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规 格 书

SPECIFICATION

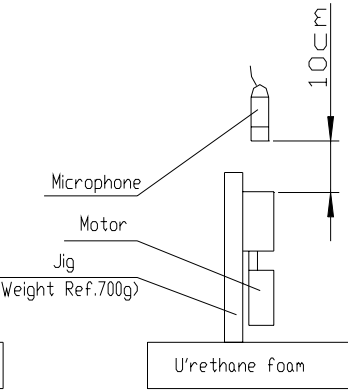
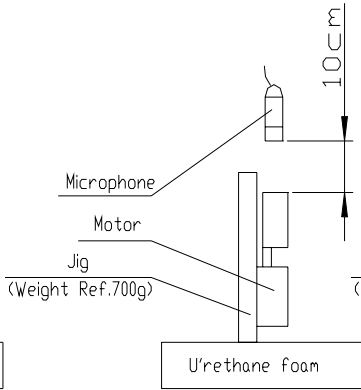
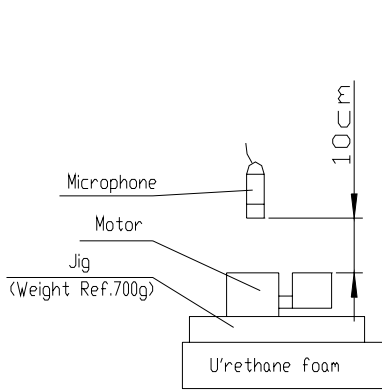
客 户 信 息	客户名称/Customer	
	客户料号/Part No.	
	客户承认签章 Customer Approved Signatures	

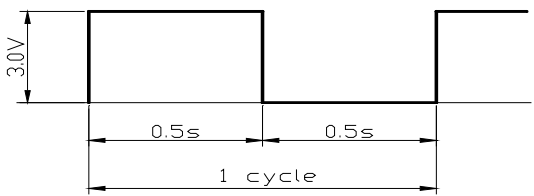
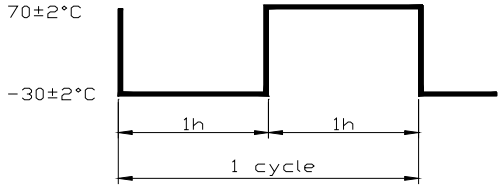
文件编号/Spec No.	KOTL-B-749	
品名/Description	圆柱直流马达/Cylindrical DC motor	
型号/Part No.	Z4TL2B124064X	
设计/Designed	审核/Checked	批准/Approved
		
2009.05.15	2009.05.15	2009.05.15

规格书内容/Contents

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2009.05.15		规格书/Specification	编号/No KOTL-B-749	代码/code:0	3/9																																
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1. 适用范围/ General Scope																																					
本规格书适用于圆筒式永磁直流电机 Z4TL2B124064X 型																																					
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标准测试条件为温度 20℃，湿度 65%。如无疑异，也可在温度 5~35℃、湿度 45~85%的条件下测试。马达测试时，放置方向为轴向水平。/The measurement at 20℃ & 65%RH is standard. If the judgment is not questionable, recognize measurement at 5℃ to 35℃ & relative humidity 45% to 85%. Direction of motor is shaft horizontal.																																					
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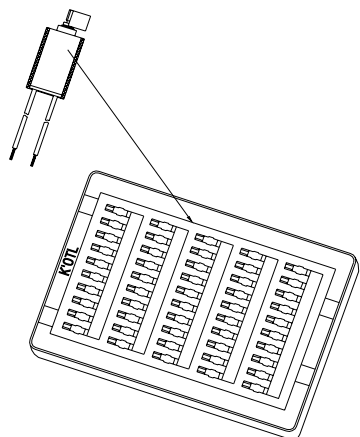
2009.05.15		规格书/Specification	编号/No KOTL-B-749	代码/code:0	4/9
5.性能特征/Performance and characteristics					
项目/Item		规格/ Specifications	条件·备注/ Conditions & Remarks		
5-1	额定转速 Rated speed	15,000±2500 rpm	在额定电压和额定负载（振子）下。 At rated voltage and rated load (Counterweight).		
5-2	额定电流 Rated current	80 mA Max			
5-3	堵转电流 Stall current	105 mA Max	在额定电压下。 At rated voltage		
5-4	起动电压 Starting voltage	2.0V DC Max	在额定负载（振子）下电枢的任意位置。 At rated load (Counterweight) any position of rotor.		
5-5	绝缘电阻 Insulation resistance	1MΩ Min	在 100V 直流下，端子和机壳间 At DC 100V between Terminal and case.		
5-6	端子阻抗 Terminal resistance	35Ω (±20%)	在 20℃ 下 At 20℃		
5-7	机械噪音 Mechanical noise	50dB(A)Max			
	在额定电压、额定负载（振子）下 背景噪音：不大于 28dB.A 计权 测试仪器：B&k 夹具重量：700g At rated voltage and rated load (Counterweight). Back ground noise 28dB(A) Max Measuring instruments: B&k Weight of jig:700g 				

2009.05.15		规格书/Specification		编号/No KOTL-B-749		代码/code:0		5/9	
6. 可靠性/Reliability									
项目/Item		规格/ Specifications						判定标准/Judgment	
6-1	寿命 Life time							试验后,马达应符合项 7-1 的要求。 After the test, motors shall be approved as specified in item 7-1.	
		位置 Position	电压 Volt	负荷 Load	温度 Temp	湿度 Humi	寿命 Life		
		轴水平 Horizon	额定 Rated	振子 Weight	20℃	65%	200,000 Cycles		
6-2	低温放置 Low temp exposure	温度 /Temperature: $-40\pm 2^{\circ}\text{C}$ 时间 /Time: 96h						在常温常湿下放置 2h 后, 马达应符合项 7-2 的要求。 After 2 hours exposure in ordinary temperature and humidity, Motors shall be approved as specified in item 7-2.	
6-3	高温放置 High temp. Exposure	温度 /Temperature: $80\pm 2^{\circ}\text{C}$ 时间 /Time: 96h							
6-4	湿度放置 Humidity exposure	温度 /Temperature: $40\pm 2^{\circ}\text{C}$ 湿度 /Humidity: $90\sim 95\%\text{RH}$ 放置时间 /Exposure time: 96h 无水气凝结/No condensation of moisture							
6-5	振动 Vibration	全振幅 /Displacement : 1.5mm (p-p) 频率 /Frequency: 10 ~ 55Hz 加速度 /Acceleration: 22m/s^2 周期 /Period: 20min 完成 10~55~10Hz /20 Minutes log sweep10~55~10Hz 方向 /Direction: x, y, z 时间 /Time: 每个方向 2h /Each 2 hours						测试结果应符合项 7-2 的要求。 After the test motors shall be approved as specified in item 7-2.	
6-6	自然跌落 Free fall	试验状态/Test state:将马达固定在约 100 克 (包括马达本身) 的物体上, 落向水泥地面。 Set the motor to the approximately 100g (include the motor) weight of block drop the motor on the concrete floor. 高度 /Height: 1.5m 方向 /Direction: 6 个面 / 6 faces 次数 /Number of times: 每个面 2 次 / Twice 2 each						测试结果应符合项 7-2 的要求。 After the test motors shall be approved as specified in item 7-2.	
6-7	热冲击 Heat shock test	试验循环 /Test cycle :20 cycles 						在常温常湿下放置 2h 后, 马达应符合项 7-2 的要求。 After 2 hours exposure in ordinary temperature and humidity, Motors shall be approved as specified in item 7-2.	

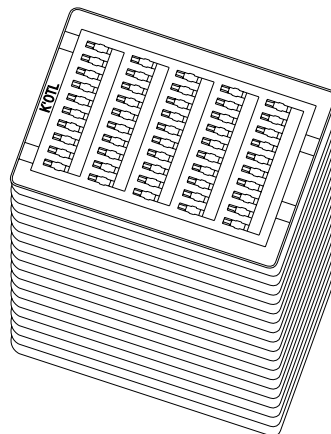
项目/Item		判定基准 / Requirements
7-1	表 A Table A	1) 额定转速/Rated speed: 不低于初始值-30%,不高于初始值+60% Initial data -30% Min, Initial data +60% Max 2) 额定电流/Rated current: 不大于初始值±30%/Initial data±30% max 3) 起动电压/Starting voltage: 2.4V DC Max
7-2	表 B Table B	1) 额定转速/Rated speed: 不大于初始值±30%/Initial data±30% max 2) 额定电流/Rated current: 不大于初始值±30%/Initial data±30% max 3) 起动电压/Starting voltage: 2.4V DC Max

8-6 马达轴向间隙处不应有杂物（如颗粒、纤维物、头发、胶带、胶水等）(There should be no sundries (such as grain, fibre, hair, small tape, glue etc.) in the shaft end play.)

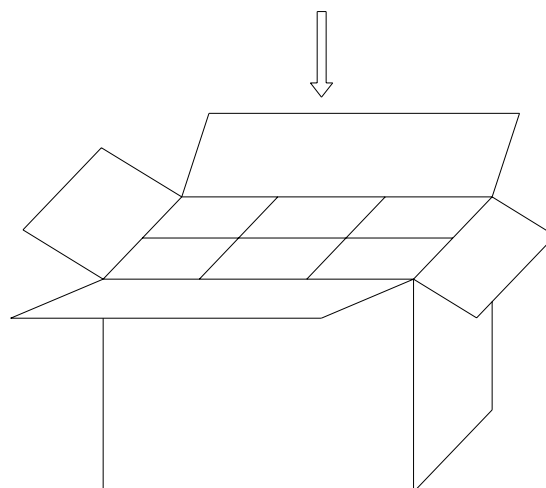
4mm(L型) 圆柱马达包装 Packaging drawing of 4mm cylindrical motor



50PCS(1 tray) × 20



1000PCS(1 bundle) × 6

**包装试验要求****1. 标准**

- (1) 整箱重量小于等于9kg的, 跌落高度设定为75cm.
(2) 整箱重量大于9kg但小于等于23kg的, 跌落高度设定为60cm.

2. 试验方法:

跌落要求为六面三棱一角.

- (1) 六面: 先从最大两面跌, 然后是中间大小的两面, 最后跌最小的两面, 一共六次.
(2) 三棱: 指任选三条同一角的棱, 跌落秩序: 最长棱, 中间长度, 最短的, 一共三次.
(3) 一角: 指上一步三条棱所组成的角, 跌落一次.

3. 判定基准

经过跌落试验后, 产品外观、性能无不良。

Package Test Requirement:**1. Criteria**

- (1) The weight of the whole carton less than 9kg, the dropping height is 75cm.
(2) The weight of the whole carton more than 9kg and less than 23kg, the dropping height is 60cm.

2. Test Methods:

Dropping requirement is 6 faces, 3 arris, 1 angle.

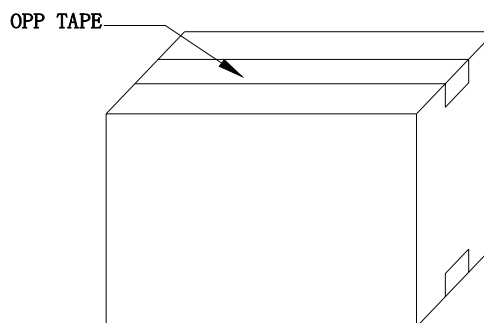
- (1) 6 faces: First dropping with two biggest faces, then dropping with another two middle faces, at last dropping with two smallest faces, once per face, total 6 faces.
(2) 3 arris: Choose any 3 arris which make up of the same the angle, the dropping sequence is the longest arris, middle arris, shortest arris. Total 3 times.
(3) 1 angle: Point to the angle which is made up with the 3 arris in the above step. Dropping for 1 time.

3. Judgement Criterion

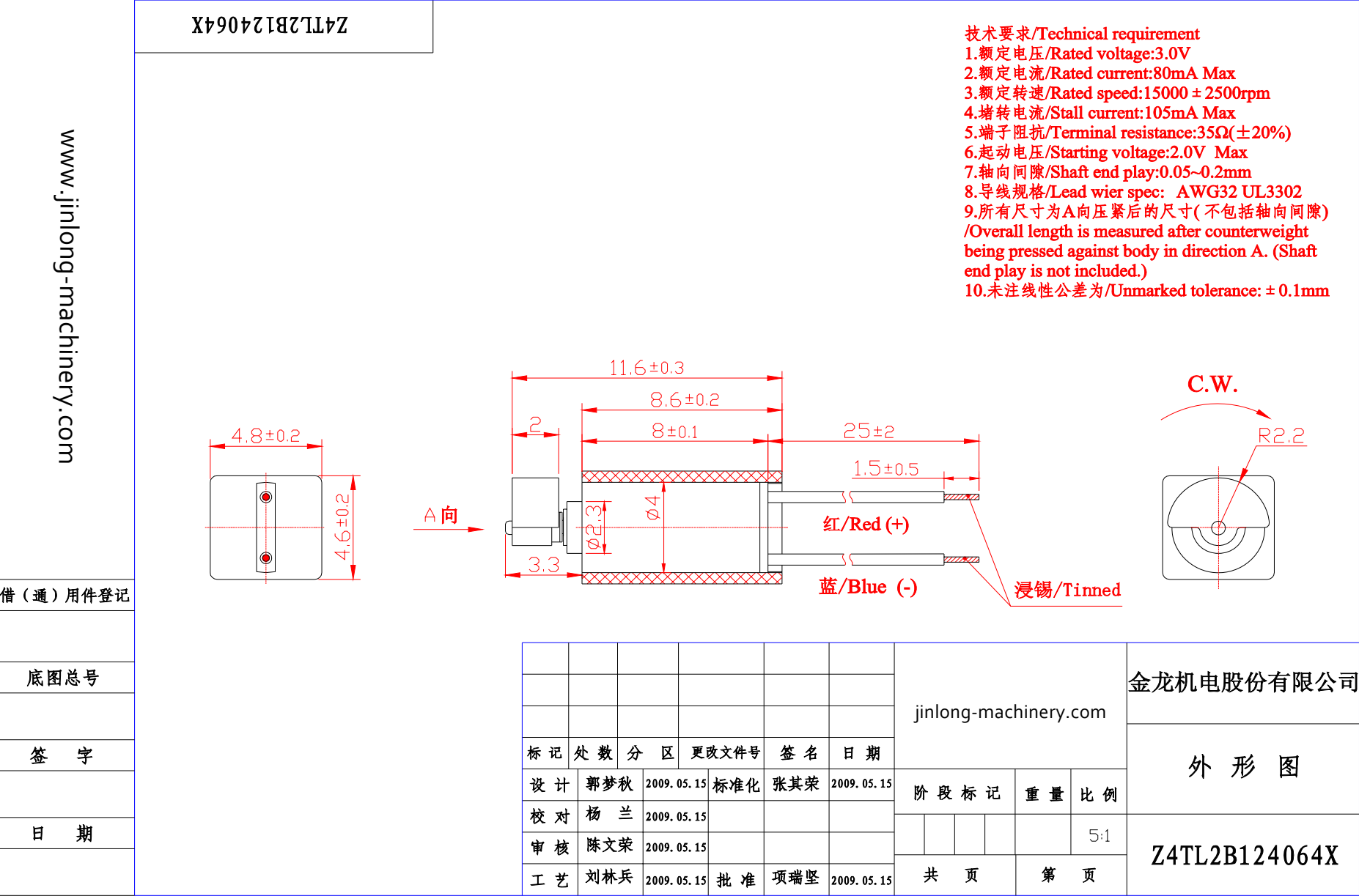
After drop test, no evidence of damage on the appearance and performance.

Remarks:

1000PCS/CTN: 23.5cm × 17cm × 27cm
2000PCS/CTN: 33.5cm × 23.5cm × 27cm
4000PCS/CTN: 46.5cm × 33.5cm × 27cm
6000PCS/CTN: 50.5cm × 46.5cm × 27cm



10. 外形图/Outline Drawing



2009.05.15

说明书/Specification

编号/No K0TL-B-749

代码/code:0

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