



捷宜电子有限公司

JIE YI ELECTRONICS LIMITED

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	扁平振动马达 Coin Type Vibration Motor		
型号Part No.	JYC1434		
送样日期Date			
设计Designed by	审核Checked by	批准Approved by	
		SAMPSON	
		2018/08/16	

JIE YI ELECTRONICS LIMITED
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1. 使用条件 / Operating condition

序号/No.	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	3.0-3.7V DC
2-3	旋转方向 Rotation	C.W/C.C.W (clockwise or counter clockwise)
2-4	马达位置 Motor position	全方向 All direction
2-5	使用环境 Operating environment	-10~60°C, 10%RH~90% RH 无水气凝结 /No coagulation of moisture
2-6	贮存环境 Storage environment	-30~70°C, 5%RH~95% RH 无水气凝结 /No coagulation of moisture

2. 测试条件 / Test condition

序号/No.	项目/Item	规格/Specification
3-1	温度 Temperature	20±2°C
3-2	湿度 Humidity	63%RH~67% RH
3-3	位置 Motor position	轴向水平(电机固定在测试夹具中) Motor shaft horizontal.(Lock the motor in a test fixture)

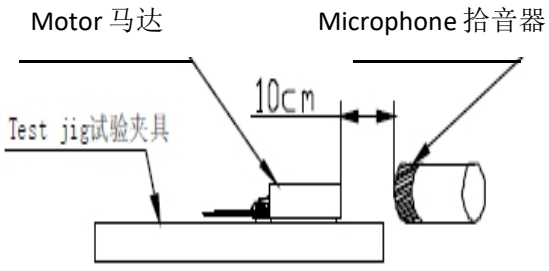
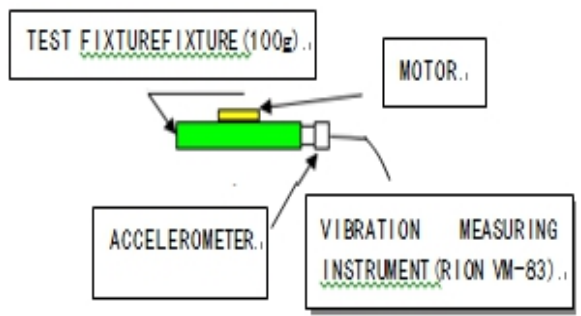
标准测试条件为温度20°C，湿度65%RH。如无疑异，也可在温度5~35°C、湿度45RH~85%RH的条件下测试。马达测试时，放置方向为轴向水平。

The measurement at 20°C & 65%RH is standard. If the judgment is not questionable, recognize measurement at 5°C to 35°C & relative humidity 45%RH to 85%RH. Direction of motor is shaft horizontal.

3. 性能特性 / Performance and characteristics

序号/No.	项目/Item	规格/Specification
4-1	额定转速 Rated speed	11000±2000 rpm
4-2	额定电流 Rated current	90 mA Max
4-3	起动电压 Starting voltage	2.3V DC Max, 在额定负载下转子的任意位置。 At rated load any position of rotor.
4-4	绝缘电阻 Insulation resistance	10MΩ Min,在100V 直流下, 端子和机壳间。 At DC 100V between Terminal and case.
4-5	端子阻抗 Terminal resistance	30Ω ±20% 《AT 20°C/在20°C》

4. 机械特征/Mechanical properties

序号/No.	项目/Item	规格/Specification	测定条件/备注 Measuring conditions/Remark
5-1	机械噪音 Mechanical noise	小于 50 分贝, A 计权 50dB(A)Max	见下图: See below
	额定电压下, 背景噪声 ≤ 28 dB (A), 电机轴向水平固定在测试夹具上 (100g), 拾音器沿轴向正对电机平面, 距离 10cm At rated voltage and scene noise as 28dB(A)Max, the shaft is horizontally fastened to the test jig (100g). The Microphone faces the plane of motor along the shaft. The distance is 10cm.		 <p>Motor 马达 Microphone 拾音器</p> <p>Test jig 试验夹具</p> <p>10cm</p>
5-2	振动量 Vibration quantity	RMS 4.5G Min EQ p-p 13G Min	测定方法 METHOD: 见下图: See below
	把马达用双面胶粘贴在测试治具上, 在额定电压 3.0V 下正常旋转而测定 The motor is fixed on the test fixture with double-sided adhesive and rotated normally at rated voltage of 3.0V.		 <p>TEST FIXTURE (100g) ..</p> <p>MOTOR ..</p> <p>ACCELEROMETER ..</p> <p>VIBRATION MEASURING INSTRUMENT (RION VM-83) ..</p>

序号/No.	项目/Item	规格/Specification	备注 / Remark
5-3	轴向脱出力 Shaft output	$\geq 500\text{gf}$	
5-4	底壳偏转力 Bottom deflection	$\geq 500\text{gf}$	

5. 可靠性/Reliability

序号 /No.	项目/Item	规格/Specification
6-1	循环寿命试验：开/关测试 Cycle life test no/off test	<p>在常温常湿下,马达接入额定电压 3.0V,2 秒接通,1 秒断开,为一个回转周期,共循环 50000 次。</p> <p>Under normal temperature and humidity, the motor is connected to the rated voltage 3.0V, turned on for 2 seconds, and turned off for 1 second, which is a rotation cycle, with a total cycle of 50,000 times.</p>
6-2	低温贮存放置 Low temperature storage test	温度Temperature: $-30 \pm 2^{\circ}\text{C}$ 时间Time: 72h
6-3	高温贮存放置 High temperature storage test	温度Temperature: $70 \pm 2^{\circ}\text{C}$ 时间Time: 72h
6-4	湿度放置 Humidity exposure	温度Temperature: $40 \pm 2^{\circ}\text{C}$ 湿度Humidity: 90RH~95%RH 放置时间Exposure time: 72h
6-5	跌落实验 Drop test	<p>把马达安置在一个手机模型中 (100g), 手机模型的 6 个面分别从 1.5 米的高度自由落地 3 次。</p> <p>The motor is placed in a mobile phone model (100g). The six sides of the mobile phone model land freely 3 times from a height of 1.5 meters.</p>

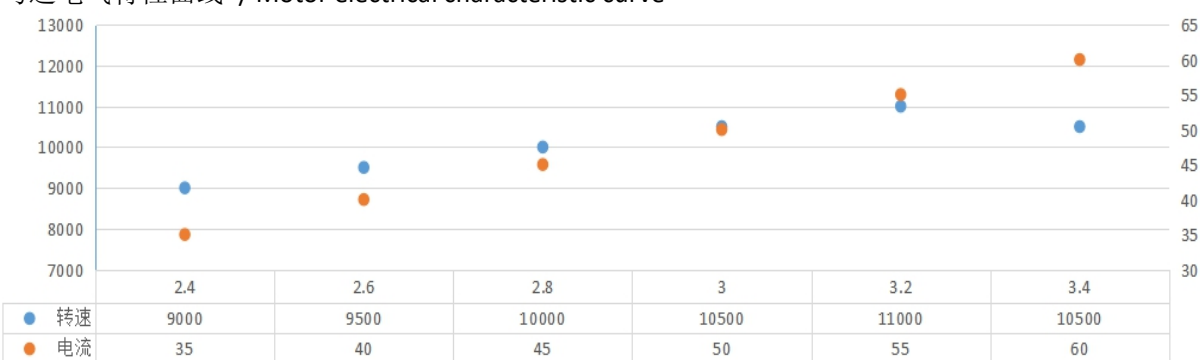
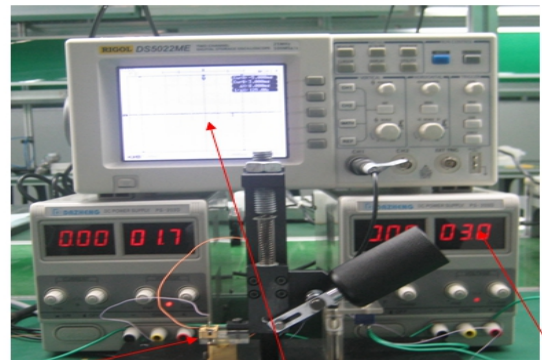
序号 /No.	项目/Item	规格/Specification
6-6	可靠性试验结果判定标准 Judgement standard	1、 在常温常湿下放置2h后, 电机性能应符合以下要求: 1) 额定转速、额定电流: 指标在初始值±30%以内; 2) 终端电阻: 指标在初始值±10%以内; 3) 起动电压: 2.3V DC Max直流电压. 2、 测试时用肉眼外观检查时不就有外观变形、龟裂及部品的破损; 1、 After 2h exposure in the ordinary temperature and humidity, the motor's performance should accord with below requirements: 1) Rated speed, Rated current: Changing rate of measured data must be within ±30% of initial value; 2) Terminal resistance: Changing rate of measured data must be within ±10% of initial value; 3) Starting voltage: 2.3V DC Max 2、 There should be no deformation, cracking and breakage of parts when tested with the naked eye visual inspection.

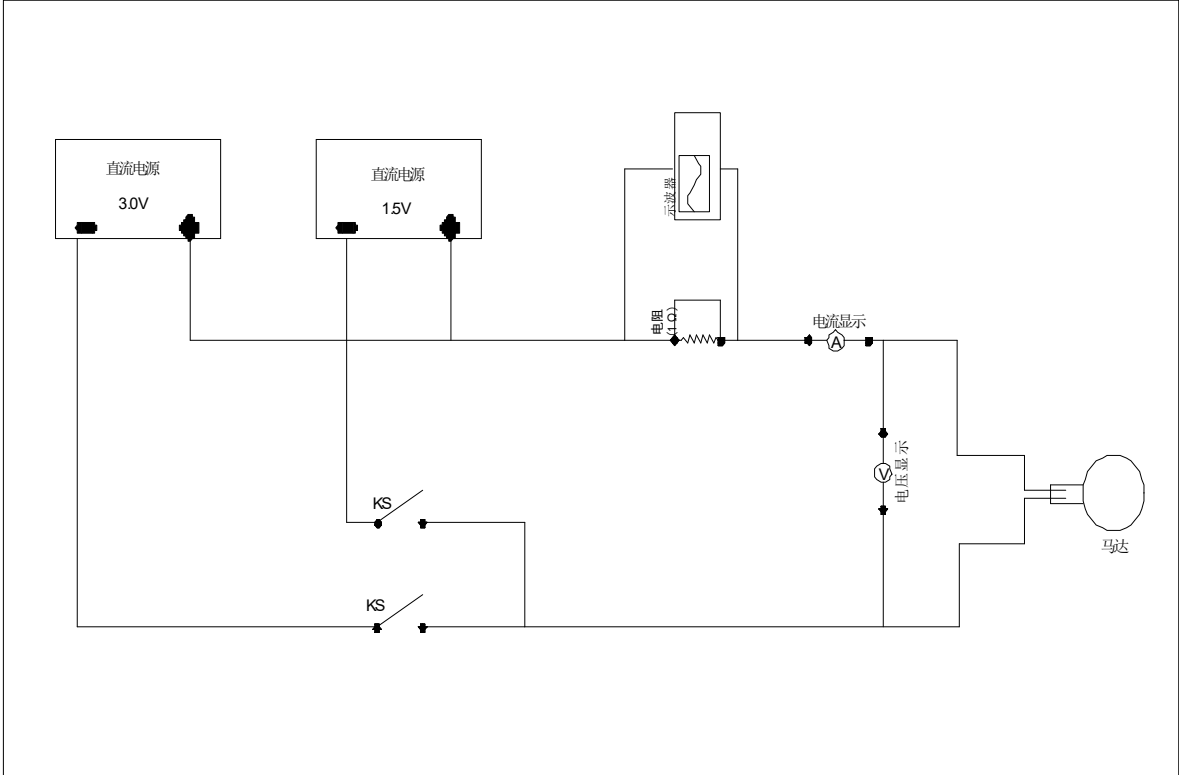
6. 注意事项 / Matters needing attention

序号/No.	项目/Item
7-1	此马达是小型精密的产品,在运输过程中,应防止落地和 0.5kgf 以上力的撞击,另外如果受到意外事件需要包装,应保证马达的电气特性无变化; The motor is a small and precise product. In the course of transportation, the impact of landing force and force above 0.5 KGF should be prevented. In addition, if the outer package needs to be replaced in case of accident, electrical characteristics of the motor should be kept unchanged.
7-2	请注意防潮 Please pay attention to moisture-proof.
7-3	应避免在下列场合中使用: 1、 高温高湿的场合; 2、 有腐蚀性气体的场合, 如 H ₂ S、SO ₂ 、NO ₂ 、CL ₂ 等; Avoid use in the following situations: 1、 High temperature and humidity; 2、 Corrosive gases, such as H ₂ S、SO ₂ 、NO ₂ 、CL ₂ ,etc.
7-4	长期在高温下工作或保存可能会使绝缘性能降低,应注意预防。 Long-term operation or preservation at high temperature may reduce insulation performance, and precautions should be taken.

序号/No.	项目/Item
7-5	<p>请不要在接近强磁场或有强磁场的仪器设备处保存或工作;</p> <p>Please do not store or work near instruments and equipment with strong magnetic field or strong magnetic field.</p>
7-6	<p>马达外壳存在泄漏磁场,使用时注意;</p> <p>Motor housing leakage magnetic field. The use of attention.</p>
7-7	<p>在工作过程中,电刷与换向器之间可能会发生细微的电气噪声;</p> <p>In the work process, fine electrical noise may occur between the electric brush and the commutator.</p>
7-8	<p>包装方法:由使用者确认;</p> <p>Packaging method: determined by the user</p>
7-9	<p>变更或增加规格书内容, 由双方协商并实施;</p> <p>Change or Increase the content specification, implementation and consultation by both parties.</p>

7、电气特性检测 / Electrical characteristics test

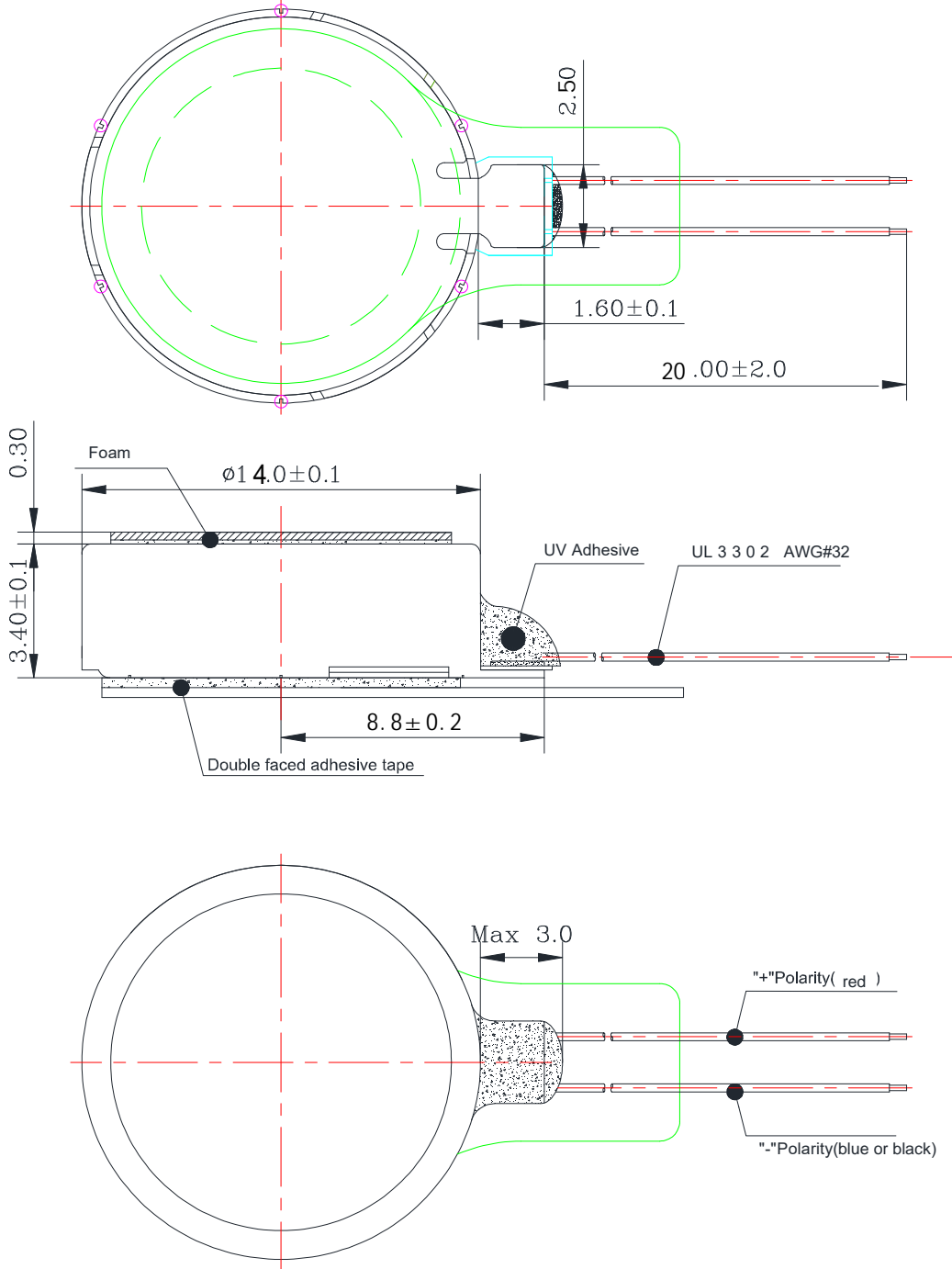
序号/No.	项目/Item																					
8-1	<p>马达电气特性曲线 / Motor electrical characteristic curve</p>  <table border="1"> <thead> <tr> <th></th> <th>2.4</th> <th>2.6</th> <th>2.8</th> <th>3</th> <th>3.2</th> <th>3.4</th> </tr> </thead> <tbody> <tr> <td>● 转速</td> <td>9000</td> <td>9500</td> <td>10000</td> <td>10500</td> <td>11000</td> <td>10500</td> </tr> <tr> <td>● 电流</td> <td>35</td> <td>40</td> <td>45</td> <td>50</td> <td>55</td> <td>60</td> </tr> </tbody> </table>		2.4	2.6	2.8	3	3.2	3.4	● 转速	9000	9500	10000	10500	11000	10500	● 电流	35	40	45	50	55	60
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8-2	<p>标准测试方法 / Standard test method</p>  <p style="text-align: center;"> 马达安装装置 马达回转速脉冲显示 电流/电压显示 </p>																					

序号/No.	项目/Item
8-3	<p>测量方法回路图 / Measurement circuit diagram</p>  <p>The diagram illustrates a measurement circuit. It features two DC power sources: a 3.0V source and a 15V source. The 3.0V source is connected to a resistor labeled '电阻' (Resistor) and a '电流显示' (Current display) unit. The 15V source is connected to a switch labeled 'KS'. The circuit also includes a '电压显示' (Voltage display) unit connected in parallel with the motor, labeled '马达' (Motor). Another switch labeled 'KS' is connected to the common ground of the circuit.</p>

8.外形图/Outside View

NO.	图号	零件名称	数量	材料	备注
1					
2					

- Technical Requirements:
1. Rated Voltage: 3.0 V
 2. Rated Current: 90 mA (Max)
 3. Rated Speed: 11000±2000rpm
 4. Started Current: 2.3 V (Max)
 5. Terminal Resistance: 30±20% Ω
 6. Vibration Force (Grms): 4.5
 6. Rotation: CW/CCW



硬度	投影角 第一角	未注公差 $\pm 0.05 / \pm 0.5$	材料	比例 10/1	日期 2018/08/16
设计	审核	批准	名称	扁平震动马达	
JIE YI ELECTRONICS LIMITED			型号	JYC1434	
			图号		