

重庆市灵龙电子有限公司

CHONGQING LINGLONG ELECTRONIC CO., LTD.

承 认 书

SPECIFICATION FOR APPROVAL

客 户Customer:

项目名称Project:


规格型号Part No:

L124035F-028010999-0001

客 户 确 认/ Customer Approved	
料 号/ Part No.	签 章/ Signatures

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	产品规格书/specification	No	LL-3-J-27150
		版本Revision	A.3
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1. 适用范围/General

本规格书适用于重庆灵龙电子有限公司所提供的产品：L124035F-028010999-0001

The specification is applicable to lnlon's part:L124035F-028010999-0001

2. 使用条件/Operating condition

No	项目/Item	规格/Specification
2-1	额定电压 Rated voltage	1.8±0.05 V RMS AC SINE WAVE
2-2	使用电压范围 Operating voltage	0.1~1.85 V RMS AC SINE WAVE
2-3	输入频率 Operational frequency	240±15 Hz
2-4	马达位置 Motor position	All positions
2-5	使用环境 Operating environment	-20~60°C, 10~90% (RH) No coagulation of moisture
2-6	保存环境 Storage environment	-30~70°C, 10~90% (RH) No coagulation of moisture

3. 测量条件/Measuring condition

一般情况下, 马达可以在5~35°C, 相对湿度45~85% (RH) 的环境中测试。为了保证一致性, 测试应在下表规定内进行Normally, it should be tested under 5~35°C, 45~85% (RH) .To ensure the coherence, it must be tested according to the below chart.

No	项目/Item	规格/Specification
3-1	温度 Temperature	25±3°C
3-2	湿度 Humidity	(63%~67%) RH
3-3	测定位置 test position	Refer Figure 1

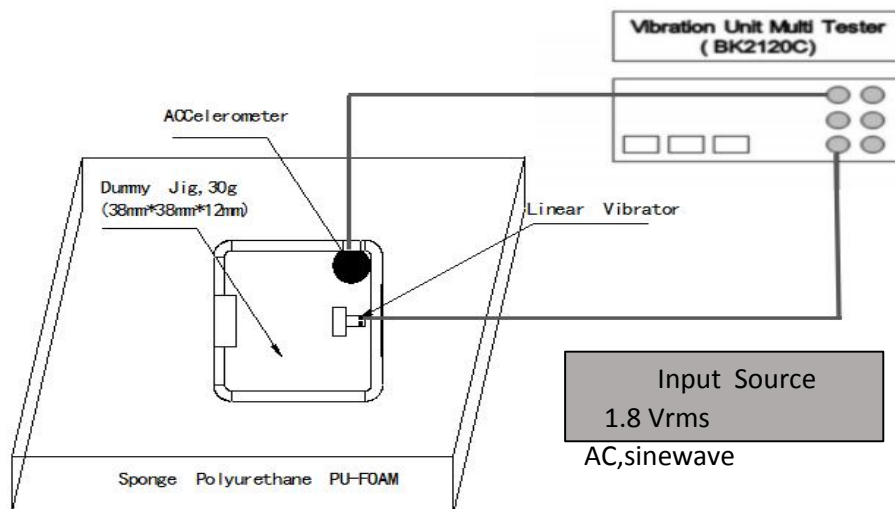



Figure 1

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4. 机械要求/Mechanical specification

No	项目/Item	规格/Specification	测定条件/备注 Measuring condicions/Remark
4-1	外观 Appearance	No evidence of machanical damage, rust corrision, and so on.	Visual examination

5. 性能特征/Performance and characteristics

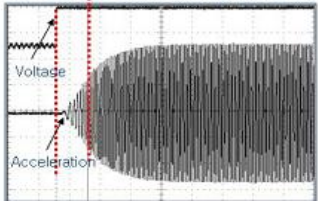
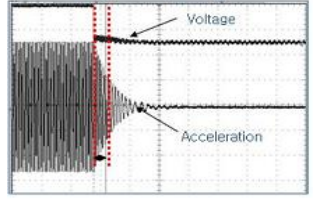
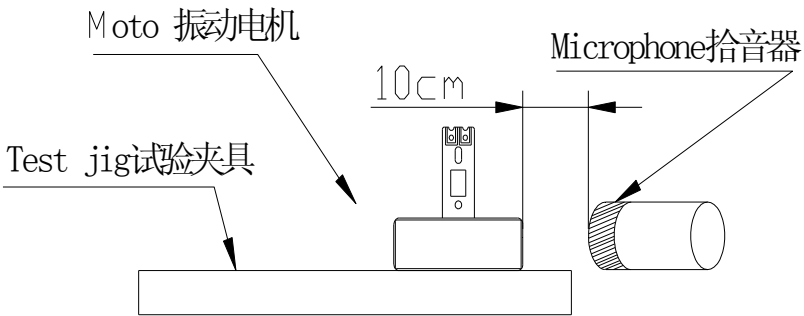

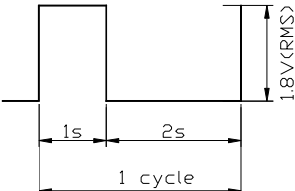
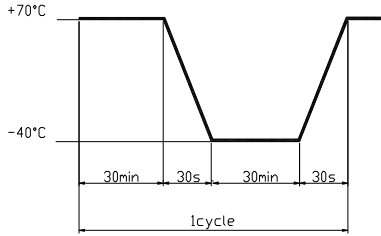

No	项目/Item	规格/Specification	测定条件/备注 Measuring condicions/Remark
5-1	端子阻抗 Terminal resistance	28±2 Ω	Test between the two touch pins
5-2	额定电流 Rated current	70 mA Max	Input Source:1.8 Vrms AC, sinewave
5-3	振动量 Acceleration	1.0 Grms Min	Input Source:1.8 Vrms AC, sinewave, 30g dummy JIG
5-4	重量 Weight	1.05±0.1 gram	Test with precision balance
5-5	绝缘电阻 Insulation resistance	10 MΩ Min	100V DC input, between Case and FPCB
5-6	响应时间 Rising Time	40 ms Max	
5-7	下降时间 Falling Time	60 ms Max	
5-8	机械噪音 Mechanical noise	45 dB Max	Refer Figure 2
			

Figure 2

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6. 可靠性/Reliability

No	项目/Item	测试条件/Specification	判定标准/Judgment
6-1	寿命 Life	 <p>1. 8Vrms, AC, sinewave, F0状态下共循环300000次。 300000 cycles in the state of 1.8vrms, AC, sinewave, fo</p>	<p>在常温常湿下放置4h后, 电机性能应符合以下要求。</p> <p>1) 振动量: 指标在初始值±30%以内 2) 额定电流: 指标在初始值±30%以内。 3) 噪音小于55db 4) 其它参数在规格书范围内</p> <p>After 4h exposure in the ordinary temperature and humidity, the motor's performance should accord with below requirements:</p> <p>1) vibrator: Data±30% Max. 2) Rated current: Data±30% Max. 3) Noise less than 55dB 4) Other parameters are within the scope of the specification</p>
6-2	低温贮存放置 Low temperature storage test	<p>温度Temperature: $-40 \pm 2^{\circ}\text{C}$ 时间Time: 168h</p>	
6-3	高温贮存放置 High temperature storage test	<p>温度Temperature: $80 \pm 2^{\circ}\text{C}$ 时间Time: 168h</p>	
6-4	湿度放置 Humidity exposure	<p>温度Temperature: $55 \pm 2^{\circ}\text{C}$ 湿度Humidity: $95\% \pm 2\text{RH}$ 放置时间Exposure time: 120h</p>	
6-5	振动 Vibration	<p>全振幅Full swing: 1.5mm (p-p) 频率Frequency: 10 to 55Hz 周期Cycle: 20min (10~55~10Hz) 方向Orientation: x、y、z 时间Time: 2h</p>	
6-6	热冲击 Heat stock test	 <p>周期Period: 24times</p>	
6-7	自然跌落 Free fall	<p>试验状态: 将马达固定在约30克(包括马达本身)的物体上, 落向水泥地面。 高度: 1.5m 方向: $\pm x, \pm y, \pm z$ 次数: 每个方向3次 Test state: Fasten the motor onto a object(30g) and then let it fall down to the ground. Height: 1.5m Orientation: $\pm x, \pm y, \pm z$ Times: 3times per orientation</p>	

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7. 环境管理物质/Environmental management materials:

7.1 本产品应符合RoHS指令要求和无卤素要求

The product should be in compliance with RoHS requirements:

* 镉及其化合物最大允许含量为100PPM

Cadmium and Compound:100PPM Max

* 铅及其化合物最大允许含量为1000PPM

Lead and Compound:1000PPM Max

* 汞及其化合物最大允许含量为1000PPM

Hydrargyrum and Compound:1000PPM Max

* 六价铬及其化合物最大允许含量为1000PPM

+6 Chromium and Compound:1000PPM Max

* 多溴联苯及其化合物最大允许含量为1000PPM


PBB and Compound:1000PPM Max

* 多溴二苯醚及其化合物最大允许含量为1000PPM

PBDE and Compound:1000PPM Max

* 氯溴两种卤素之和最大允许含量为1500PPM

The allowed content of Cl, Br is 1500PPM Max for total.

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10. 包装要求/Packing requirements:

10-1: 每个吸塑盒里放100PCS电机, 包装盒尺寸为248*203*11.5

100pcs/pallet, pallet size:248*203*11.5mm

10-2: 每21个包装盒用胶带捆成一捆, 数量为2000PCS.

21pallets/bundle, Qty:2000pcs

10-3: 每捆装入一个内箱里面, 数量为2000PCS. 内箱尺寸为260*220*175

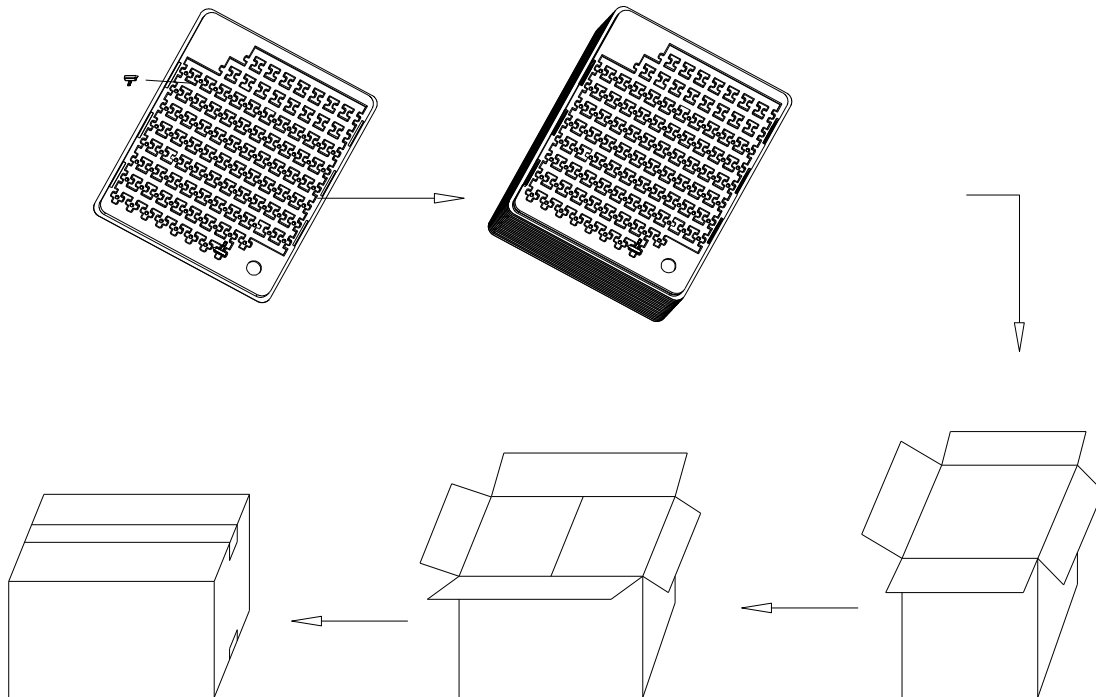
1bundles/inner box, Qty:2000pcs. box size:260*220*175mm

10-4: 每两个内箱放入一个外箱里, 外箱尺寸为465*280*200

2 inner-box/outer-box, box size:465*280*200 mm

10-5: 外箱封箱, 数量和生产批次, 均注明在外箱上面.

Seal the outer box and indicate the quantity, Lot No. on it.



10-6 包装试验要求/Packing test requirements:

(1) 标准: 整箱重量 $\leq 9\text{kg}$, 跌落高度设定为75cm; 整箱重量 $> 9\text{kg}$ 但 $\leq 23\text{kg}$, 跌落高度设定为60cm。


Standard: Gross weight $\leq 9\text{kg}$ Fall height is 75cm; Gross 9kg $<$ weight $\leq 23\text{kg}$ Fall height is 60cm.

(2) 试验方法: A、每面跌落1次, 共6次; B、任选三条同一角的棱, 各跌落一次, 共3次。

Test method: A、Fall one time per face, six times in total; B、Chose eight arris and fall one time each, three times in total.

(3) 判定基准: 经过跌落试验后, 产品外观、性能无不良。

Judgement: After the fall test, the appearance and the performance are both passed.

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11. 使用注意事项说明/Matters to be paid attention to when using motor

11-1 电机在运输过程中应小心轻放，避免碰撞敲击引起的电机机身和性能受损。

Please place the motors carefully in transportation to avoid any damage to the motor body or its electric function because of collision.

11-2 电机不能在高温、高湿、带有腐蚀性气体的环境中贮存和使用，否则有可能导致电机的性能下降。

Please don't leave and use the motors in the environment of high temperature, high humidity and corrosion gas, or it would cause the function to fall down.

11-3 不能长时间用外力锁死振动轮，以免烧坏线圈，电机不能工作。

Please don't lock up the vibrating wheel, or the coil would be burned up and the motors can't operate.

11-4 避免接触或靠近强磁性物体，否则有可能导致电机性能下降。

Please prevent from magnetic objects, or it may cause the function fall down.

11-5 请在6个月内使用，在使用时和打开包装时，请避免水气凝结。

Please use the motors within six months and prevent them from coagulation of moisture when open the package and use them.