



# 产品规格书

PRODUCT SPECIFICATION

客户名称Buyer Name	
客户料号Buyer Part No.	
客户承认签章 Buyers Approval & Signatures	

文件编号Spec No.		版本	A/0
品名描述 Product Description	圆柱直流马达 Cylindrical DC motor		
型号Part No.	Z4TL2B06200043P		
送样日期Date			
设计Designed by	审核Checked by	批准Approved by	
陳满	陈满	陈满	
2019.09.04	2019.09.04	2019.09.04	

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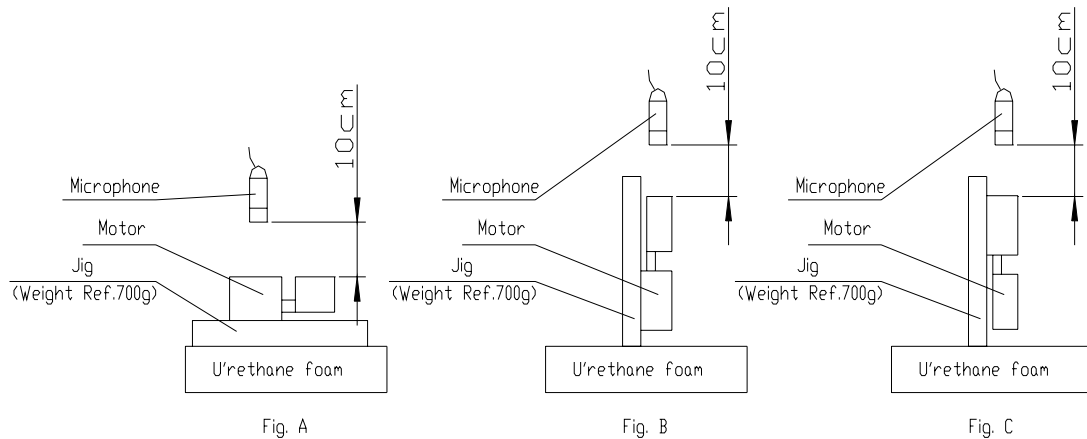
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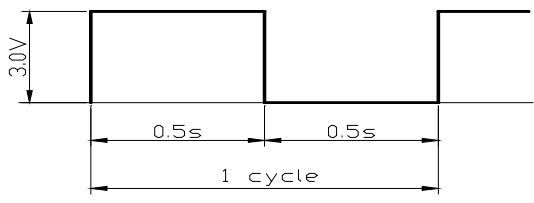
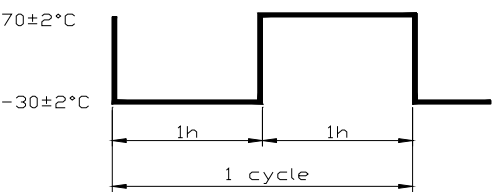
## 5.性能特征/Performance and characteristics

项目/Item		规格/ Specifications	条件·备注/ Conditions & Remarks
5-1	额定转速 Rated speed	8,000±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	12 mA Max	
5-3	启动电流 Starting current	20 mA Max	在额定电压下。 At rated voltage
5-4	起动电压 Starting voltage	2.4V 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	170Ω (±20Ω)	在 20℃ 下 At 20℃
机械噪音 Mechanical noise		45dB(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

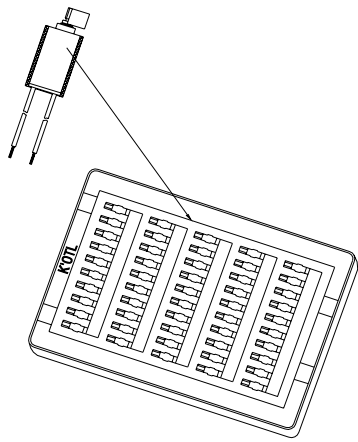
5-7



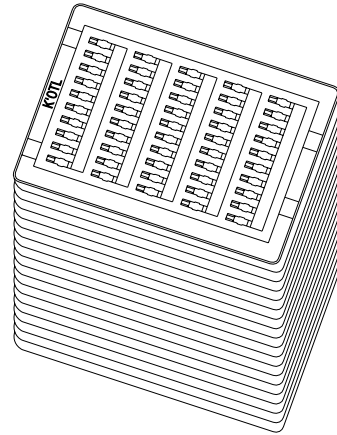
2019.09.04		规格书/Specification		编号/No		代码/code:0		5/9	
6. 可靠性/Reliability									
项目/Item		规格/ Specifications						判定标准/Judgment	
6-1	寿命 Life time							试验后, 马达应符合项 7-1 的要求。 After the test, motors shall be approved as specified in item 7-1.	
		位置 Position	电压 Volt	负荷 Load	温度 Temp	湿度 Humi	寿命 Life		
		轴水平 Horizon	额定 Rated	振子 Weight	20°C	65%	200,000 Cycles		
6-2	低温放置 Low temp exposure	温度 /Temperature:	-40±2°C				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±2°C						
6-4	湿度放置 Humidity exposure	湿度 /Humidity:	90~95%RH						
6-4		放置时间 /Exposure time:	96h						
6-4		无水气凝结 /No condensation of moisture							
6-5	振动 Vibration	全振幅 /Displacement :	1.5mm (p-p)				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.		
6-5		频率 /Frequency:	10 ~ 55Hz						
6-5		加速度 /Acceleration:	22m/s <sup>2</sup>						
6-5		周期 /Period:	20min 完成 10~55~10Hz						
6-5		方向 /Direction:	x, y, z						
6-5		时间 /Time:	每个方向 2h /Each 2 hours						
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。				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		高度 /Height:	1.5m						
6-6		方向 /Direction:	6 个面 / 6 faces						
6-6		次数 /Number of times:	每个面 2 次						
6-6		次数 /Twice 2 each							
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.		
6-7		70±2°C							
6-7		-30±2°C							



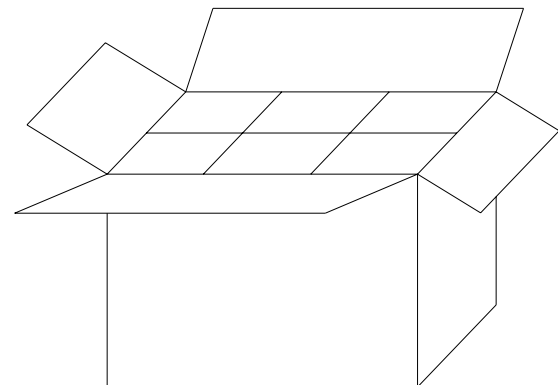
## 4mm(L型) 圆柱马达包装 Packaging drawing of 4mm cylindrical motor



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 arsis, 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 arsis: Choose any 3 arsis which make up of the same the angle, the dropping sequence is the longest arsis, middle arsis, shortest arsis. Total 3 times.
- (3) 1 angle: Point to the angle which is made up with the 3 arsis 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

OPP TAPE

