

客户承认书

SPECIFICATION FOR APPROVAL

CUSTOMER/客户: _____

CUSTOMER P.N./客户物料号: _____

MODEL NO./产品型号: HKA00505010-XGAPPROVAL NO./承认编号: WI-F-20120837PREPARED DATE/拟定日期: 2012-8-10

CUSTOMER AUTHORIZED SIGNATURE/客户承认签核

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Please return to us one copy of "SPECIFICATION FOR APPROVAL" with you approved signature. // 客户确认签字, 盖章后请回传一份承认书给我司.

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拟 制:	审 核:	批 准:

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1. SCOPE/概述

The document detail the electrical, mechanical and environmental specifications of a SMPS, the power supply provide 5.0 W continuous output power.

资料详细描述了一款 5.0W(连续输出功率)开关电源的电气性,结构性及环境等要求.

The power supply shall meet the RoHS requirement.

此款电源符合 RoHS 要求.

Description/描述:

- SMPS Adaptor (Wall mount)/插墙式适配器 SMPS Adaptor(Desk-top)/桌面型适配器
 Open Frame/开放式结构 SMPS Unit (With Case)/带铁壳型
 Others/其他

2. Input Characteristics/输入特性

2.1. Input Voltage & Frequency/输入电压与频率

The range of input voltage is from 90Vac to 264Vac single phase.

输入电压范围: 从 90Vac 到 264Vac, 单相输入.

	Minimum/最小	Normal/额定值	Maximum/最大
Input Voltage/输入电压	90Vac	100Vac~240Vac	264Vac
Input Frequency/输入频率	47Hz	60Hz/50Hz	63Hz

2.2. Input AC Current/AC 输入电流

0.2Amax. @ 115Vac input & Full load/在 115Vac 输入和满载条件下最大 0.2A

0.2Amax. @ 230Vac input & Full load/在 230Vac 输入和满载条件下最大 0.2A

2.3. Inrush Current (cold start)/浪涌电流(冷启动)

30Amax. @ 220Vac input/在 220Vac 输入条件下最大 30A

2.4. Average Efficiency /平均效率

While input 115Vac and 230Vac,the average efficiency is more than 68.17%.The test point is at 25%,50%,75% and 100% of max load respectively.

在输入 115Vac 和 230Vac 条件下,平均效率不小于 68.17%。测试点分别是最大载的 25%,50%,75%和 100%。

2.5. No-Load INPUT POWER DISSIPATION 输入空载功率损耗

Input 90Vac or 264Vac ,output no load, the input power loss is less than 0.15W.

输入 90/264V 交流, 在输出空载条件, 输入功耗小于 0.15W

2.6. Flow Backward Electric Current Tests 倒灌电流测试

When cut down AC power ,input 0—5V DC power into charger, The current should less than 5mA.

当充电器不接交流电的条件下,在充电器输出端加入 0—5VDC 直流电压,通过充电器的电流应小于 5mA.

3. Output Characteristics/输出特性

3.1. Static Output Characteristics <Vo & R+N>/静态输出特性

Output Rail	Rated Load/额定负载		Output Range 输出电压范围	R+N 纹波与噪声	Remark 备注
	Rated Load	Range CV: 2.0-4.75V			
+5.0V	1.0A	1.0-1.3A	4.75V ~ 5.25V	120mVp-p	

1. Load range CV: Under the input Voltage 100 Vac~240Vac.

CV 模式测试在 100Vac~240Vac 输入条件下测试。

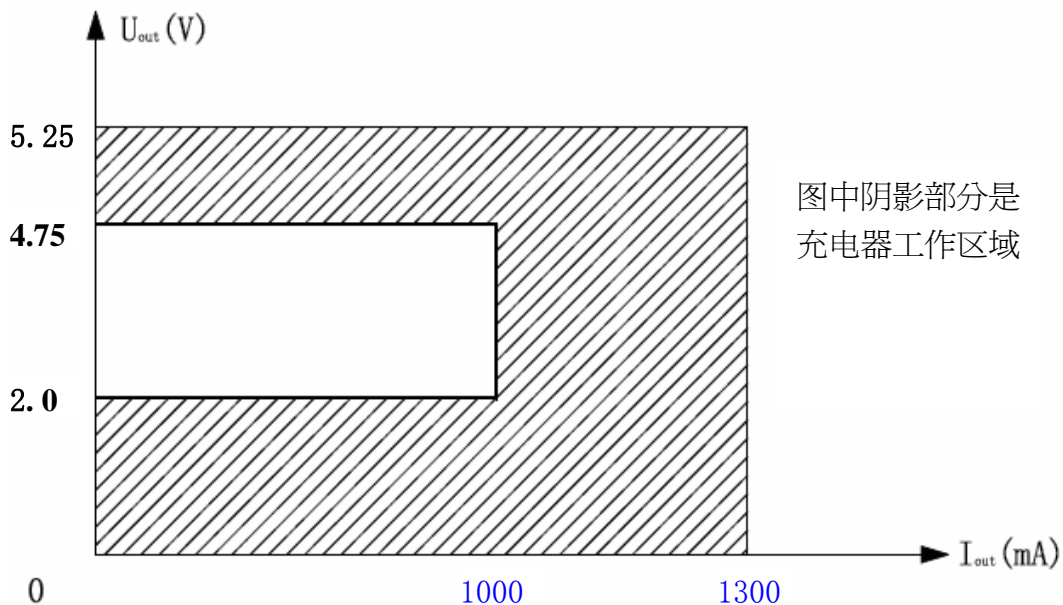
2. Under the input Voltage > 100 Vac

测试在 > 100Vac 输入条件下测试

Ripple & Noise: Measurement is done by 20MHz bandwidth oscilloscope and the output paralleled a 0.1uF ceramic capacitor and a 10uF electrolysis capacitor.

纹波与噪声: 量测时示波器选用 20MHz 带宽限制, 输出端要并联一颗 0.1uF 的陶瓷电容和一颗 10uF 的电解电容。

Charger Output Voltage/Current Characteristics 充电器输出电压/电流 V-I 特性图



3.2. Turn - on Delay Time/开机延迟时间

3S max. @ 100 Vac to 240Vac input & Full load/在 100Vac-240Vac 输入和满载条件下最大 3S

3.3. Hold-up Time/关机维持时间

10mS min. @ Full load & 115Vac/60Hz input turn off at worst case

在 115Vac/60Hz 输入, 满载同时最差情况下关机, 最小 10mS

20mS min. @ Full load & 230Vac/50Hz input turn off at worst case

在 230Vac/50Hz 输入, 满载同时最差情况下关机, 最小 20mS

3.4. Rise Time/上升时间

30mS max. @ 70% load/70%负载条件下最大 30mS

3.5. Fall Time/下降时间

20mS max. @ Full load/满载条件下最大 20mS

3.6. Output Overshoot / Undershoot/输出过冲/欠冲

10% max. When the power on or off/当电源开/关机时最大 10%

3.7. Output Load Transient Response/输出负载瞬态响应

1>. output voltage within 4.5-5.5V for load step from 0% to 50%, R/S: 0.5A/uS, frequency: 100Hz duration and 8mS at 50%.

输出电压在 4.5-5.5V 之间, 负载变化: 从 0%到 50%, 斜率: 0.5A/uS, 频率: 100Hz, 50%负载持续时间为 8mS.

3.8. Capacitance Load/容性负载

While input 100~240Vac and capacitance load is 2200uF, the adapter can turn on normally and the output is in the rated range.

在输入 100~240Vac, 2200uF 容性负载条件下, 适配器能正常开机。并且输出电压范围在额定范围下

4. Protection Requirements/保护要求

4.1. Over Current Protection/过流保护

OCP Point Limited: 200%max of Io-rated /保护点限制:最大为额定负载的 200%

The output shall hiccup when the over current applied to the output, and shall be self-recovery when the fault condition is removed

当过电流时,输出将进入打嗝模式,当过流情况解除后,产品将会自动恢复正常

4.2. Short Circuit Protection/短路保护

The input power shall decrease when the output rail short, the power supply shall no damage, and shall be self-recovery when the fault condition is removed.

当输出短路时,产品输入功率降低且不会损伤,当短路情况解除后,产品将会自动恢复正常

4.3. Over Voltage Protection/过压保护

OVP Point Limited: 7.5VMax. Load/保护点限制:最大 7.5V。

The power supply shall be protected when the output is over voltage, and the power supply shall not be damaged.

当输出过压时,产品保护且不会损伤

5. Environment Requirements/环境要求

5.1. Operating Temperature and Relative Humidity/操作温/湿度要求

0°C to +40°C

20%RH to 80%RH

5.2. Storage Temperature and Relative Humidity/存储温/湿度要求

-40°C to +70°C

5%RH to 95%RH non-condensing @ Sea level shall be low 10,000 feet/低于 10,000 英尺

5.3. Vibration/振动

10 to 300Hz sweep at a constant acceleration of 1.0G(Breadth: 3.5mm) for 1Hour for each of the perpendicular axes X, Y, Z

扫描频率: 10 to 300Hz, 加速度: 1.0G(位移: 3.5mm), X, Y, Z 三垂直坐标轴向各振动 1 小时

5.4. Drop in/跌落

1 Corner, 3 Edges, 6 Surfaces, Height: 100cm, On the cement plane

1 角, 3 棱, 6 面, 跌落高度: 100 厘米, 跌落到水泥面上

6. Reliability Requirements/可靠性要求

6.1. Burn-in/煲机

The power supply shall under go a minimum of 4 Hours burn-in test at $40^{\circ}\text{C} \pm 5^{\circ}\text{C}$ under full load condition

产品至少要在 $40^{\circ}\text{C} \pm 5^{\circ}\text{C}$ 的环境及满载条件下煲机 4 小时

6.2. MTBF Qualification/平均间隔故障时间估算

The MTBF shall be at least 50,000hours at 25°C , 80% Full load and nominal input condition

平均间隔故障时间: 至少 50,000 小时, 25°C 环境及额定输入与 80% 满载条件下

7. EMI/EMS Standards/EMI/EMS 标准

7.1. EMI Standards/EMI 标准

EN 55022:1998, +A1:2000 +A2:2003, Class B

CISPR 22:2003, Class B

AS/NZS CISPR 22: 2004, Class B

7.2. EMS Standards/EMS 标准

EN 61000-3-2	Harmonic current emissions
EN 61000-3-3	Voltage fluctuations & flicker
EN 61000-4-2	Electrostatic Discharge(ESD): 8kV air discharge, 6kV contact discharge
EN 61000-4-3	Radio-Frequency Electromagnetic Field Susceptibility Test-RS
EN 61000-4-4	Electrical Fast Transient/Burst-EFT
EN 61000-4-5	Surge Immunity Test: Differential mode $\pm 1\text{kV}$, Common mode $\pm 2\text{kV}$
EN 61000-4-6	Conducted Radio Frequency Disturbances Test-CS
EN 61000-4-8	Power Frequency Magnetic Field Test
EN 61000-4-11	Voltage Dips

8. Safety Standards/安规标准

8.1. Dielectric Strength(Hi-pot)/介电耐压强度(高压)

Primary to Secondary: 3000Vac / 3.5mA / 60second(3second for production)
or 4242Vdc / 3.5mA / 60second(3second for production)

初级对次级: 3000Vac / 3.5mA / 60 秒(生产时高压测试时间: 3 秒)

或 4242Vdc / 3.5mA / 60 秒(生产时高压测试时间: 3 秒)

8.2. Leakage Current/漏电流

0.25mAmax. at 250Vac / 50Hz/在输入 250Vac/50Hz 的条件下最大 0.25mA

8.3. Insulation Resistance/绝缘阻抗

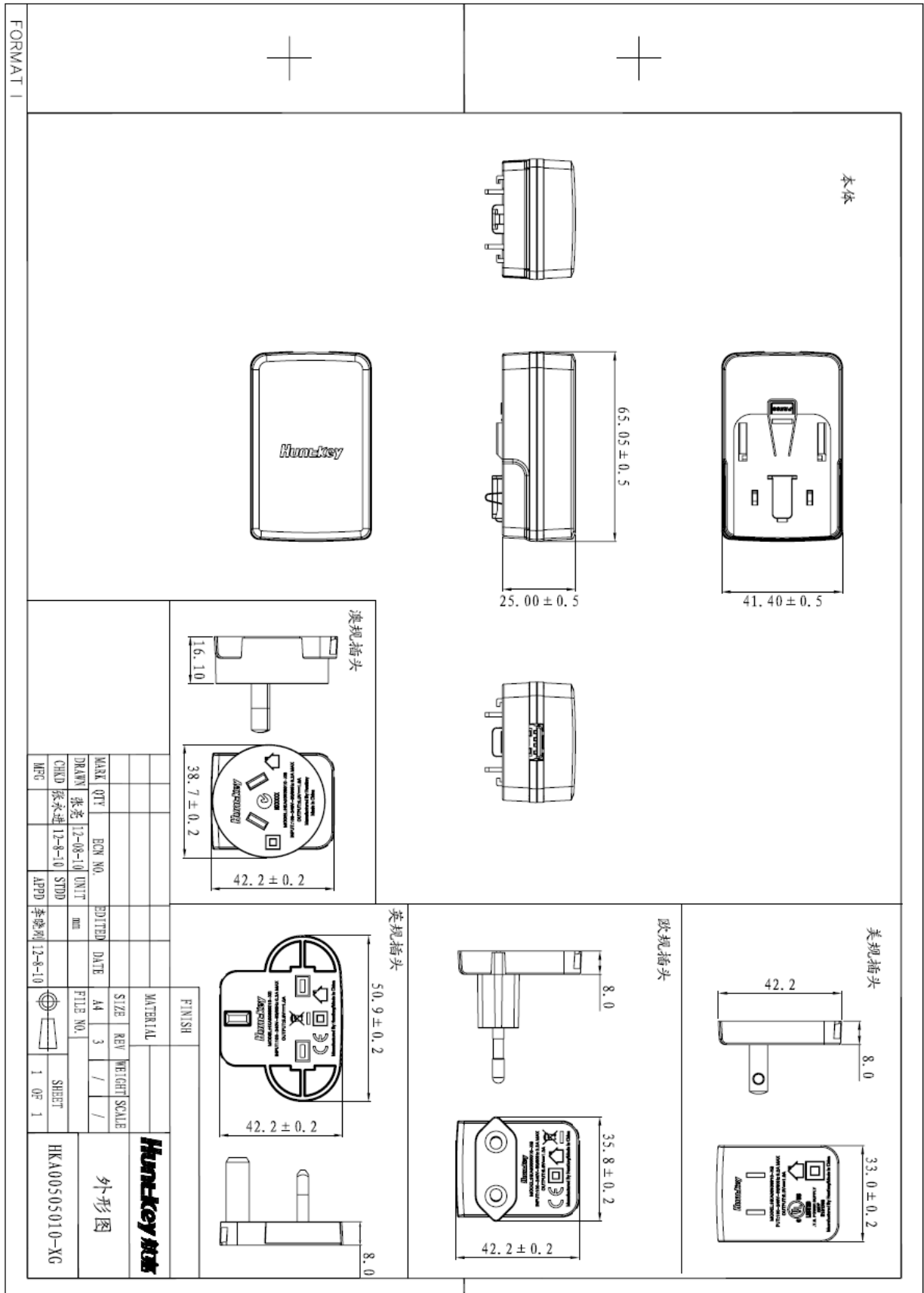
100M Ω min. at primary to secondary add 500Vdc test voltage

在初级与次级间加 500Vdc 进行测试，绝缘阻抗最小 100 MΩ。

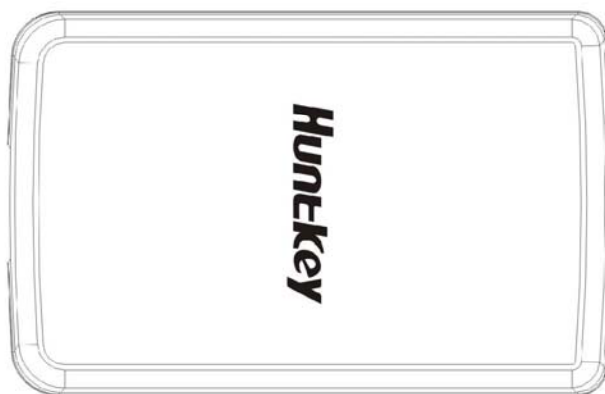
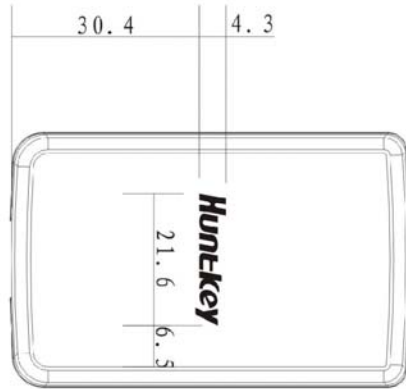
8.4. Regulatory Standards/安规标准

Type	Country	Standard	Type	Country	Standard
<input type="checkbox"/> UL/CUL	USA	UL60950-1	<input type="checkbox"/> PSB	Singapore	IEC60950-1
<input type="checkbox"/> TUV	Europe	EN60950-1	<input type="checkbox"/> PSE	Japan	J60950
<input type="checkbox"/> CCC	China	GB4943	<input type="checkbox"/> NOM	Mexico	NOM-001
<input type="checkbox"/> CE	Europe	EN60950-1	<input type="checkbox"/> GOST	Russia	MEK60950
<input type="checkbox"/> C-Tick	Australia	AS/NZS 3548			

9. Mach. Outline Drawing/外观图



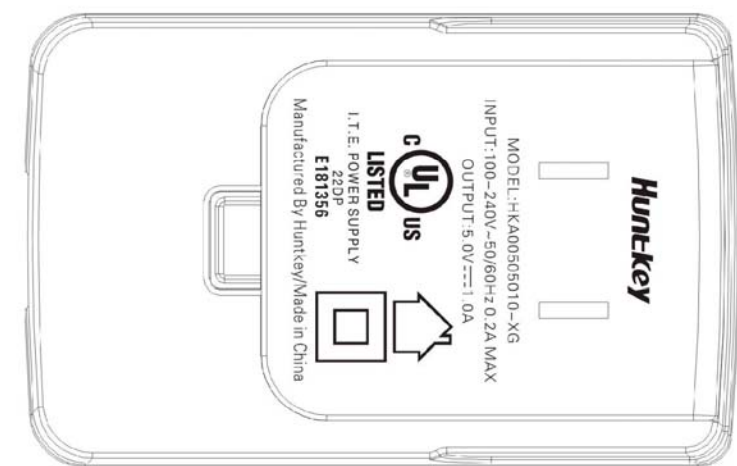
变更日期	标记	处数	变更描述



技术要求:

- 1、 镭雕;
- 2、 字体清晰、颜色均匀、无毛边,用50g砂纸耐酒精擦拭50次无不良;
- 3、 未标注公差: +/-0.5.

Huntkey 航嘉		MATERIAL	镭雕	MATERIAL
SHEET	1 OF 1	MATERIAL No.	FILE NAME	BKX0959501-0-26 (体字字上盖)
UNIT	mm	SCALE	DATE	2012.06.21
DESIGNED	陈真	CHECKED	王新军	秦文刚
				李晓刚
				FILE No.

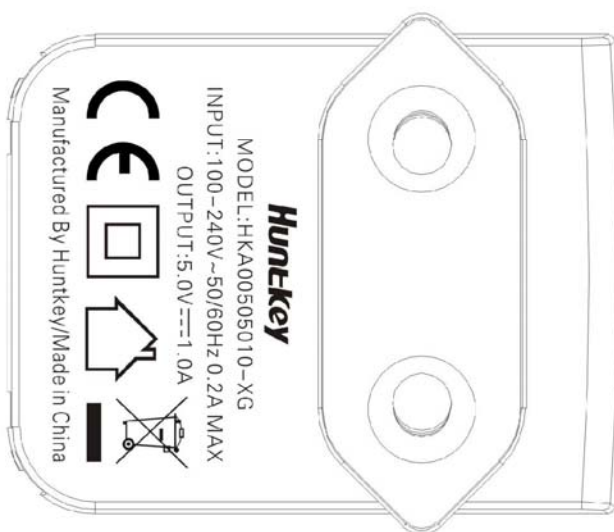
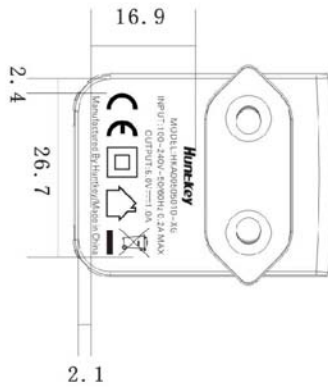


- 技术要求:
- 1、 镭雕;
 - 2、 字体清晰、颜色均匀、无毛边,用50g砵码耐酒精擦拭50次无不良;
 - 3、 未标注公差: +/-0.5.

变更日期	标记	处数	变更描述

Huntkey 航嘉		MATERIAL	镭雕	MATERIAL
SHEET	1 OF 1	MATERIAL No.	FILE NAME	
UNIT	mm	SCALE	DATE	2012.06.21
DESIGNED	陈真	CHECKED	王新军	CHECKED
			秦文刚	APPROVED
			李晓明	FILE No.
				1

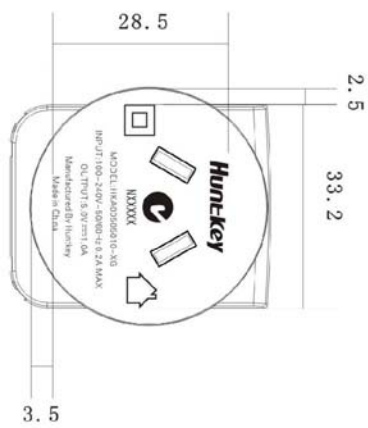
变更日期	标记	处数	变更描述



- 技术要求:
- 1、 镭雕;
 - 2、 字体清晰、颜色均匀、无毛边,用50g砵码耐酒精擦拭50次无不良;
 - 3、 未标注公差: +/-0.5.

Huntkey 航嘉		MATERIAL	镭雕	MATERIAL
SHEET	1 OF 1	MATERIAL No.	FILE NAME	HKA00505010-XG (体字下盖)
UNIT	mm	SCALE	DATE	2012.06.21
DESIGNED	陈真	CHECKED	王新军	秦文刚
				李晓刚

变更日期	标记	处数	变更描述



- 技术要求:
- 1、镗雕;
 - 2、字体清晰、颜色均匀、无毛边,用50g砂纸耐酒精擦拭50次无不良;
 - 3、未标注公差: +/-0.5.

Huntkey 航嘉		MATERIAL	镗雕	MATERIAL					
SHEET	1 OF 1	MATERIAL No.	FILE NAME	HKA00505010-96 (体京华下盖)					
UNIT	mm	SCALE	DATE	2012.06.21					
DESIGNED	陈真	CHECKED	王新军	CHECKED	秦文刚	APPROVED	李晓刚	FILE No.	1

10. Packing Drawing/包装图

尺寸范围 (mm)	公差
0.5-10	+0.5
10-100	+1.0
100-200	+1.5
200-500	+2.0
500以上	+3.0

打栈板方式：需交错咬合放置，需要采用围膜、为角一个整体。带进行保护，使货物包装与托盘成堆高不高于4层

1PCS成品 装入PPE袋

1PCS

每层25PCS, 共4层

采用“工”字型封箱

变更日期	标记	处数	变更描述

Huntkey 航嘉		MATERIAL	外箱	MATERIAL	
SHEET	5 OF 5	MATERIAL No.	365-60420000R	FILE NAME	HKA00505010-XG
UNIT	mm	SCALE	/	DATE	2012.08.08
DESIGNED	CHECKED	CHECKED	秦文刚	APPROVED	FILE No.
陈寅飞	张永进				