

SPECIFICATION FOR APPROVAL

客户承认书

Customer ID 客户: 141141-UKB P/N No.: KRE-2400450L Model No. 型号: KRE-2400450L
Sample Date 日期: 2016-09-21 Design No. 设计流水号: 160903-141141-140012-B1



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: 141141-UKB

DESCRIPTION/概述: Linear Power Supply(AC/DC adaptor)

CUSTOMER P.N. /客户料号:

PART NO. /产品编号: KRE-2400450L REV: 1.0 RoHS: Yes

CUSTOMER AUTHORIZED SIGNATURE/客户承认签核			

Please must return to us one copy of "SPECIFICATION FOR APPROVAL"

with your authorized signature. /客户确认签字, 盖章后请回传一份承认书给我司.

Address: 32 CuiHuJu, YangGuangMeiJia, No.138 MinAn Rd South, XiaoLan,
ZhongShan, GuangDong, 528415 China

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盖章前审查: 拍照了吗? 录入产品库了吗?

	KINGRONG ENTERPRISE LTD. 景荣企业有限公司	Approved by:	Checked by:	Prepared by:
		黄秀红	吴静雯	王苑

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0. Reversion List /变更履历表

变更后立即通知生产更新资料，切记！

Rev. 版本	Date 日期	Description of Changes 变更内容描述	Notes 备注
1.0			
2.0			
3.0			

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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	AC230V
额定输入频率 Rated Input Frequency	50Hz
最大空载电流 Max. Exciting Current (no load)	80mA max
空载功率 Maximum No Load Power	0.5 W max

1.2 Output Performance/输出电压与电流性能

输出电压 Output Voltage	24V ±5%
负载电流 Rated Load Current	450mA
空载电压 No Load Voltage	32V ± 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 MΩ 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 MΩ.

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≤ **65℃** on input coil, at ambient temperature 25℃±3℃.

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2.4 Induced Voltage /高电压高频率测试:

All secondary open, primary should withstand 440 V AC 400 Hz for 15 second without breakdown.

全部次级打开, 初级要在 15秒内经受住 440 VAC 400 Hz而不损坏。

2.5 Overload Test /过载测试:

In an ambient temperature of 25℃ 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℃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。

2.6 Life Test /寿命试验:

In an ambient temperature of 40℃, 90~95% R.H., reliability humidity applied a power source of rated input with rated load and operated continuously for 8 hours, after taken out from oven. Shall meet item 2.1 ~ 2.2.

在温度为 40℃、湿度为 90~95%的环境下, 额定输入负载工作 8小时, 取出烤箱后需满足 2.1~2.2的要求。

2.7 Humidity Test /湿度测试:

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

在 40±2℃, 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

2.8 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, 10 lbs

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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 10lbs的拉力, 无任何损坏。

3.2 Drop Test /落地测试: (Desktop type is not applicable)

Products shall be dropped form 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:

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- ☒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

8.2 Spot Check Procedures/抽检测试项目:

- ☒Humidity operating at rated load ☐D.C. Resistance
☒Insulation test ☒Life test ☒Drop test

9. Safety Standards /安规标准

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

- ☐UL60950 ☐IEC/EN60950 ☐AS/NZS60950 ☐J60950 ☐K60950 ☐GB4943
☐UL60065 ☐IEC/EN60065 ☐AS/NZS60065 ☐J60065 ☐K60065 ☐GB8898
☐UL60335 ☐IEC/EN60335 ☐AS/NZS60335 ☐J60335
☐UL1310 ☒IEC/EN61558 ☐AS/NZS61558 ☐J61558
☐IEC/EN61347

10. EMI/EMS Standards /电磁兼容标准

10.1 EMI Standards/ EMI标准

- ☒EN55022:2010+AC:2011(IT) ☐EN55013:2001+ A1:2003+ A:2006(AV)
☐FCC Part 15 Class B:2014 & ANSI C63.4:2009(USA)
☐GB9254-2008(IT) ☐GB13837(AV)
☐J55022(IT) ☐J55013(AV) ☐CISPR 32/22/射频干扰
☐IEC/EN61547(LED)

10.2 EMS Standards/ EMS标准

- ☒EN55024:2010(IT&AV) ☐EN62493:2010(EMF) ☐GB17625.1-2012/谐波电流限值
☒IEC61000-4-2/ESD静电放电 ☒IEC61000-4-3/辐射搞干扰
☒IEC61000-4-4/EFT电快速瞬变脉冲群 ☒IEC61000-4-5/雷击surge测试
☒IEC61000-4-6/CS传导性干扰 ☐IEC61000-4-8/电源频率磁场耐受检测
☐IEC61000-4-11/电压跌落及中断
☐EN61000-3-2/谐波电流
☐EN 61000-3-3:2013/电压波动和闪烁

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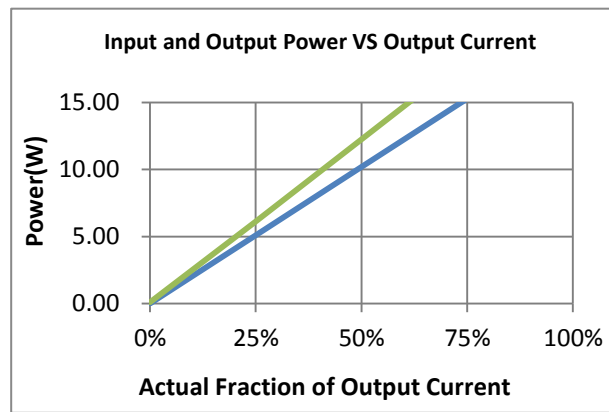
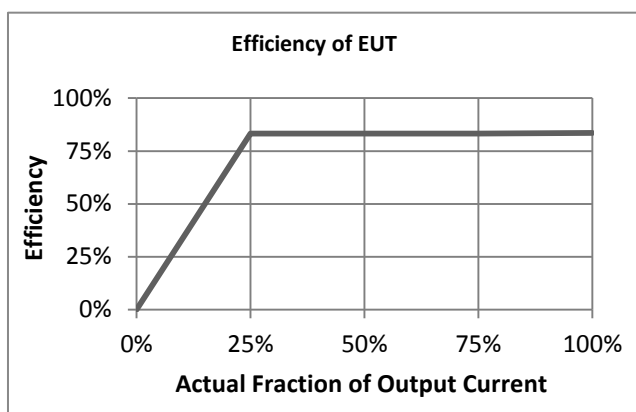
11.0 Efficiency Level Standard and Test Report/节能标准和测试报告

☒ N/A ☐ IV ☐ V ☐ VI Efficiency Test Report 节能测试报告

☐ GEMS ☐ CEC ☐ ErP ☐ DoE VI 6 (US) ☐ CoC V5 (EU)

Item 项目	Standard No-load Power 标准空载损耗 (W)	Standard Average Efficiency 标准平均效率%
Standard 标准		

	No Load	Active power values					
Percent of nameplate current 负载比例	0%	25%	50%	75%	100%	No load Power 空载功率 W	Average Efficiency 平均效率%
Output Current 输出电流							
Output voltage 输出电压							
Output power 输出功率 W 次							
AC input power 输入功率 W 初							
Efficiency% 效率%							



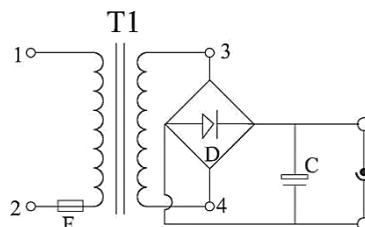
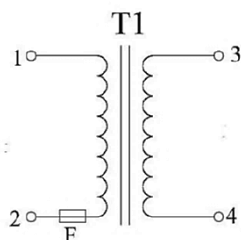
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12.0 Circuit Diagram /电路图



☐ AC / AC 交流

☒ AC / DC 直流

No.	Symbol	Part Name	Specification
1	T1	Transformer	EI-48
2	F	Thermal-Link	125℃ 250VAC 2A
3	D	Diode	
4	C	Capacitor	
5			
6			

13.0 Outline Characteristics /外观特性

13.1 Dimension/尺寸: 8.2*5.6*8.5cm (LxWxH)

13.2 Net Weight/净重: 0.475 kgs (ref.)

13.3 AC Inlet/输入插头: ☒ 2P EU ☐ 2P US ☐ 3P UK

13.4 Power Cable Spec/输入电源线: N/A

13.5 Case Material/外壳材质: ABS or PC or PC+ABS, 94V-0

13.6 Product Color/颜色: Black

13.7 Output Cord & Length/输出线及长度: UL 2468 24AWG 175CM

13.8 DC Connector Size & Shape/DC头尺寸及外形: 2.1x5.5x12mm

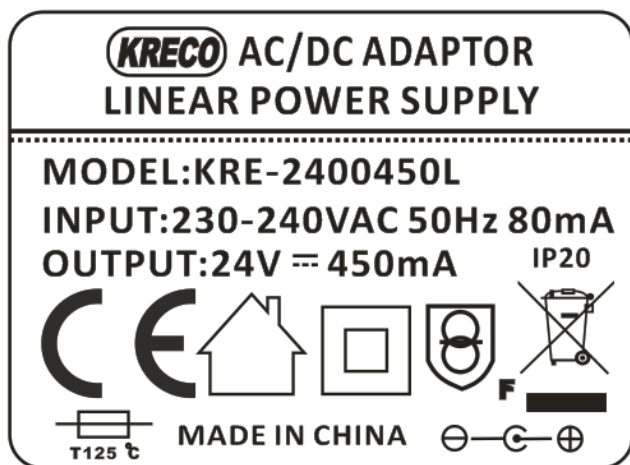
☒ Straight ☐ L-type

13.9 DC Polarity/极性: ☒ Center + ☐ Center-

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14.0 Label Diagram /铭牌图

☐ Laser engraving ☒ PVC sticker ☒ Serial code 128

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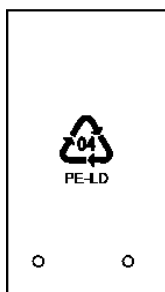
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15.0 Mechanical Outline Photograph /外观示意图

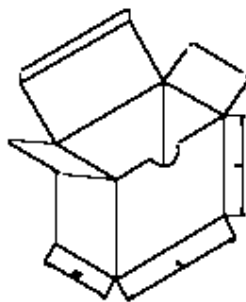
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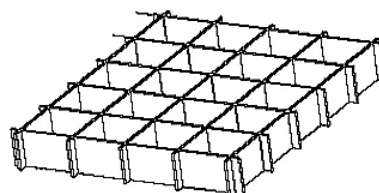
16.0 Package Drawing /包装示意图



☒: PE Bag

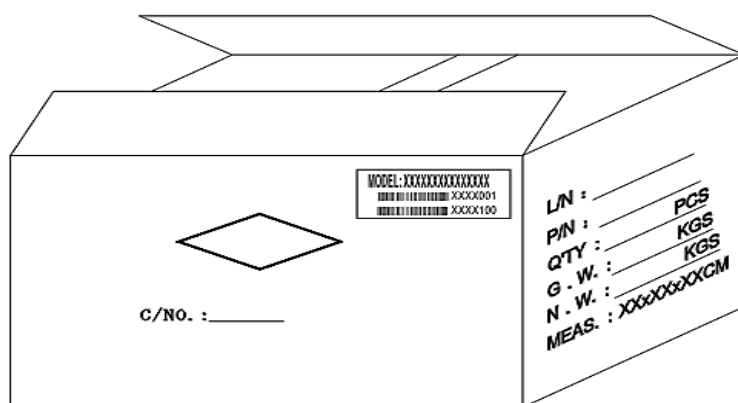


☒: White Box



☐: Blade Cardboard.

No.	Item Name	Density/Spec	Dimension (LxWxH cm)
1	PE bag 袋	N/A	16*12
2	White box 小白盒	400g/cm3	10*6*9



Outer Carton

Name	Material	Measurement (LxWxH)	Q'ty	Shipping Mark	Part No. In Carton
Outer Carton	K=K	42x26x23cm	60Pcs	KRECO	KRE-2400450L

17.0 Certificates /认证证书

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