



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/1
品名描述 Product Description	线性振动马达 LINEAR VIBRATION MOTOR		
型号Part No.	VL181206-120H		
送样日期Date			
设计Designed by	审核Checked by	批准Approved by	
陳满	陈满	陈满	
2021.07.01	2021.07.01	2021.07.01	

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更改记录/ Revision History

修改号 Rev. No.	日期 Rev. Date	页码 Page No.	修改项目 Revised Item	更改原因 Reason
A/0	2021.05.19	/	产品颁布/ Release for Production	
A/1	2021.07.01	/	Changed company name from JINLONG MACHINERY to VYBRONICS, changed part # from L181206-120H to VL181206-120H	Rebranding

1. Operating scope 适用范围

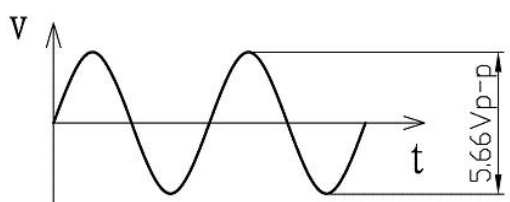
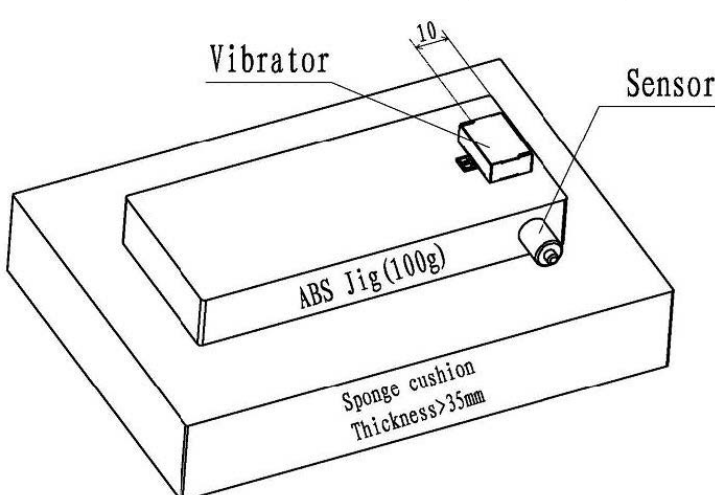
This specifications apply to linear vibrator model VL181206-120H.

本规格书适用于 VL181206-120H 线性振动器。

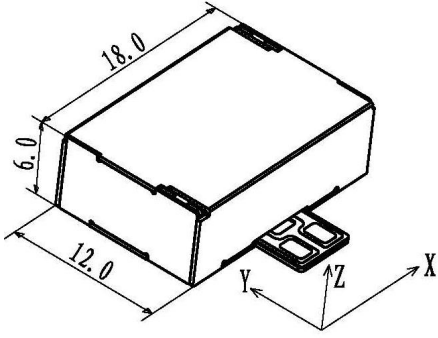
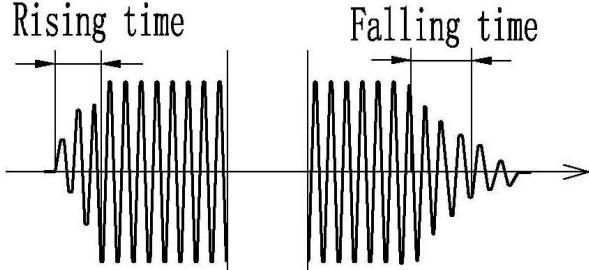
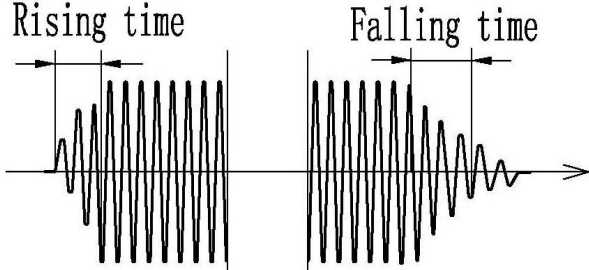
2. Storage, Operating temperature / Humidity conditions (储存、使用温度/湿度条件)

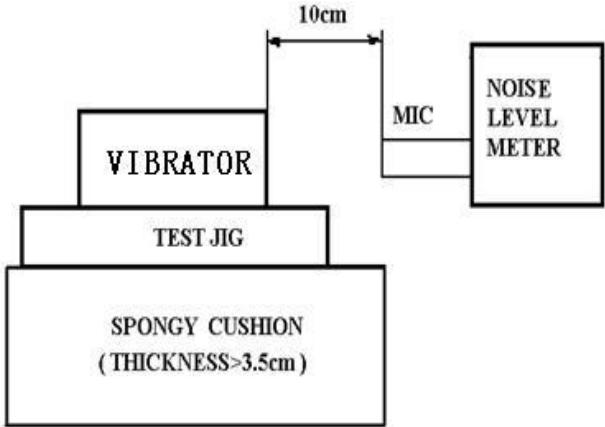
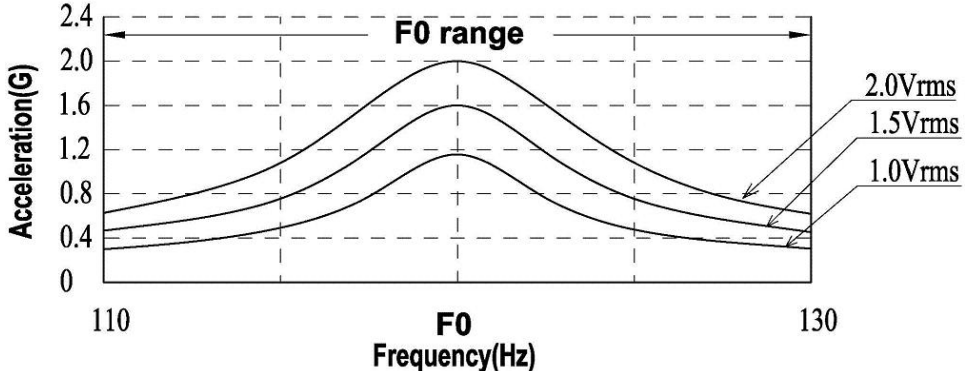
No	Items (项目)	Conditions (条件)
2-5	Operating Environmental 使用环境	Temperature /温度 : -30°C ~ 70°C Humidity / 湿度 : 5 ~ 95%RH
2-6	Storage Environmental 储存环境	Temperature /温度 : -40°C ~ 85°C Humidity / 湿度 : 5 ~ 95%RH

3. Standard measurement conditions (标准测试条件)

NO	ITEMS/项目	SPECIFICATION/规定
3-1	Temperature/温度	20±5°C
3-2	Humidity/湿度	(65±20%)RH
3-3	Rated voltage 额定电压	AC2.0 ±0.05Vrms (Vp-p=5.66V) <div style="text-align: center;">  </div>
3-4	Operating Frequency 工作频率	@F0 (F0∈120±10Hz)
3-5	Measuring method 测量方法	<p>Place Vibrator horizontally (Lock the Vibrator on a 100g dummy jig) 振动器水平放置 (固定在 100 克的测试夹具上)</p> <p>The direction of the sensor as same as the direction of Vibrator vibration(As item 4-2) 传感器检测方向和振动器振动方向保持一致。(参见项目 4-2)</p> <div style="text-align: center;">  </div>

4. Product performance (制品性能)

NO	Items(项目)	Requirements (要求)	Conditions Or Remark (条件/备注)
4-1	Shape size 外形尺寸	L18×W12×H6(mm) not included Welding lead position 不包含引线焊接部位	Details refer to page 8 
4-2	Vibration direction 振动方向	X axis	
4-3	Weight/重量	7.0±0.5g	/
4-4	Resonant Frequency 谐振频率	F0∈(120±10)Hz	/
4-5	Rated voltage 额定电压	AC, 2.0Vrms	
4-6	Operating voltage 工作电压	AC, 0.9 ~ 2.2Vrms	
4-7	Acceleration 振动加速度	2.0±0.3G@F0	@ Rated voltage
4-8	Rise time 启动时间	≤30ms	Rise to 70% of the nominal acceleration 加速度上升到典型值的 70% 
4-9	Falling time 断开时间	≤30ms	Down to 30% of the nominal acceleration 加速度下降到典型值的 30% 
4-10	Rated current 额定电流	230mArms(MAX)	@ Rated voltage
4-11	Terminal resistance 端子电阻	8.0±1Ω	AT 20°C
4-12	Insulation resistance 绝缘电阻	10MΩ(Min)	100V DC, Between the vibrator terminal and case.测试电压 DC100V,端子和外壳间。
4-13	Operating Attitude 工作姿态	All direction(全方向)	

4-14	Mechanical Noise 机械噪音	45dB-A (MAX)	<p>At rated voltage and load ; F0 , Background noise 30dB-A (MAX)/在额定电压 , 额定负载下测试 , 背景噪音不超过 35dB.</p> 
4-15	Voltage- Acceleration Characteristics 输入电压—加速度特性曲线		

5. External performance (外观性能)

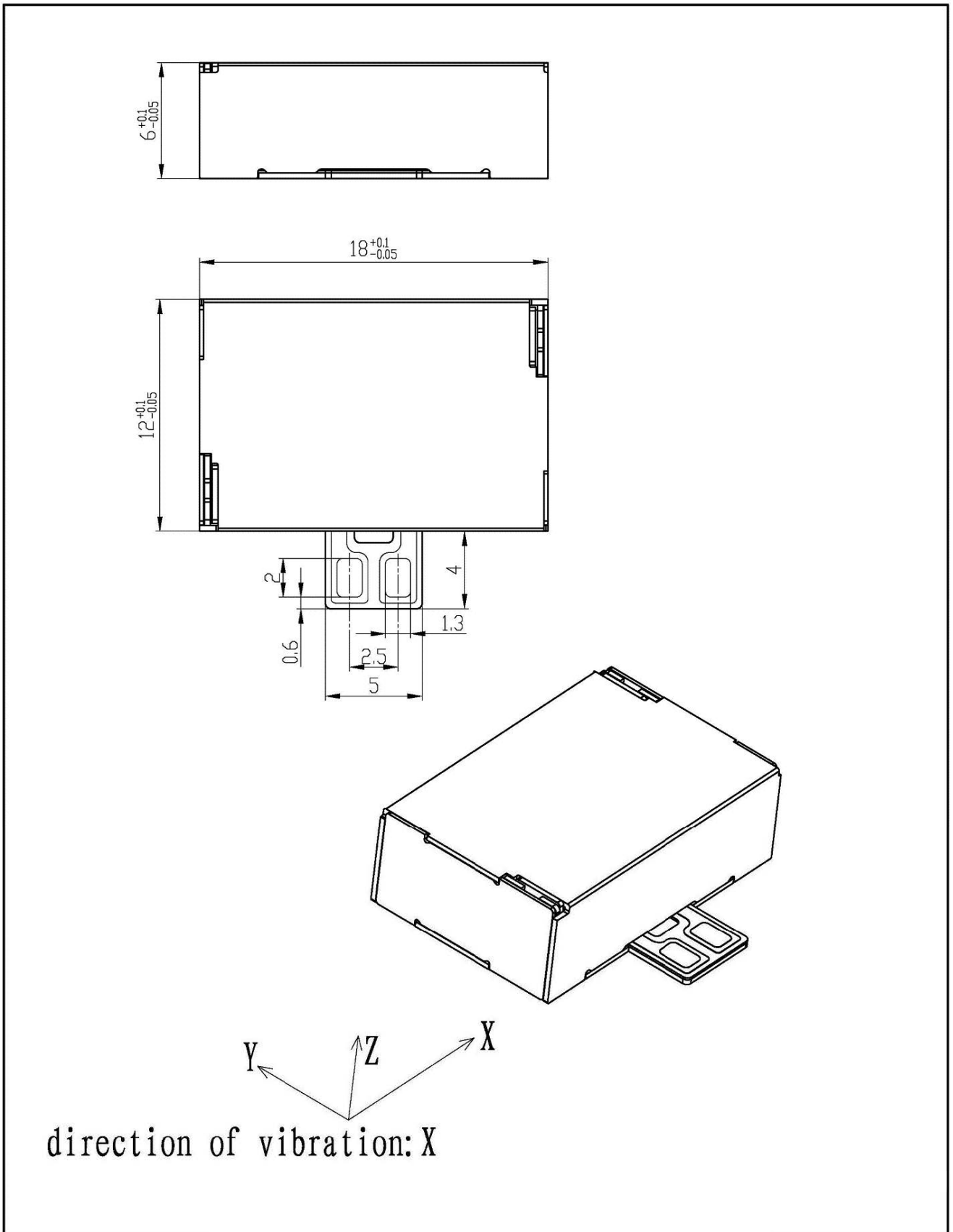
it should not remarkable wound and deleterious defect , No distortion、rust、stain, etc.

不应有明显的划伤、有害缺陷 , 无变形、锈蚀、污迹等。

6. Reliability test 可靠性试验

NO	Items(项目)	Standard test conditions(标准试验条件)	Judgment (判定)
6-1	Life test 寿命试验	Lock the vibrator on a test fixture (100g JIG) 振动器固定在 100g 的测试夹具上。 Temperature/温度 : 25°C±2°C Humidity/湿度 : 65±20%RH AC2.0Vrms sine wave , f=120Hz AC2.0Vrms 正弦交流电 , 频率 120Hz Test model/试验形式 : 1S ON 1S OFF Total times:1000,000 times(100 万次/11.6Days)	After the test, vibrator shall be satisfy with specified in item 6-8 试验结束后, 振动器应满足 6-8 中规定的要求。
6-2	Low temp Storage 低温存放试验	Temperature (温度) : -30°C±2°C Test time (试验时间) : 168 hours	After the test, After 2 hours placed in ordinary temperature and humidity ,vibrator shall be satisfy with specified in item 6-8 试验结束后, 在常温常湿中放置 2 小时后, 振动器应满足 6-8 中规定的要求
6-3	High temp storage 高温存放试验	Temperature (温度) : 70°C±2°C Test time (试验时间) : 168 hours	
6-4	Heat shock 温度冲击	-40°C/+85°C 2hours/cycle,15cycles. 低温-40°C , 高温+85°C , 2 小时切换 , 15 个循环	
6-5	Humidity storage 湿热存放试验	Temperature (温度) : 65°C±2°C Humidity (湿度) : 95%RH Test time (试验时间) : 120hours	
6-6	Drop test 跌落试验	Dummy JIG 150g , drop to the granite floor. 治具 150g , 自由落下到花岗岩板上 Height/高度 : 1.2m Direction/方向 : 6 faces . Times/次数:Each face 3 times, totaling 18 times. 每面跌落 3 次 , 共计 18 次	
6-7	Repetitive Drop Test 微跌试验	JIG/治具 : 150g Height/高度 : 7cm impact surface/冲击面 : steel floor Times/次数 : Front and back each 2500 drops	After the test, vibrator shall be satisfy with specified in item 6-8 试验结束后, 振动器应满足 6-8 中规定的要求。
6-8	AFTER TEST REQUIREMENTS/试验后特性判定		
	1、 Acceleration within ±30% from initial./加速度变化在初始值的±30%内 ;		
	2、 Insulation resistance within±20% from initial./绝缘电阻变化在初始值的±20%内 ;		
	3、 Terminal resistance within±20% from initial./ 端子电阻变化在初始值的±20%内 ;		
4、 No signs of corrosion/无明显腐蚀迹象			

7. Outline drawing (外形图)



8. Packaging requirements 包装要求

100 pcs per box, 20 boxes per bundle, 2 bundles per box, 4000 total.

每盒 100PCS, 每捆 20 盒,每箱 2 捆 , 共 4000PCS

9. Caution for Use 使用注意事项

- 10-1. Please use vibrator in the specification of this specification. Otherwise the service life and performance of the vibrator will be affected.请在本规格书规范内使用振动器 , 否则会影响振动器的使用寿命和性能。
- 10-2. Make arrangement to limit the storage period to 6 months or less. 请在 6 个月内使用。
- 10-3. please do not push the load of 15N or more on the surface of the vibrator ,when exceeding 15N,it causes the trouble. 振动器表面承载压力不得超过 15 牛顿 , 否则可能会导致功能故障。
- 10-4. Vibrators should be firmly fixed in the direction of vibration (Recommended Installation Force 5-8N), Otherwise it will be prone to noise.振动器应牢牢固定在振动方向上(推荐安装力 5-8N) , 否则容易产生噪声。
- 10-5. Please lay the vibrators carefully in transportation to avoid any serious damage to the vibrator body or its electric function because of collision. 在运输过程中应小心轻放 , 避免振动器碰撞受损
- 10-6. when soldering FPCB,The soldering iron temperature does not exceed 350 degrees and the soldering time per spot does not exceed 3 seconds.焊接 FPCB 时 , 电烙铁温度不超过 350° , 每个点焊接时间不超过 3 秒。
- 10-7. Vibrators can't be used in high temperature, High humidity and corrosive gas environment. 振动器不能在高温、高湿度和有腐蚀性气体环境中使用。
- 10-8. The vibrator has a strong magnet, So please be aware that it has a magnetic force on the surface of the bracket. 振动器有一个强的磁铁 , 因此请注意 , 它的支架表面有磁力。
- 10-9. Under the conditions of meeting this specification, our company can change the material、 size and shape of parts to improve quality、 performance or production efficiency.在满足本规范的情况下 , 我司可以改变零件材料、尺寸及形状来改善品质、性能或生产效率。
- 10-10. If there is any argument on vibrator performance and/or life, judgment is to be made base on this specification only. 如对振动器的性能和 (或) 寿命有任何争议 , 仅基于此规格书作出判断。