



SPECIFICATION FOR APPROVAL

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KSC-2W-A

AC/DC ADAPTOR

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KSC-2W-A

Manufacturer Part No.: KS240377



Customer Name KTEC

Customer Part NO. _____

Project Modify List

Item	Content	Rev.	Date	Prepared By	Checked By
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1. INPUT REQUIREMENTS

1.1 Highlight & Features

- An inductive charging base used for toothbrushes.
- 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.
- The maximum room ambient temperature (Tmra), as mentioned in clause B.1.6 and B.2.6 of IEC 62368-1, for the external power supply is 45 °C.
- Cooling: natural convection

1.2 Chemical Substance Control Laws

PAHS 6P NP NOP REACH ROHS

1.3 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 power	2.0W max.
Power consumption	0.3W maximum (no-loading)
Primary current protection	An adequate internal fuse on the AC input line is provided.
Input Configuration 2 Conductor	<u>2</u> Conductor

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2. INDUCTIVE CHARGING BASE

2.1	Standby power consumption	Max. 0.3W
2.2	Power consumption during charging	Max. 2.0W
2.3	Power consumption when fully charged	Max. 2.0W
2.4	Nominal output current (secondary side), for NiMH battery load	70-115mA (NiMH)
2.5	Nominal output current (secondary side), for Li-Ion battery load	40-500mA (Li-Ion)
2.6	Storage conditions	No defects when storing at -20 to +70°C at 95%rh
2.7	Operation conditions	No defects when operating at 0 to +45°C at 95%rh
2.8	UV-stable colorant	No discoloration after UV lamp 38% UV- A, 7% UV-B, 160 Watt, for 96 h, distance to lamp: 300mm
2.9	Water tightness	IP67
2.10	Durability	Min. 5 years (e.g. use suitable capacitors)

3. Inductance (Location: L3)

3.1	Distance from PCB to lower end of coil	5mm±0.8mm
3.2	Number of turns	35.5 turns
3.3	Inductance	22uH +/-5%

Samples of the secondary charging coil can be provided for circuit adjustment.

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4. MECHANICAL

4.1 Enclosure and Layout

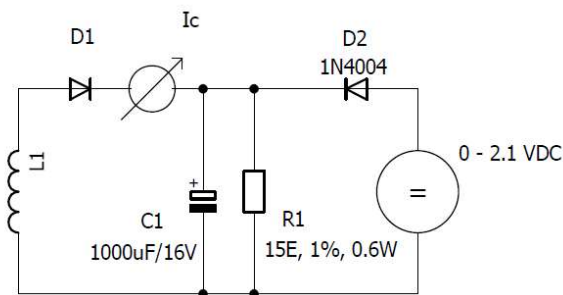
Plastic case	UL94V-0
Weight	/ g (Max.)
Dimensions	84.65*47.5*31mm
Color	WHITE(WT-07)

4.2 Input and Output Configuration

Input pin	EU 2Pin
Output connector	DC plug type: /
Polarity	Center “+”
Cable	H03VVH2-F 2*0.5 OD3.2*5.2 WHITE (WT-07)

5. Circuit diagram for output current measuring setup

Single Cell Size AA



Charging Current (mean value) 90mA +/- 10%

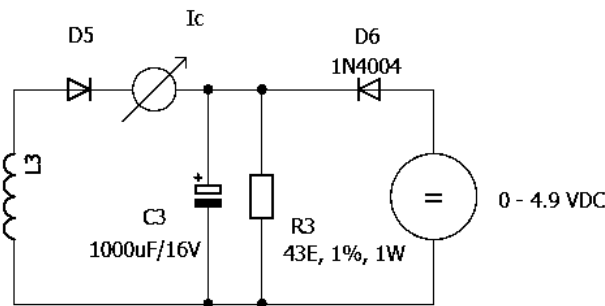
NiMh, up to 1500mAh

Spec. of D1

preferred silicium diode of type 1N4448W-7-F from Diodes Inc.

Single Cell Size AA

Li-Ion, up to



Charging Current (mean value) 100mA +/- 10%

1500mAh

Spec. of D5

preferred silicium diode of type 1N4448W-7-F from Diodes Inc.

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6. REGULATORY COMPLIANCE

6.1 EMC Specifications

The external power supply must meet all specification in this section. it is required that the external power supply work closely with the customer's equipment in order to get the best EMC solution.

6.1.1 Radiated and Conducted Emission

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

EN55032, Class B for radiated and conducted emissions.

6.2 Immunity

6.2.1 Electrostatic Discharge Immunity

EN 55035, EN 61000-4-2

Air Discharge: $\pm 8\text{kV}$

Contact Discharge: $\pm 4\text{kV}$

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 330 Ω) 8kV air discharge, 4kV contact discharge.

6.2.2 Radiated Field Immunity

EN 55035, EN 61000-4-3

Frequency Range: 80-1000MHz, still need test singly 1800MHz, 2600MHz, 3500MHz, 5000MHz

Field Strength: 3V/m with 80% amplitude modulation of 1kHz Performance Criteria A

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

6.2.3 Fast Transient Immunity

EN 55035, EN 61000-4-4

Power line: 1kV

Signal line: 0.5kV

Performance Criteria B

6.2.4 Surge Immunity

EN 55035, EN 61000-4-5

- Line to line: $\pm 1\text{kV}$

- Line to earth: $\pm 2\text{kV}$

- + 90° / -270°

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Lighting surge voltage of differential and common modes shall be applies across AC input lines and across input and frame ground.

6.3 Safety Requirements and Certification

6.3.1 Regulatory Standard

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

for short	Country or Region	Certified Status	Standard
CE	Europe	Meet	Declared& CE Mark EN62368-1

7. ENVIRONMENTAL REQUIREMENTS

Temperature	Operating	0 °C +45 °C
	Non-Operating	-20 °C +70 °C
Humidity	Operating	5%~95% (Non Condensing)
	Non-Operating	5%~95% (Non Condensing)

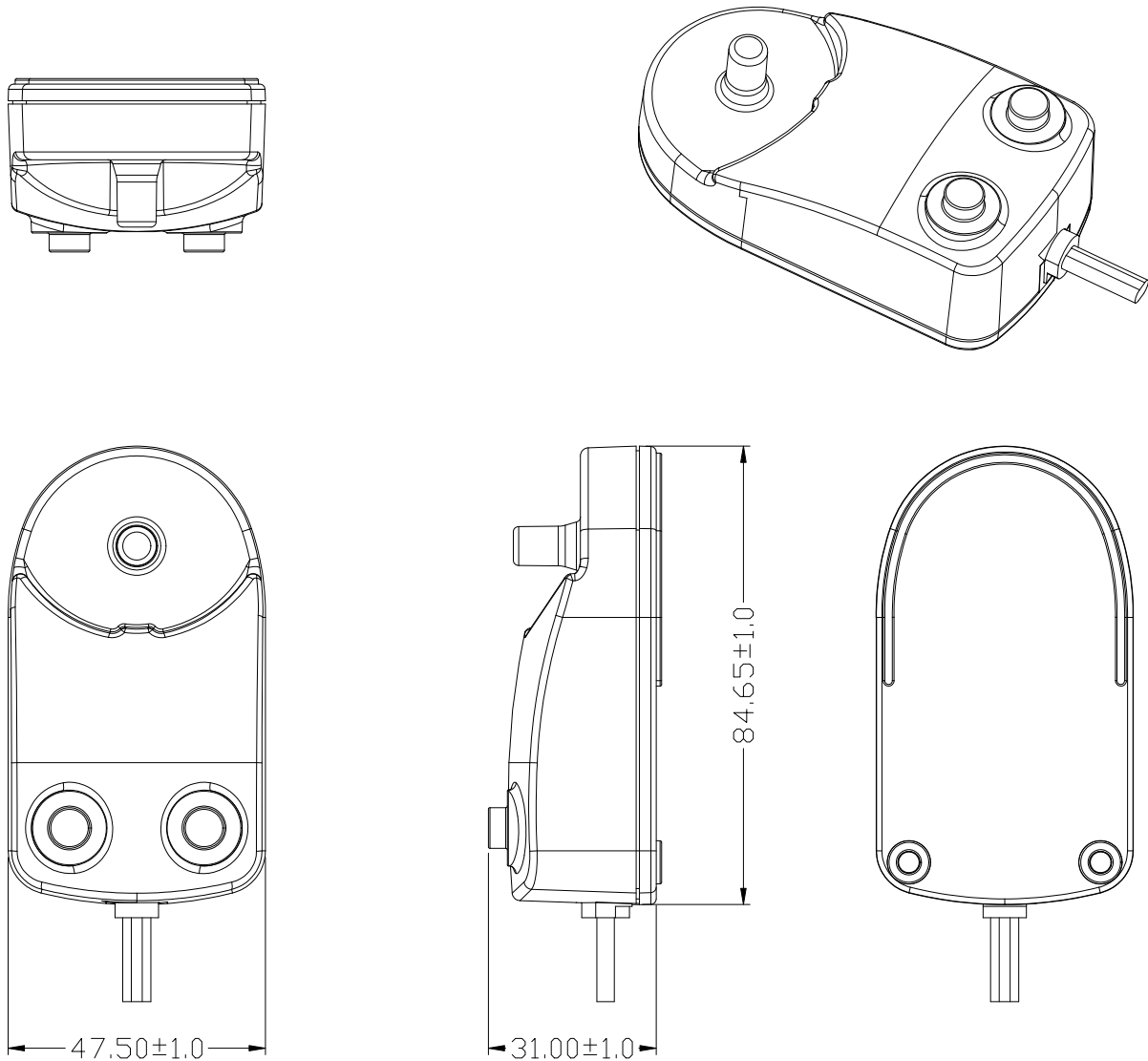
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8. APPEARANCE DRAWING: (UNIT: MM)



NOTE:

1. Case cover & chassis material PC WHITE(WT-07) (NO KTEC)
2. AC PIN MATERIAL: BRASS <0.1Pb (NI PLATED)
3. PAHS 6P NP NOP REACH ROHS
4. Mill Finish

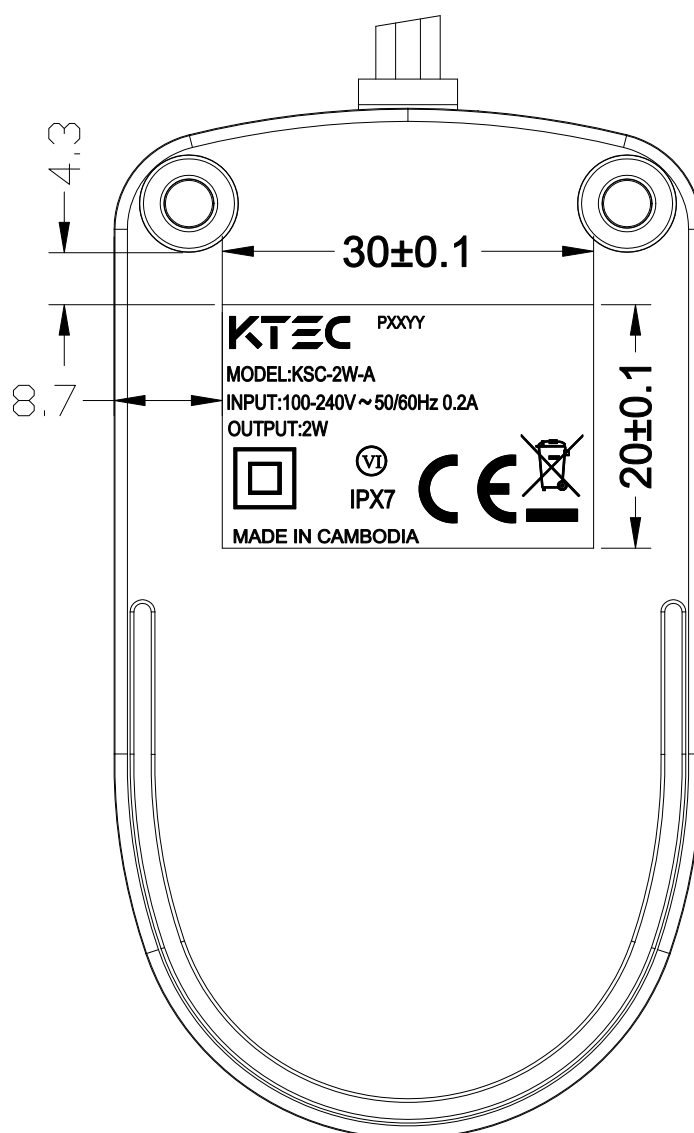
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9. NAME PLATE



Note: Laser (无边框)

PXXYY (P=PAHS, 6P, NP XX=Week, YY=Year), use the actual production date.

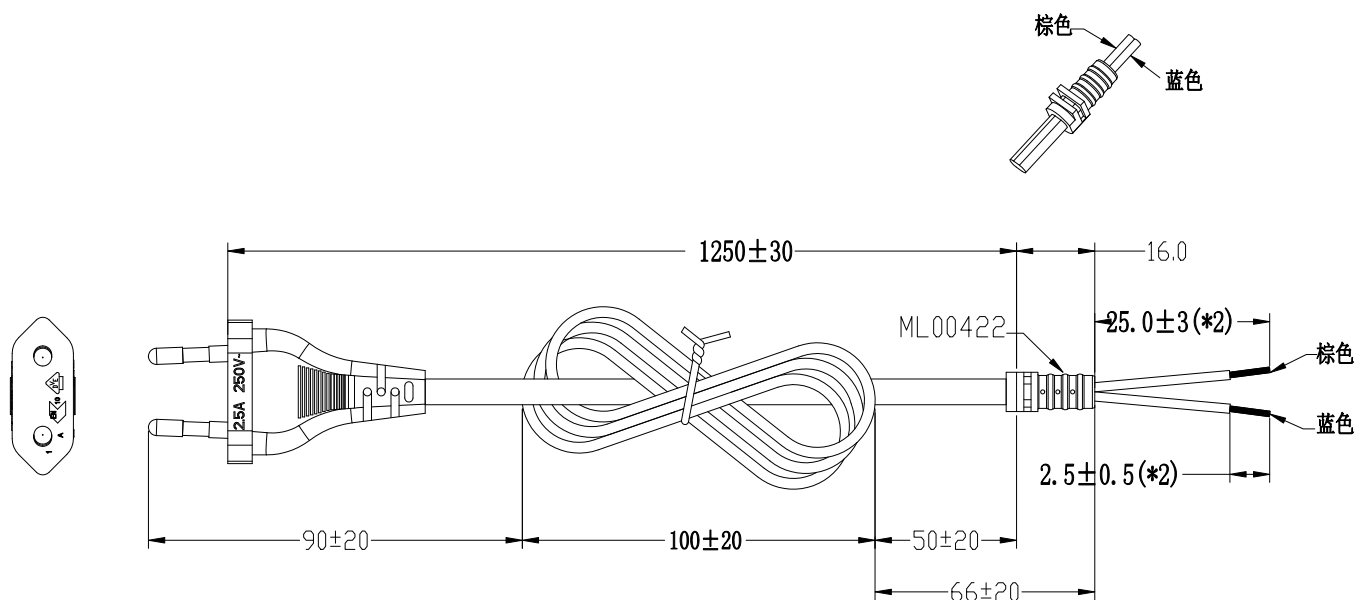
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10. DIMENSION OF OUTPUT PLUG & DC CORD (UNIT: MM)



NOTE(unit:mm):

- 1). WIRE TYPE: AC H03VVH2-F 2*0.5mm 300/300V WHITE(WT-82) EU L=1250mm
- 2). 6P,NP,PAHS,REACH,ROHS NOP
- 3). SR mold: ML00422

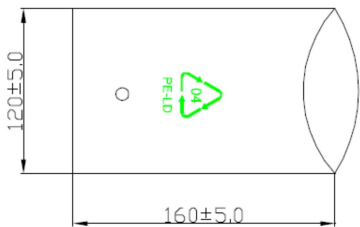
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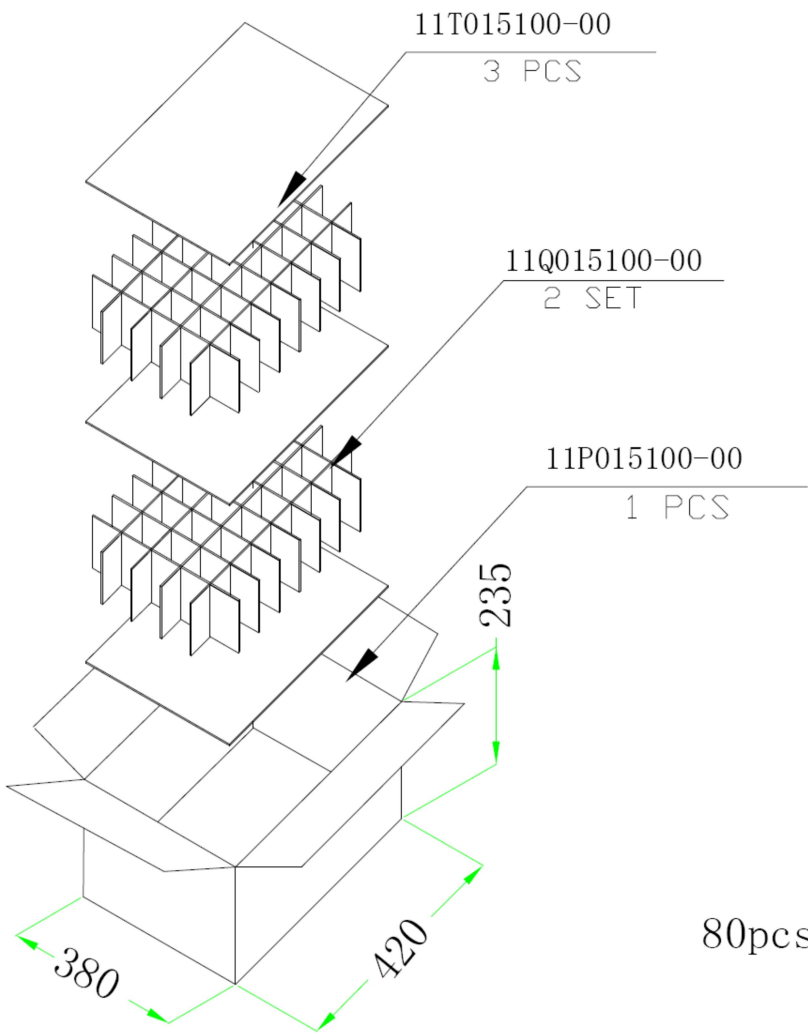
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11. PACKING (UNIT: MM)



05P041000-07



80pcs/Carton