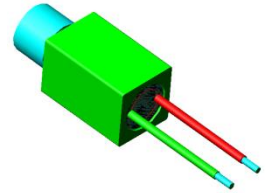


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 规 格 书

 SPECIFICATION



顾客名称/Customer			
文书编号/Spec NO.			
机型/Model	0408RN-3V		
作成/Written	设计/Designed	审核/Checked	承认/Approved
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2008.04.09	2008.04.11	2008.04.11	2008.04.12

顾 客 承 认 Customer Approved	
顾客机型/Customer Model	顾客承认/Customer Approved

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1.使用范围

Scope

This section motor is suitable for the mobile phone and the pagers
This specification book only uses in this company 0408RN-3V MOTOR

内 容

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2. 使用条件 operating conditions

番号 No.	项 目 I t e m s	规 格 Specification
2-1	额定电压 Rated voltage	DC 1.3 V
2-2	额定回转速 Rated speed	9,000rpm (normal)
2-3	额定电流 Rated current	95 mA (normal)
2-4	回转方向 Rotating direction	CW / CCW 全方向 CW / CCW all directions
2-5	使用电压范围	DC 1.0 ~ 1.6 V
2-6	Voltage range for use 许用温度范围	1) 工作温度范围 : -20℃ ~ 60℃ Working temperature
2-8	标准存放条件 Standard depositing condition	2) 存放温度范围 : -40℃ ~ 80℃ Storage temperature 正常温度正常湿度存放 Measure at normal temperature and humidity

3. 测试条件 Measuring conditions

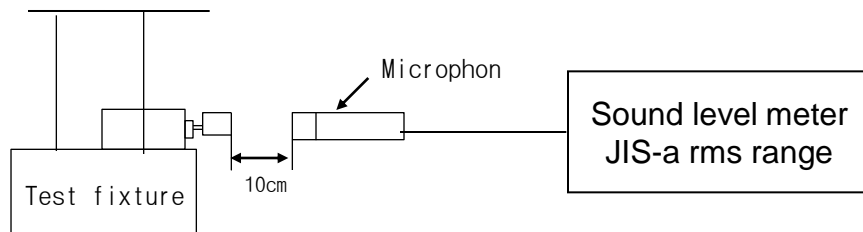
番号 No.	项 目 I t e m s	规 格 Specification
3-1	温度 Temperature	20±5℃
3-2	湿度 Humidity	(65±5%)RH
3-3	马达状态 Motor position	马达固定在测定夹具中保证输出轴水平 The motor fixes in determines in the jig to guarantee the output shaft level
所有数据测试请参考 (3-1,3-2) All data test please refer (3-1,3-2,3-3)		

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4. 电气性能
Electrical characteristics

番号 No.	项 目 Items	规 格 Specification	测 定 条 件 Measuring condition
4-1	额定电流 Rated load	95 mA max.	在额定电压,额定负荷下(摆锤重) At rated voltage and rated load
4-2	额定回转速 Rated speed	9000 ± 2000 rpm.	在额定电压下测定 Measure at rated voltage
4-3	启动电流 Starting current	130 mA max.	在额定电压输出轴堵转 At rated voltage and shaft lock
4-4	启动电压 Starting voltage	0.95 V max.	在额定负荷下转子的任意位置 At rated load (counter weight) any Position of rotor
4-5	电枢阻抗 Armature resistance	(12Ω ± 20% max.)	AT 20°C
4-6	绝缘强度 Insulation resistance	10 MΩ min.	端子和马达外壳引加 DC 100V电压 Supply with DC 100V between a terminal and case of motor
	机械噪音 Mechanical noise	45 dB(A) max.	背景噪音在25 dB (A)测定 Back ground noise: 25 dB(A) max.

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5. 机械特性
Machinery characteristics

番号 No.	项 目 Items	规 格 Specification	测定条件 Condition remark
5-1	重量 Weight	1.0±0.5gf	
5-2	轴向游隙 End play	0.3mm max	轴向游动的距离 Distance of axial play on shaft
5-3	外观 Appearance	没有机械的损害痕迹,并且也没有腐蚀痕迹等 Does not have the machinery the harm trace, and has not corroded the trace and so on	目视检查 Visual check

6. 寿命实验
Life test

1). 寿命实验条件:

Life test condition

- 引加电压:DC1.3V Test voltage:DC1.3V
- 1周期实验条件:2Sec回转, 2Sec停止 1cycle test condition: 2Sec. on, 2Sec. off

2). 测定条件根据50,000周期实施后, 满足表1的评价项目.

Should be satisfied with evaluation items of table1. after 50,000 cycles as following operating condition.

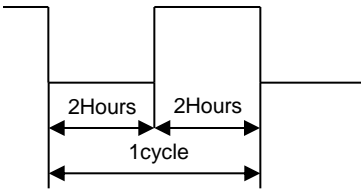
表1. 评价项目

Table1. Evaluation items

番号 No.	项 目 Items	规 格 Specification
6-1	额定电流 Rated current	与初期值对比(±35%)以内 Not exceed (±35%) from the initial value
6-2	额定回转速 Rated speed	回转速的变化在初期值的(-30%,+60%)以内 Exceed (-30%,+60%) from the initial value
6-3	启动电压 Starting voltage	启动电压最大值为1.1V (开,关测试) DC 2.6V max (On/Off test)

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7. 可靠性实验
Reliability test

番号 No.	项 目 Items	试验条件 Test condition
7-1	高温存放试验 High temperature storage test	温度:80°C±2°C ,时间:96小时放置后在常温下放置24小时以上测定. Expose to 80°C±2°C for 96hours and then return to normal temperture and humidity for 24hours before test.
7-2	低温存放试验 Low temperature Storage test	温度:-40°C±2°C,时间96小时放置后在常温下放置24小时以上测定 Expose to -40°C±2°C for 96hours and then return to normal temperture and humidity for 24hours before test.
7-3	湿度存放实验 Humidity test	温度: 40°C,湿度90%RH,时间96小时放置后在常温下放置24小时后测试 Expose to40°C 90%RH for 96hours and then return to normal temperture and humidity for 24hours before test.
7-4	温度冲击实验 Temperature shock	实验周期时间:32cycles,Test duration 
7-5	振动实验 Vibration test	全振幅:1.5mm(p-p) / total peak amplitude 频率:10-55Hz / frequency 周期:10Min(10-55-10Hz) / period 方向: X, Y, Z / direction 实验时间: 30分钟每阶段 /test time
7-6	跌落实验 Drop test	100gf 的set安装后标准实验装备以1.5m高度X-Y-Z各方向各6面3次自由下落(总18次)后测定 Free-drop each side from 1.5m above standard test equipment (18 times) after attachment of 100gf set.

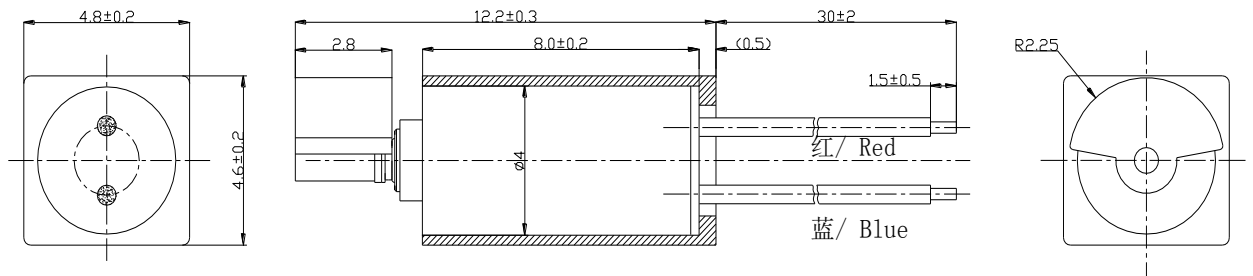
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8. 注意事项
Cautions

工作范围 Working range	<p>使用时应与规格书一致,否则马达寿命和性能会受到一定的影响(注意在工作电压和工作电流范围内)</p> <p>Unless it is used accordance with specifications, the performance and life may be considerably affected adversely. (Due attention should be to the working voltage and current range)</p>
存贮 Storage	<p>-马达避免高温,高湿,腐蚀性气体及有机气体环境下放置.室温条件下存贮 时间不超过6个月,</p> <p>-Please don't store motor under environmental conditions of high temperature, extreme humidity, corrosive gas, Organic gas. please don't store the motors for over 6motors even room conditions.</p> <p>-电路上的凝露会损坏马达或控制电路.监视环境和采取措施防止凝露,如安装传感器,必要时断开电源.</p> <p>-Condensation on the electrical circuits can destroy the motor or control circuits. Monitor the environment and undertake measures to prevent condensation, such as installing condensation sensors to cut power when necessary.</p>
操作 Handing	<p>-轻拿轻放马达,引加电压后不要经常性堵住回转轴,马达在回转时不要触碰振子(防止马达烧毁现象发生)</p> <p>-Hold the housing softly. Please don't lock the motor shaft when power is supplied and don't touch the counterweight when motor is rotating (may cause the burning problem)</p> <p>- 防止磁性物体吸引马达磁钢,如果磁性物体吸引 马达磁钢,可能导致马达停转和机械噪音发生.</p> <p>- Don't bring a magnetized object or attracted object by the motor magnet, if such object attracted by the motor magnet, motor will cause no-rotation, mechanical noise</p>

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9. 马达外型图
Outline drawings

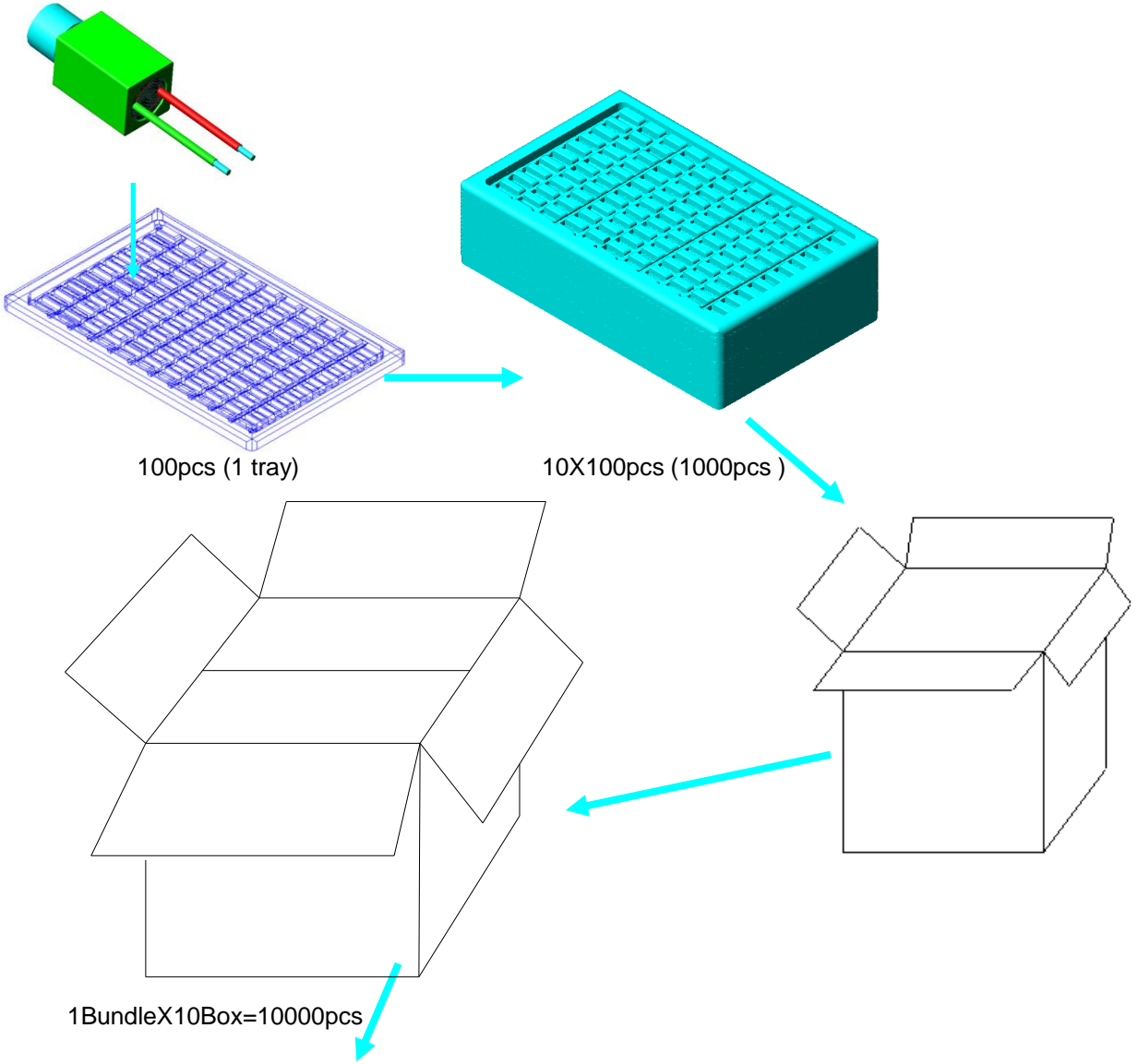


电气特性:

- 1.额定电压 (Rated Voltage) : 3.0V;
- 2.额定电流 (Rated Current) : 95 mA max;
- 3.额定转速 (Rated Speed) : 9000±2500 rpm;
- 4.启动电流 (Starting Current) : 130 mA max;
- 5.启动电压 (Starting Voltage) : 2.0V max;
- 6.电枢阻抗 (Armature resistance) : 12Ω (±20%) ;
- 7.回转方向 (Rotating direction) : CW /CCW All Direction;
- 8.使用范围 (Voltage range for use) :2.2V~3.6V

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10. 包装规格
Packing specification



■.包装跌落试验要求：
 跌落试验时沿外包装±X、±Y、±Z方向，各自由跌落2次，跌落高度1.5m，跌落试验后马达无机械损伤，符合电气性能保准要求。

