



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.	VZ3TH5B3120076P		
送样日期Date			
设计Designed by	审核Checked by	批准Approved by	
邵梦利	陈文军	王新军	
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www.vybronic.com

sales@vybronic.com

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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 VZ3TH5B3120076P 型

This specification applies to cylindrical permanent-magnetic motors DC model VZ3TH5B3120076P

2. 使用条件/Operating Conditions

项目/Item	规格/Specifications	条件·备注/Conditions & Remarks
2-1 额定电压 Rated voltage	3.0V DC	
2-2 额定负荷 Rated load	振子 Counterweight	见 10. 外形图 As specified in 10. Outline Drawing
2-3 旋转方向 Rotation	C.W/C.C.W (clockwise or counter clockwise)	
2-4 马达位置 Motor position	全方位 All position	
2-5 使用电压范围 Operating voltage	2.5~3.6V DC	
2-6 使用环境 Operating environment	-20 ~ 60℃, 常 湿 /Ordinary Humidity:10~90%RH	无水气凝结 No condensation of moisture
2-7 保存环境 Storage environment	-30 ~ 80℃, 常 湿 /Ordinary Humidity:10~90%RH	无水气凝结 No condensation of moisture

3. 测定条件/Measuring Conditions

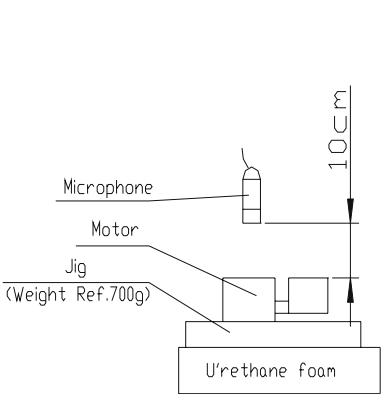
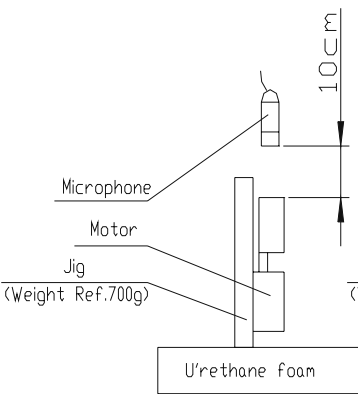
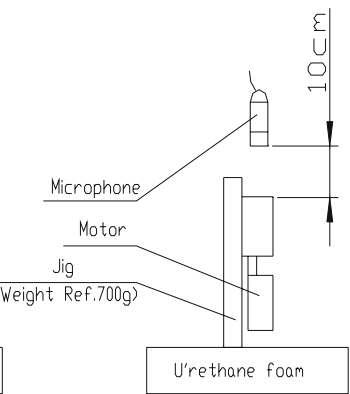
项目/Item	规格/Specifications	条件·备注/Conditions & Remarks
3-1 温度 Temperature	20±5℃	
3-2 湿度 Humidity	65±15%RH	
3-3 位置 Motor position	轴向水平 Motor shaft horizontal	将马达固定在试验台上 Lock the motor in a test fixture

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.

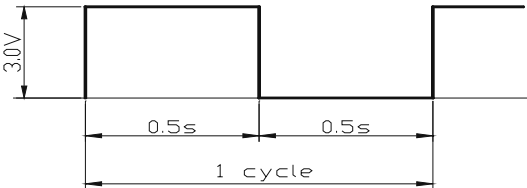
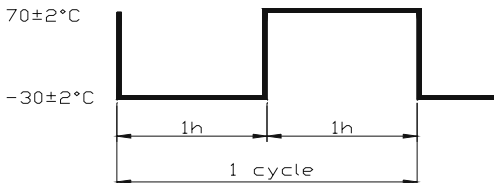
4. 机械要求/Mechanical Specifications

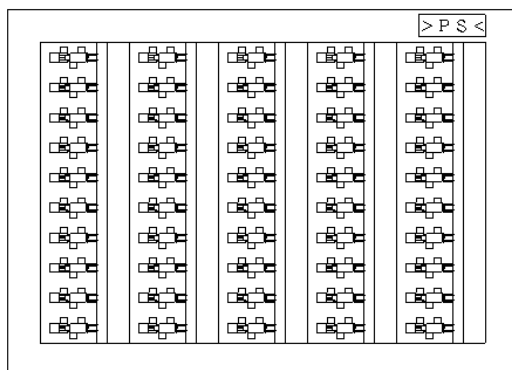
项目/Item	规格/Specifications	条件·备注/Conditions & Remarks
4-1 结构 Configuration	见外形图 As specified in outline drawing	Outline drawing No: VZ3TH5B3120076P
4-2 外观 Appearance	不含有机机械损坏及不适当的浸蚀等。 There shall be no evidence of mechanical damage and shall not have inadequate corrosion and so on	目测（容许范围根据样品外形） Visual examination(allowable extent is based on boundary sample)
4-3 轴向间隙 Shaft end play	0.05mm~0.2mm	
4-4 振子固定力 Holding strength of vibration weight	19.6N Min	

5.性能特征/Performance and characteristics

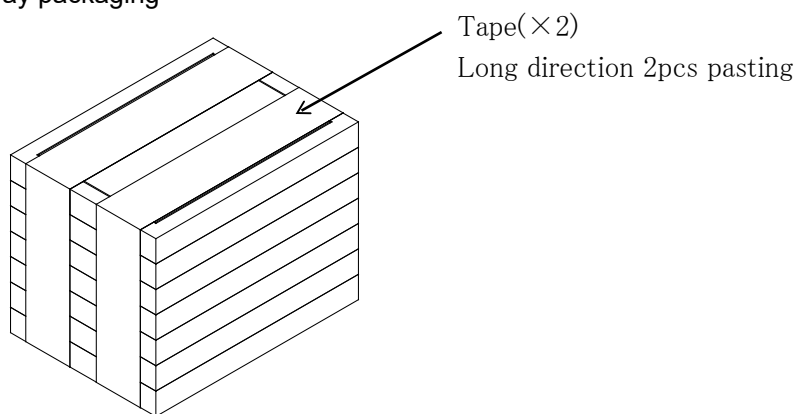
项目/Item		规格/ Specifications	条件·备注/ Conditions & Remarks
5-1	额定转速 Rated speed	8,500±2500 rpm	在额定电压和额定负载（振子）下。 At rated voltage and rated load (Counterweight).
5-2	额定电流 Rated current	16 mA Max	
5-3	启动电流 Starting current	20 mA Max	在额定电压下。 At rated voltage
5-4	起动电压 Starting voltage	2.5V DC Max	在额定负载（振子）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	165Ω (±15Ω)	在 20℃ 下 At 20℃
5-7	机械噪音 Mechanical noise	45dB(A)Max	
	<p>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</p> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>Fig. A</p> </div> <div style="text-align: center;">  <p>Fig. B</p> </div> <div style="text-align: center;">  <p>Fig. C</p> </div> </div>		
5-8	振动量 Vibration Strength	0.50 Grms	

6. 可靠性/Reliability

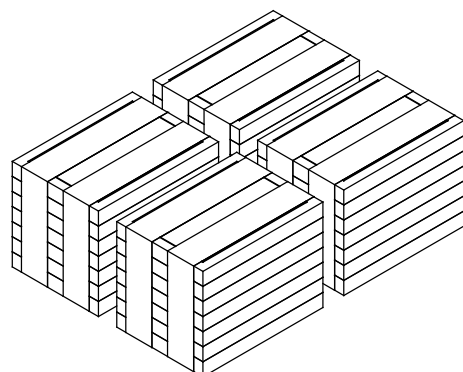
项目/Item		规格/ Specifications					判定标准/Judgment	
6-1	寿命 Life time						试验后, 马达应符合项 7-1 的要求。 After the test, motors shall be approved as specified in item 7-1.	
		位置 Position	电压 Volt	负荷 Load	温度 Temp	湿度 Humi		寿命 Life
		轴水平 Horizon	额定 Rated	振子 Weight	20℃	65%		200,000 Cycles
6-2	低温放置 Low temp exposure	温度 /Temperature: $-40\pm 2^{\circ}\text{C}$ 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.	

9. 包装/Packaging
9-1 Motor packaging


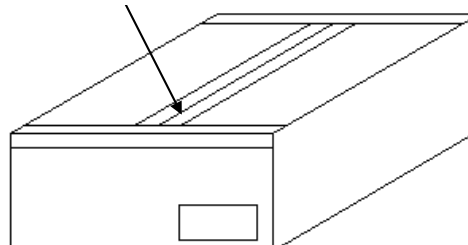
Tray	Size	230×165×35 (mm)	Material	Styrofoam
	Qty	50 pcs		

9-2 Tray packaging


Packaging block	Qty	50pcs×7trays=350pcs
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9-3 Carton packaging


Tape:
I type pasting



Carton box	Size (inside)	470×340×235(mm)	Material	Double-wall cardboard box
	Q'ty	350 pcs ×4 sets=1400 pcs		

The heaping up number of carton box is less than five boxes.

10. 外形图/Outline Drawing
