

SPECIFICATION FOR APPROVAL**客户承认书**

客户 Customer ID: 860755

景荣料号 KRECO P/N No. : KRE-135500T

日期 Date: 2022-3-1

设计流水/订单号 Design/PO No. : 220214-860755-860759



景荣企业有限公司
中山市景荣电子有限公司

KINGRONG ENTERPRISE LTD. (Since 2008)**ZHONGSHAN KINGRONG ELECTRONICS CO., LTD.****客户承认书****SPECIFICATION FOR APPROVAL****CUSTOMER ID/客户编号:****860755****DESCRIPTION/概述:****Power Transformer****CP.N. /客户料号:****Modification is to update a new with new design number 生成新版修改设计号****CUSTOMER AUTHORIZED SIGNATURE/客户承认签核**

Notes Special 特殊要求	1.	Signature & seal:
	2.	
	3.	
	4.	
		Date:

Sign it means acknowledge our sample(s) performance and we production to samples. In the event of discrepancies between the sample(s) and specification, the sample(s) shall prevail. /客户确认签字,盖章即视为确认样品性能,以样品为准生产.

Address: 9F, Block 2, Bldg 6, Meicheng Creative Industrial Park, Mingcheng East Rd, Xiaolan, Zhongshan, Guangdong, 528415 China

TEL: +86-760-22582166**FAX: +86-760-87600816****Http://www.kreco.com.cn****Email: enquiries@kreco.com.cn**

KINGRONG ENTERPRISE LTD.
景荣企业有限公司

Approved by:**谭华响****Checked by:****李淑仪****Prepared by:****陈梓健**

SPECIFICATION FOR APPROVAL

客户承认书

客户 Customer ID: 860755

景荣料号 KRECO P/N No. : KRE-135500T

日期 Date: 2022-3-1

设计流水/订单号 Design/PO No. : 220214-860755-860759

TABLE OF CONTENTS/目录

1. Electrical Characteristics /电子性能.....	3
2. Safety Test /安全测试.....	3
3. Mechanical Characteristics /机械特性.....	4
4. Reliability/可靠度.....	5
5. Insulation System /绝缘等级.....	5
6. Environment Requirements /环境要求.....	5
7. DC Resistance /DC 电阻.....	5
8. Production Tests /生产线检查.....	5
9. Safety Standards /安规标准.....	6
10. EMI/EMS Standards /电磁兼容标准.....	6
11. Efficiency Level Standard and Test Report/节能标准和测试报告.....	7
12. Circuit Diagram /电路图.....	8
13. Outline Characteristics /外观特性.....	8
14. Label Diagram /铭牌图.....	9
15. Mechanical Outline Photograph /外观示意图.....	10
16. Package Drawing /包装示意图.....	11



KINGRONG ENTERPRISE LTD.
景荣企业有限公司

Approved by:

谭华响

Checked by:

李淑仪

Prepared by:

陈梓健

SPECIFICATION FOR APPROVAL

客户承认书

客户 Customer ID: 860755

景荣料号 KRECO P/N No. : KRE-135500T

日期 Date: 2022-3-1

设计流水/订单号 Design/PO No. : 220214-860755-860759

1. Electrical Characteristics / 电子性能

1.1 Input Voltage & Frequency / 输入电压与频率

额定输入电压 Rated Input Voltage	AC 230V
额定输入频率 Rated Input Frequency	50Hz
最大空载电流 Max. Exciting Current (no load)	48mA max
最大空载功率 Max. No Load Power	(参考第P7页) 4.1 W max

1.2 Output Performance / 输出电压与电流性能

输出电压 Output Voltage	13.5V $\pm$ 5% (AC)
负载电流 Rated Load Current	5000 mA
空载电压 No Load Voltage	16V $\pm$ 5%

2. Safety Test / 安全测试

2.1 Hi-Pot Test / 高压测试

Primary to Secondary & Case for Class I / 初级对次级及外壳::

1500Vac / 10mA Max / 60 seconds

Primary to Secondary & Case for Class II / 初级对次级及外壳::

3750Vac / 10mA Max / 60 seconds

Leakage Current / 漏电流

0.25 mA max. at 264Vac / 50Hz

2.2 Insulation Test / 绝缘测试:

DC 500V 100 M Ω min between input to output plug and case (or core).

输入对输出 & 外壳(或铁芯)施加 DC 500 V, 绝缘电阻最小 100 M Ω .

2.3 Temperature Rise / 温升测试:

When at rated AC input / 额定输入, output rated load / 输出额定负载 shall not exceed / 表面温升 $\leq 65^{\circ}\text{C}$ on input coil, at ambient temperature $25^{\circ}\text{C} \pm 3^{\circ}\text{C}$.



KINGRONG ENTERPRISE LTD.
景荣企业有限公司

Approved by:

谭华响

Checked by:

李淑仪

Prepared by:

陈梓健

SPECIFICATION FOR APPROVAL

客户承认书

客户 Customer ID: 860755

景荣料号 KRECO P/N No.: KRE-135500T

日期 Date: 2022-3-1

设计流水/订单号 Design/PO No.: 220214-860755-860759

2.4 Overload Test /过载测试:

In an ambient temperature of 25°C applies a power source of rated input with the output load adjusted to 5% of rated output and rated continuously for 4 hours, after turning off 60 minutes in normal temperature, shall meet item 2.1 ~ 2.2. 环境温度为 25°C 的情况下, 适配器不间断工作 4 小时, 且额定输入及输出有 5% 调整率; 断开电后恢复 60 分钟, 需满足 2.1~2.2 的要求。

2.5 Life Test /寿命试验:

In an ambient temperature of 40°C, 90~95% R.H., reliability humidity applied a power source of rated input with rated load and operated continuously for 4 hours, after taken out from oven. Shall meet item 2.1 ~ 2.2.

在温度为 40°C、湿度为 90~95% 的环境下, 额定输入负载工作 4 小时, 取出烤箱后需满足 2.1~2.2 的要求。

2.6 Humidity Test /湿度测试:

Temperature 40±2°C, 90~95% R.H. for 48 hours, after taken out from oven. Shall meet 2.1.

在 40±2°C, 湿度 90~95% 的环境下, 放置 48 小时, 取出烤箱后需满足 2.1 的要求

2.7 Caution (Attention) /警示 (注意):

RISK OF ELECTRIC SHOCK DRY LOCATION USE ONLY (POUR UTILISATION À L'INTÉRIEUR SEULEMENT).

触电危险, 仅用于干燥环境下使用。

3. Mechanical Characteristics /机械特性

3.1 Strain Relief Test /拉力测试:

Plug and cord, at their normal position applied a weight of 20lbs to input plug, 5 lbs to output cord, for 60 seconds each, there shall be no broken of lead or other damage result.

输入插头能承受 20lbs 的拉力, 输出线能承受 5lbs 的拉力, 无任何损坏。



KINGRONG ENTERPRISE LTD.
景荣企业有限公司

Approved by:

谭华响

Checked by:

李淑仪

Prepared by:

陈梓健

SPECIFICATION FOR APPROVAL

客户承认书

客户 Customer ID: 860755

景荣料号 KRECO P/N No. : KRE-135500T

日期 Date: 2022-3-1

设计流水/订单号 Design/PO No. : 220214-860755-860759

3.2 Drop Test /落地测试: (EI48 & above, and desktop type are not applicable)

Products shall be dropped from a height of 0.75 m, onto 1cm thickness dry wood surface 3 times, after shall no abnormal condition happen, and insulation test 10 MΩ min. 产品从 0.75米高度落下, 落在 1 cm厚的干木板上跌落 3次, 产品无异常; 绝缘测试最小为 10 MΩ.

3.3 Cord Bending Test /摇摆测试:

The cord shall withstand a weight of 200 g, it swings from left to right at an angle of 120 degree(total), 40 cycle/min, 300 times minimum. The cord shall be conductible. 输出线悬挂 200克重量, 以 120度、40周/分钟左右摇摆最小 300次, 输出线无异常。

4. Reliability/可靠度

The design and construction of this power supply shall exhibit a minimum Mean Time Between Failure (MTBF) of 50,000 hours full rated load operation 25°C. 适配器的设计和结构在环境温度为 25°C的情况下, 带额定负载, 可至少工作时间。

5. Insulation System /绝缘等级

CLASS B (130°C)

6. Environment Requirements /环境要求

6.1 Operating Temperature Range /工作温度范围: -20°C ~ +40°C

6.2 Operating Humidity Range /工作湿度范围: 30% ~ 85%R.H

6.3 Storage Temperature Range /储藏温度范围: -20°C ~ +85 °C

7. DC Resistance /DC电阻

Under Ambient Temperature 25±5°C.

7.1 Primary /初级: ± 20% Ω(ref) 7.2 Secondary /次级: ± 20% Ω(ref)

8. Production Tests /生产线检查

8.1 Full Test Procedures for Each Product /全检测试项目:

☒ Primary exciting current ☐ Core loss ☒ Output voltage

☒ Input current and power at rated load ☒ Noise

☒ Polarity of output plug ☒ Hi-pot test ☒ Appearance ☒ Ripple voltage



KINGRONG ENTERPRISE LTD.
景荣企业有限公司

Approved by:

谭华响

Checked by:

李淑仪

Prepared by:

陈梓健

SPECIFICATION FOR APPROVAL

客户承认书

客户 Customer ID: 860755

景荣料号 KRECO P/N No. : KRE-135500T

日期 Date: 2022-3-1

设计流水/订单号 Design/PO No. : 220214-860755-860759

8.2 Spot Check Procedures/抽检测试项目:

☒ Humidity operating at rated load

☒ Insulation test ☒ Life test ☒ Drop test

9. Safety Standards /安规标准

The product has designed / approved by the following safety standards:

☐ **62368**: IEC/EN62368;UL62368; AS/NZ62368/3112;J62368;

☐ **60335**: IEC/EN60335;UL60335;AS/NZ60335;J60335;K60335;

☒ **61558**: IEC/EN61558;UL1310;AS/NZ61558;J61558;K61558

☐ **60601**: IEC/EN60601;UL60601;

Notes: It passed the standards which mean it also could pass for same international standards as well; we reserve the right to alter without priority notice.

10. EMI/EMS Standards /电磁兼容标准

☒ **EMC General**: IEC61000-4-11;GB/T17626.11(电压跌落及中断); EMS:GB17625.1-2012/谐波电流限值; EMI:EN61000-3-2/谐波电流;EMI:EN61000-3-3:2013/电压波动和闪烁; IEC61000-4-2;GB/T17626.2/ESD静电放电;EMS:IEC61000-4-3;GB/T17626.3(辐射干扰);EMS:IEC61000-4-4;GB/T17626.4(EFT电快速瞬变脉冲群);EMS:IEC61000-4-5;GB/T17626.5(雷击surge测试);EMS:IEC61000-4-6;GB/T17626.6(CS传导性干扰);EMS:IEC61000-4-8;GB/T17626.8(电源频率磁场耐受检测)

☐ **62368 EMI-IT**: EN55032/J55022/GB9254;GB17625;EMS:EN55024(IT&AV)

EMI-AV: EN55032/J55013;GB13837;GB17625;EMS:EN55024(IT&AV)

☒ **60335 EMI-Appliance**: EN55014-1;EMS:EN55014-2(Appliance)

☐ **60601 EMC**: EN55011;IEC/EN60601-1-2

☒ **FCC**: Part15 & ANSI C63.4;EMI: CISPR 32/33

☐ **RED**: EN62497(health);EMC:ETSI EN301 489;Radio:ETSI EN300 220

Notes: It passed the standards which mean it also could pass for same international standards as well; we reserve the right to alter without priority notice.



KINGRONG ENTERPRISE LTD.
景荣企业有限公司

Approved by:

谭华响

Checked by:

李淑仪

Prepared by:

陈梓健

SPECIFICATION FOR APPROVAL**客户承认书**

客户 Customer ID: 860755

景荣料号 KRECO P/N No. : KRE-135500T

日期 Date: 2022-3-1

设计流水/订单号 Design/PO No. : 220214-860755-860759

11. Efficiency Level Standard and Test Report / 节能等级标准及测试报告Standard 标准: ☒ N/A不适用 ☐ GEMS澳 ☐ ErP EU 6级 ☐ DoE VI 6 (US)Level 级别: ☐ IV 4级 ☐ V 5级 ☐ VI 6级**KINGRONG ENTERPRISE LTD.**
景荣企业有限公司

Approved by:

谭华响

Checked by:

李淑仪

Prepared by:

陈梓健

SPECIFICATION FOR APPROVAL

客户承认书

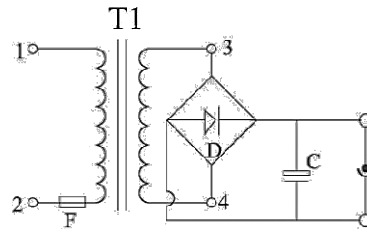
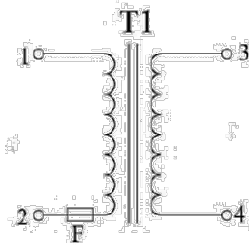
客户 Customer ID: 860755

景荣料号 KRECO P/N No. : KRE-135500T

日期 Date: 2022-3-1

设计流水/订单号 Design/PO No. : 220214-860755-860759

12. Circuit Diagram / 电路图



☒ AC / AC 交流

☐ AC / DC 直流

13. Outline Characteristics / 外观特性

13.1 Dimension/尺寸: 7.6x6.5x6.3cm (LxWxH)

13.2 Net Weight/净重: 1.276 kgs (ref.)

13.3 AC Inlet/输入插头: ☒ N/A

13.4 Power Cable Spec/输入电源线: 1015 18AWG 20CM

13.5 Output Cord & Length/输出线及长度: 1015 18AWG 20CM

13.9 DC Polarity/极性: N/A

13.10 LED color/指示灯颜色: Red/Green



KINGRONG ENTERPRISE LTD.
景荣企业有限公司

Approved by:

谭华响

Checked by:

李淑仪

Prepared by:

陈梓健

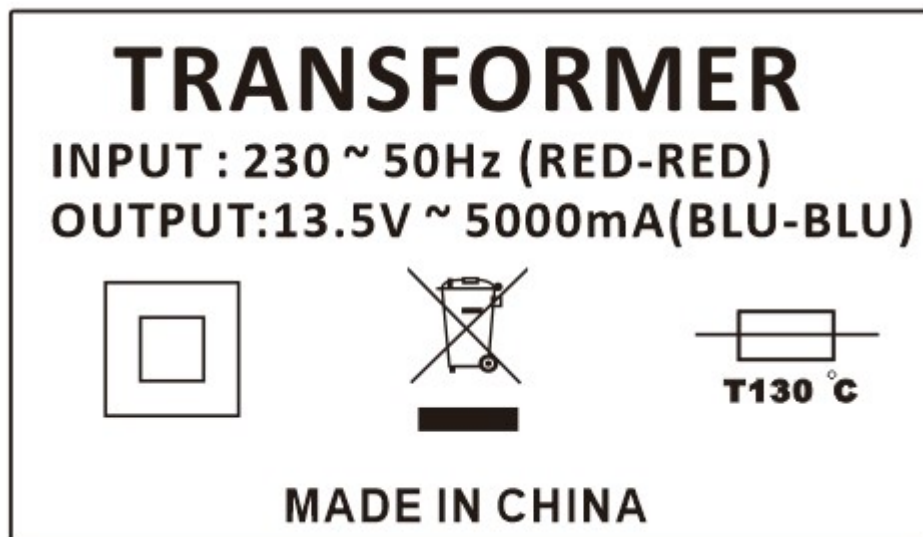
SPECIFICATION FOR APPROVAL**客户承认书**

客户 Customer ID: 860755

景荣料号 KRECO P/N No. : KRE-135500T

日期 Date: 2022-3-1

设计流水/订单号 Design/PO No. : 220214-860755-860759

14. Label Diagram /铭牌图

☐ Laser engraving ☒ PVC sticker ☒ Serial code 128

	KINGRONG ENTERPRISE LTD. 景荣企业有限公司	Approved by:	Checked by:	Prepared by:
		谭华响	李淑仪	陈梓健

SPECIFICATION FOR APPROVAL

客户承认书

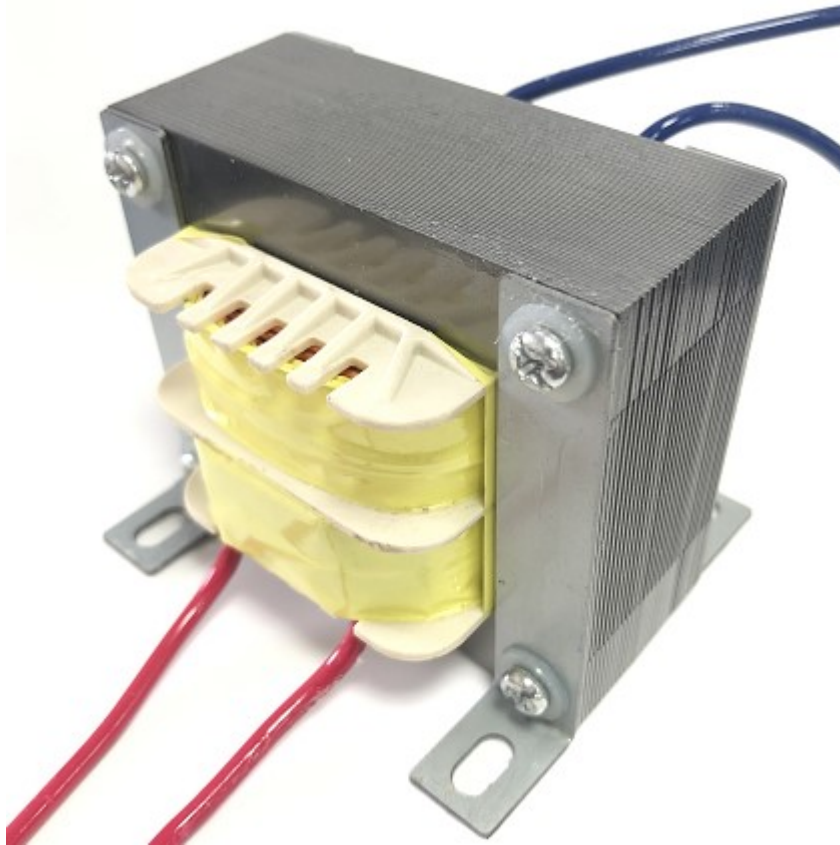
客户 Customer ID: 860755

景荣料号 KRECO P/N No. : KRE-135500T

日期 Date: 2022-3-1

设计流水/订单号 Design/PO No. : 220214-860755-860759

15. Mechanical Outline Photograph /外观示意图



KINGRONG ENTERPRISE LTD.
景荣企业有限公司

Approved by:

谭华响

Checked by:

李淑仪

Prepared by:

陈梓健

SPECIFICATION FOR APPROVAL

客户承认书

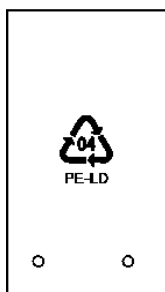
客户 Customer ID: 860755

景荣料号 KRECO P/N No. : KRE-135500T

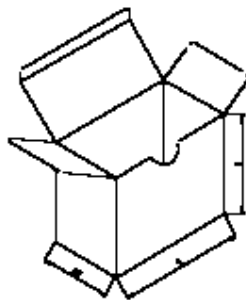
日期 Date: 2022-3-1

设计流水/订单号 Design/PO No. : 220214-860755-860759

16. Package Drawing / 包装示意图



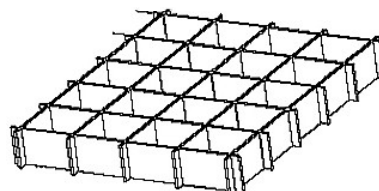
☒: PE Bag



☐: White Box



Save a tree.



☒: Blade Cardboard.



☒: Outer Carton

The following packing info just for your reference only, the final is subject to actual production.

No.	Item 名称	Spec 规格	Size (cm)尺寸 长 x 宽 x 高	Qty 数量/箱	G.W (kgs) 公斤/箱	CBM (m3) 立方米
1	PE bag 透明袋	PE	16x12	1		
2	Individual box 外盒	400g/cm3		1	0.12	N/A
3	Blister 吸塑	PET	/	/	/	/
4	Outer Carton 外箱	K=K	47 x 35 x 24	TBA	18 max	0.04
5	Pallet 托盘	Plastic	100x110x15	x	8	x
6	Marking 唛头	/	KRECO			
7	Part No 条形码	Code 128	KRE-135500T			
8	Serial No 序列号	Code 128	YYxxxxxx0000001			

 KINGRONG ENTERPRISE LTD. 景荣企业有限公司	Approved by:	Checked by:	Prepared by:
	谭华响	李淑仪	陈梓健