准包装，与样品包装可能不同，请确认！



TITLE:	REVISION:A	DRAWING NO.:
PREPARED: 廖小艳	CHECKED: 杨淳棠 林英青	APPROVED: 贺洪明
	DATE: 2024-05-30	PAGE: 11 OF 11