LJ DEVICE CO., LTD.

力 臻 股 份 有 限 公 司
LJ DEVICE CO., LTD.

零 件 規 格 書/承 認 書
SPECIFICATION FOR APPROVAL

CUSTOMER : _____

DESCRIPTION : φ10* 3.0mm , COIN TYPE

MODEL : FG-B1030L27B

CUSTOMER PART NO : _____

APPROVED SIGNATURES

Rev	Date	Description	Designed	Checked	Approved
A	2010/3/26	Release		Kevin	

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规格书内容
Contents of specifications

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1. 适用范围/General

本说明书适用于扁平式永磁直流电机 C1030B 系列.

This specification applies to coin permanent-magnetic motors DC model C1030B series

2. 使用条件/Operating condition

项目/Item		规格/Specification
2-1	额定电压 Rated voltage	3.0V DC
2-2	使用电压范围 Operating voltage	2.7～3.3V DC
2-3	旋转方向 Rotation	CW(clockwise) or CCW(contrary clockwise)
2-4	使用环境 Operating environment	-20～+60℃,Ordinary Humidity
2-5	保存环境 Storage environment	-30～+70℃,Ordinary Humidity

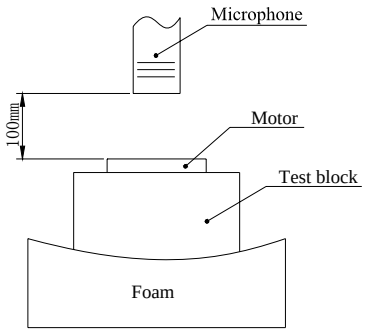
3. 测定条件/Measuring condition

项目/Item		规格/Specification
3-1	温度 Temperature	25±3℃
3-2	湿度 Humidity	65±20% RH
3-3	气压 Air pressure	1013±40 hPa
3-4	电流 Current	稳压直流电流 Stabilized DC current

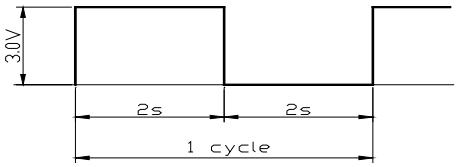
4. 初期电气性能/Electrical initial characteristics

项目/Item		规格/Specification	条件/Condition
4-1	额定转速 Rated speed	9000rpm Min	额定电压下 At rated voltage
4-2	额定电流 Rated current	90mA Max	
4-3	起动电流 Starting current	100mA Max	在最小起动电压下起动 Motor is rotating at min starting voltage.
4-4	起动电压 Starting voltage	2.3V DC Max	
4-5	绝缘电阻 Insulation resistance	10MΩ Min	在 100V 直流下，导线和机壳间 At DC 100V between lead wire and case.
4-6	端子阻抗 Terminal resistance	31Ω±15% (单相) 59Ω±15%(双相)	在 25℃下 At 25℃

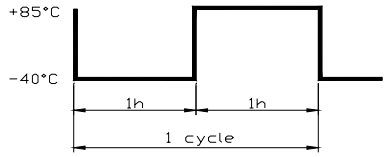
5.机械性能/Mechanical characteristics

项目/Item		规格/Specification
5-1	底盖偏转强度 Bracket deflection strength	9.8N 以上 9.8N or more
5-2	机械噪音 Mechanical noise	小于 50 分贝.A 计权 50dB(A)Max
	在额定电压下。 At rated voltage 背景噪音：不大于 28dB.A 计权 Back ground noise 28dB(A) Max  	

6.耐久性能/Durability characteristics

项目/Item		规格/Specification	判定标准/Judgment
6-1	寿命 Life	 试验循环 /Test cycle：50,000 cycles	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.

项目/Item		规格/Specification	判定标准/Judgment
6-2	低温放置 Low temp exposure	温度 /Temperature : -30℃ 时间 /Time : 96h	在常温常湿下放置 4h 后，马达应符合项 7-2 的要求。 After 4 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 : +70℃ 时间 /Time : 96h	
6-4	湿度放置 Humidity exposure	温度 /Temperature : +40℃ 湿度 /Humidity : 95%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 :10min 范围内 （10～55～10Hz） /10 Minutes log sweep (10～55～10Hz) 条件 /Condition : 在样机中，在 3 个垂直的轴方向每个方向做 10 分钟的测试。 /This motion shall be applied for a period of 10 minutes in each of 3 mutuallyperpend axis.	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 :±x.±y.±z 次数 /Number of times:每个方向 3 次 /Each 3 times 冲击 /Shock :29420m/s^2 相当 /Equivalent（3000G）	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 stock test	 试验循环 /Test cycle :15 cycles	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.

7. 要求/Requirements

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+50% data-30% Initial Min data+50% Initial Max 2)额定电流/Rated current : 不低于初始值-30%; 不高于初始值+50% data-30% Initial Min data+50% Initial Max 3)端阻/Terminal resistance : 不大于初始值±15% /Initial data±15% Max 4)起动电压/Starting voltage :不大于 2.5V 直流电压 2.5V DC Max 5)绝缘电阻/Insulation resistance :大于 10MΩ 10MΩ Min
7-2	表 B Table B	1)额定转速/Rated speed : 不大于初始值±20% /Initial data±20% Max 2)额定电流/Rated current :不大于初始值±20% /Initial data±20% Max 3)起动电压/Starting voltage :不大于 2.5V 直流电压 2.5V DC Max 4)端阻/Terminal resistance : 不大于初始值±15% /Initial data±15% Max

8. 使用时注意事项/ **Notice**

8-1 必须按照规格书标准使用,否则性能和寿命都将受到相当地减少，必须注意电压的使用范围。
Please apply motors in accordance with specifications, especially aware of ranges of operation voltage, or its performance and life durability may be considerably reduced.

8-2 建议马达在六个月内内使用,不要在以下环境中使用及保存：
1. 高温和高湿的场所；
2. 腐蚀性气体,如：H_2S、SO_2、NO_2、Cl_2；
3. 生锈场所。

It is suggested that motors should be used within 6 months, not preserved in the following environment:
1. High damp and temperature areas.
2. Corrosive gas places such as H_2S、SO_2、NO_2、Cl_2.
3. Easily rusty areas.

8-3 注意处理马达的工作环境，避免含铁质等物体被马达吸住，否则马达将会产生噪声，性能会降低，从而减少产品可靠性。
Please pay much attention to the working environment to avoid iron sundries from being sucked in the motors, possible to trigger noise, reduce performance, and decrease reliability

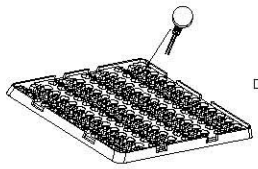
8-4 应确信本产品不会与相关标准、法律、政令相背。
It is assured of this product not violated whatever standards, laws or any political agreements

8-5 拿马达时，要轻拿轻放。
Be careful to take and put down motors slightly.

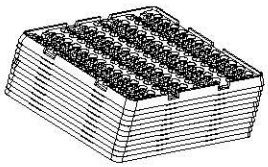
8-6 钢板面或边缘有少许锈斑是允许的。
It is allowed to have a little rust on the brim of steel plate.

8-7 因为测试设备可能有误差，所以±5％的转动频率偏差是允许的。
It is allowed to have a tolerance of ±5% vibration frequency due to testing machine errors

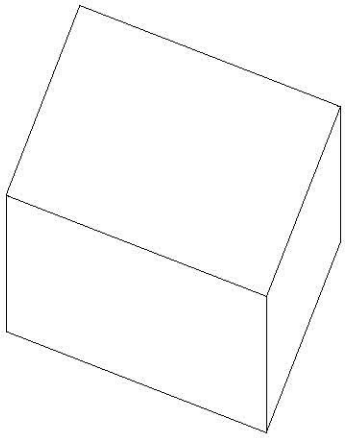
扁平系列马达包装
Pack drawing of coin type



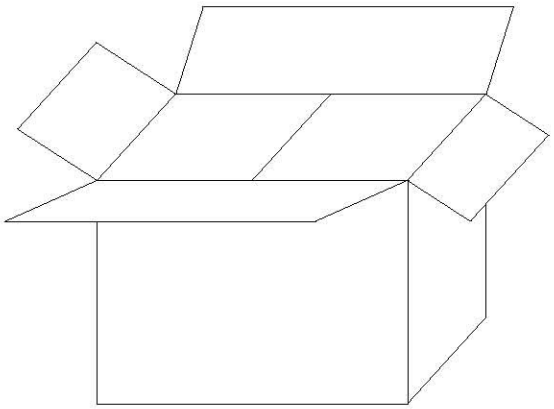
100PCS(1 tray)×10



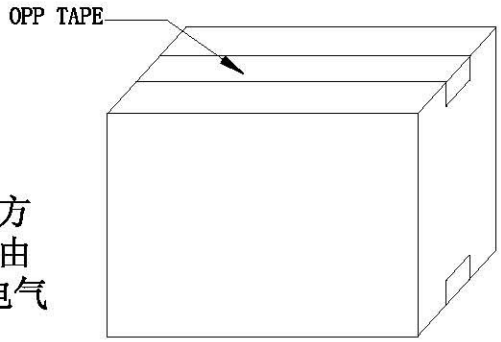
1000PCS(1 bundle)



1 box×2



Remarks:
4000PCS/CTN:45cm×28cm×20cm
6000PCS/CTN:45cm×28cm×30cm

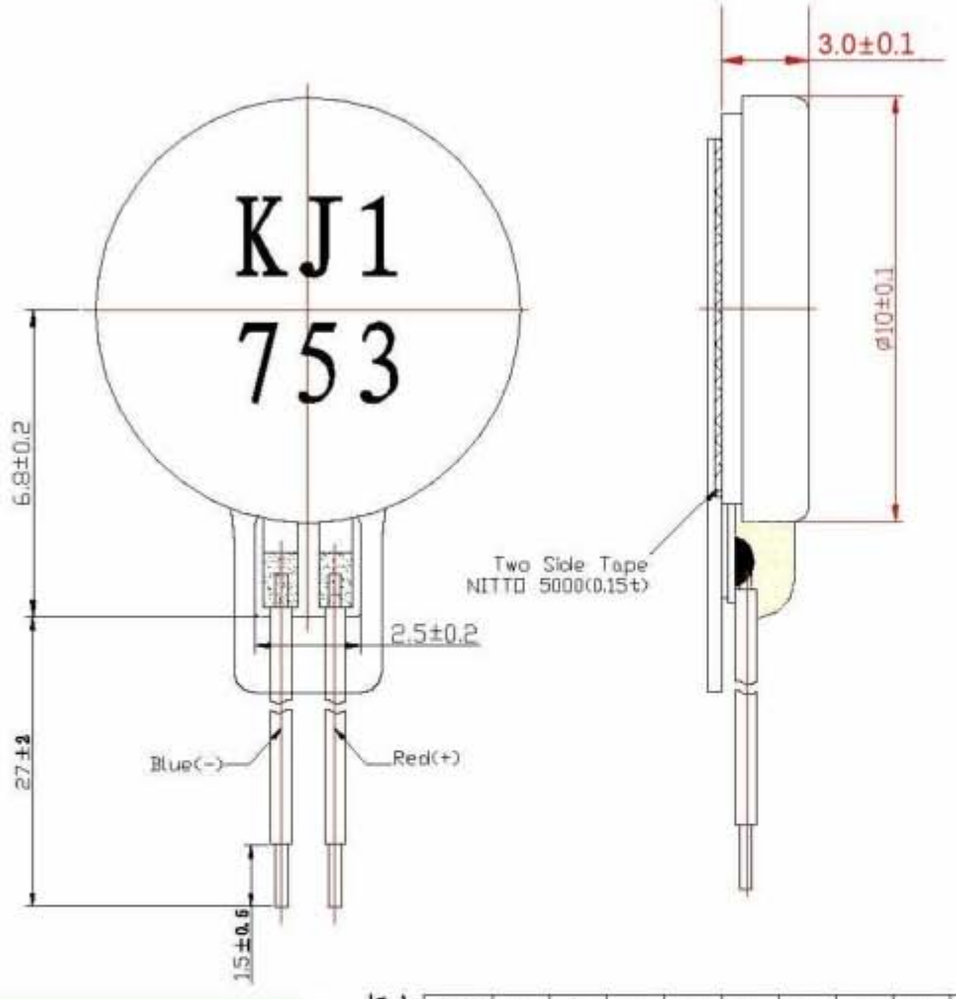


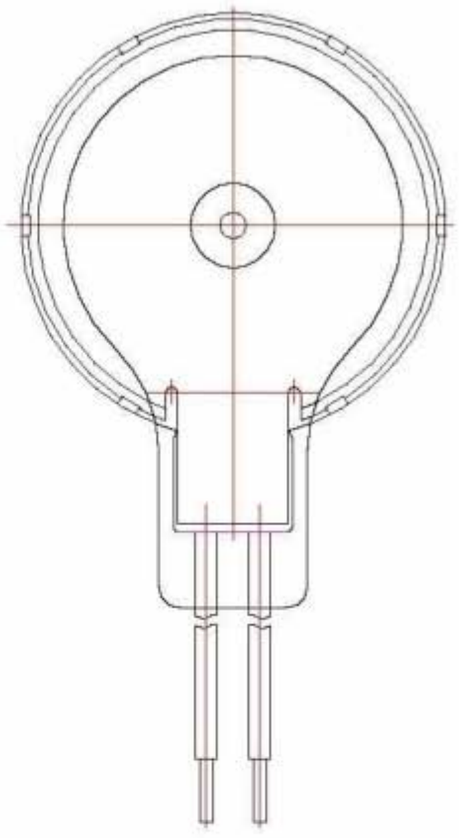
包装试验要求:

沿外包装箱±x,±y和±z方向,距水泥地面1.5m高度,各自由跌落2次,马达应无机械损伤,电气性能仍符合标准要求。

RevNO.	REVISION NOTE	DATE	SIGNATURE	CHECKED
1				
2				

NO.	PART NAME	QUANTITY	MATERIAL	FINISH	REMARKS
1					
2					

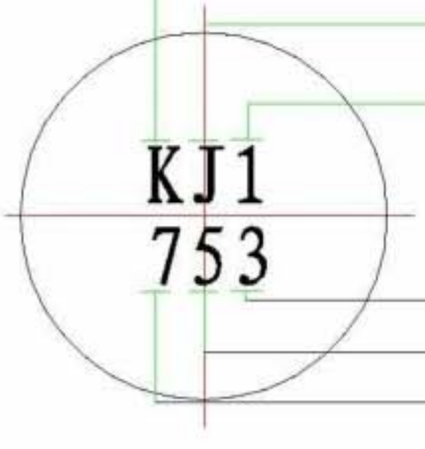




技术要求/Technic requirment

1. 额定电压/Rate voltage: 3.0V
2. 额定电流/Rate current: 90mA Max
3. 额定转速/Rate speed: 9,000r/min Min
4. 起动电压/Starting voltage: 2.3V Max
5. 端子阻抗/Terminal resistance:
   31Ω±15% (单相/single resistance)
   59Ω±15% (双相/compose resistance)
6. 在100V直流下，导线和机壳间绝缘电阻/
   At DC 100V, that lead wire and case thin out the insulation resistance: ≥10MΩ
7. 导线规格/Lead spec: AWG32 UL1571
8. 未注公差/Unmark tolerance: ±0.1

标志 印字	A	B	C	D	E	F	G	H	I	J
马达型号 马达型号	1234 3V	1227 3V	1234 1.3V	1034 3V	1030 3V	1027 3V	1227 1.3V	1034 1.3V	0634 3V	1020 3V



马达型号

生产线:["1"表示"生产一线",以此类推]

周:[3表示为该月的第三周,以此类推]

月:[1-9月份用该月数字、10月用"A"表示、11月用"B"表示、12月用"C"表示]

年:[取末位数字(例如7表示2007年、以此类推)]

HARDNESS	ANGLE	TOLERANCE	MATERIAL	SCALE	DATE
	3rd	±0.1/±0.5°		1:0/1	071205
DESIGNED BY	CHECKED BY	APPROVED BY			
WZX	SJS	LDL			

FG-B1030L27B