



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	线性振动马达 Linear Vibration Motor		
型号Part No.	VLV200634A		
送样日期Date			
设计Designed by	审核Checked by	批准Approved by	
陳满	陈满	陈满	
2022.06.24	2022.06.24	2022.06.24	

www.vybronic.com

sales@vybronic.com

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1. Revision history

Rev. No.	Rev. Date	Page No.	Revised Item	Reason
A/0	2022.06.24	/	Preliminary spec	

2. Application

This specification provided structure, function and usage condition of Linear Vibrator used in mobile communication devices for silence call.

3. Operating , Storage Temperature Conditions

No	Item	Condition
3-1	Operating Temperature Range	- 25°C ~ + 70°C
3-2	Storage Temperature Range	- 40°C ~ + 85°C

4. Measurement Conditions

No	Item	Condition
4-1	Temperature	20 ± 3°C
4-2	Humidity	65 ± 20%RH
4-3	Rated Input Voltage	1.5Vrms AC, Sinewave
4-4	Input Voltage Range	0.1 ~ 1.5 Vrms AC
4-5	Input Frequency	157.5Hz (Alert) Refer to Graph 1
4-6	Operating Attitude	Refer to Figure 1

※ Measurement Method

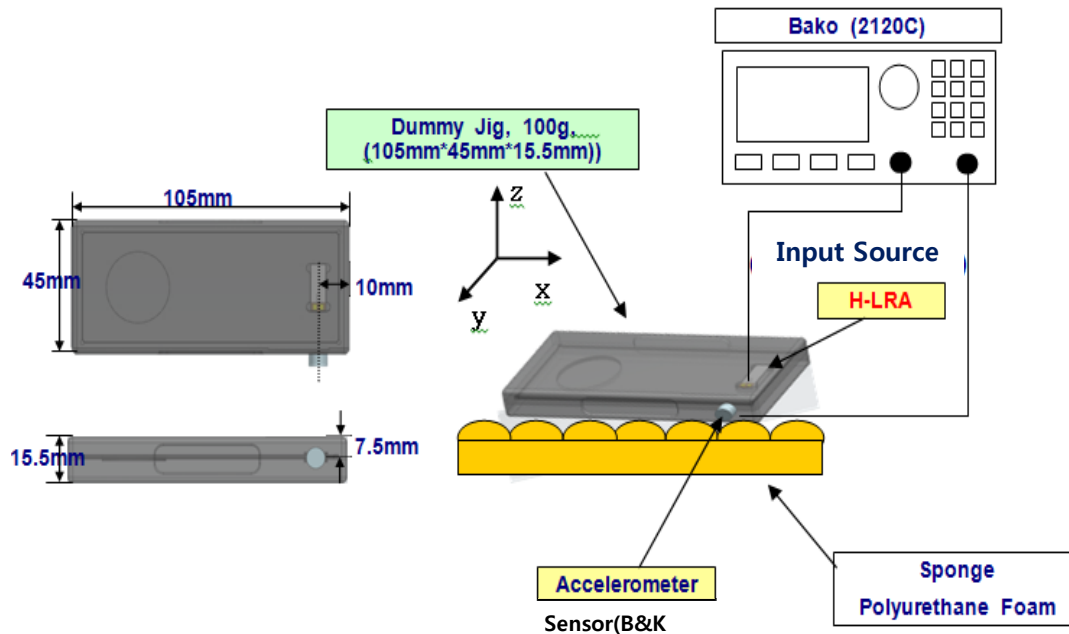


Figure 1. An Example of Measurement Method of Linear Vibrator

Position of Linear Vibrator and Accelerometer (Refer to Figure 1)

- Linear Vibrator should be mounted to vibrate direction (y-direction) on Dummy Jig.
- Also, Accelerometer should be installed to measure y-direction vibration on Dummy Jig

Position of Dummy Jig

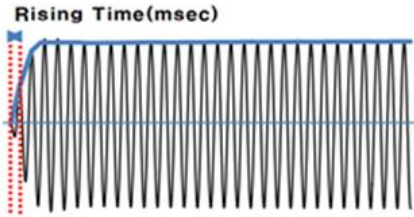
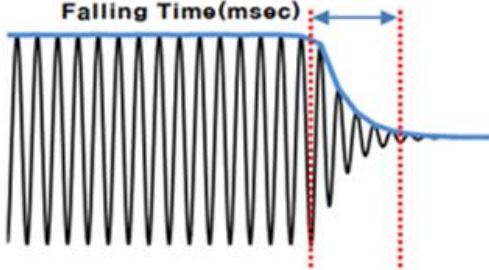
- 45mm*105mm plane of Dummy Jig should be located on Sponge
- At measurement of acceleration, Dummy Jig should be stabilized

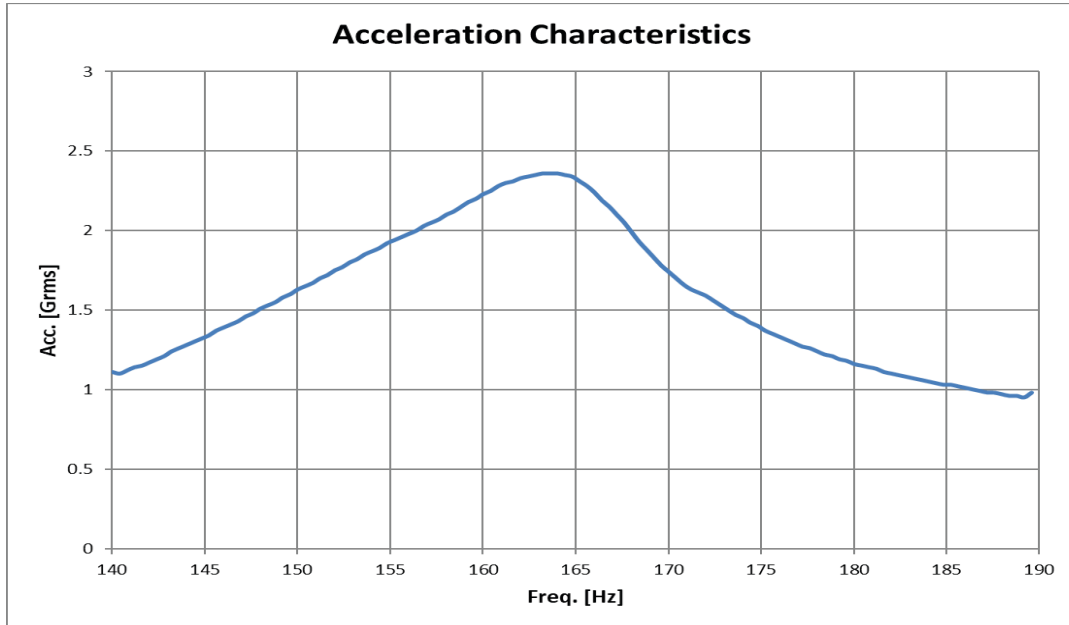
Measurement of Acceleration

- Acceleration should be measured 2~3 second later when source inputed.
- For the precise measurement, Acceleration should be measured 3 times and adopted average value on each Linear Vibrator

5. Specifications

No	Item	Specification
5-1	Resistance	7.2 ~ 8.8 Ohm
5-2	Rated Current	Max 215mA (Input Source : F0 Hz, 1.5Vrms AC, Sinewave)
5-3	Acceleration	1.8 ~ 3.0 Grms @F0 Hz 1.65 ~ 2.95 Grms@157.5Hz (Alert) (Input Source : 1.5Vrms AC, Sinewave)
5-4	Resonance Frequency	160 +8 / -6 Hz (154 ~ 168Hz)
5-5	Frequency Characteristics	Refer to Graph 1
5-6	Noise by mechanical touch (Noise_T)	Max 35dB (Input Source: F0 Hz, 1.5Vrms AC, Sinewave)
5-7	Insulation Resistance	Min 10 MΩ (100V DC input, between case and terminal)

No	Item	Specification
5-8	Rising Time	Max 22msec (@F0 Hz, 1.5Vrms) - The time reaching to 50% of normal acceleration from power on 
5-9	Falling Time	Max 60msec (@F0 Hz, 1.5Vrms) - The time reaching to 10% of normal acceleration from power off 



Graph 1. Linear Vibrator Frequency Characteristics

6. Reliability Test Condition

No	Item	Condition
6-1	Life test	Operating at rated input voltage(1.5Vrms AC, Sinewave), input frequency(160Hz) for 500,000 cycles. (2 sec On, 1sec Off)
6-2	Thermal shock test	- 40°C ~ 85°C in each of 2Hrs(1cycle), Total 15 cycles. Transition time is 5 minutes max. After the test, the Vibrator should be measured after room-temperature storage for 4Hrs.
6-3	High temperature storage test	+70°C, 168Hrs, After the test, the Vibrator should be measured after room-temperature storage for 4Hrs.
6-4	Low temperature storage test	-30°C, 168Hrs, After the test, the Vibrator should be measured after room-temperature storage for 4Hrs.
6-5	Static humidity test	+50°C, 95%RH, 120Hrs, After the test, the Vibrator should be measured after room-temperature storage for 4Hrs.
6-6	Mechanical shock test	The Vibrator that is attached to a 300g dummy jig is dropped to a steel floor 20 times(6 face, 4 coner 2 times) from 1.5m in height.

Judgement

After test, The following specifications must be satisfied.

- Acceleration : Within initial Value \pm 30%
- Rated Current : Max 215 mA rms

7. Cautions for Use

- (1) Do not press the product with more than 0.3Kgf or drop it.
It can cause the transformation of performance or external appearance.
- (2) Do not use under the following conditions. It may cause a decline in performance.
 - Do not drop into fluid (such as water, alcohol etc.).
 - Do not keep at high temperature or high humidity for extended periods of times.
 - Do not use near gases which cause erosion
 - Please refrain from operating the vibrator near magnetic devices.
- (3) The vibrator has a strong magnet. So please be aware that it has a magnetic force on the surface of the bracket.
- (4) To optimize the vibration force, Rated frequency and voltage could be changed as to assemble condition.
- (5) Please refer to the packaging drawing. It can be modified by the request of the user.
- (6) The storage condition is 5°C~35°C, 15%~65% RH, 1year about packing.

8. SPEC Drawing

UNLESS OTHERWISE SPECIFIED		
DEC.	TOLERANCES (LENGTH)	UNIT
4 - 20	±0.25	mm
20 - 100	±0.25	mm
100 - 300	±0.5	mm
300 -	±1.0	mm
X	±0.3	mm
X	±0.5	mm
X	±0.7	mm
X	±1.0	mm
XXX	±0.25	mm
XXX	±0.5	mm
XXX	±1.0	mm

SIGNATURES		MOLD/DATE	
DESIGN	NAME	MATERIAL	CITY
1		1	

3D shape

NOTE

1. Model: VLV200634A
2. This Drawing Express Appearance Size, Performance of LRA refer to Specification of Approval.
3. Land Surface Plating: Au (Au: Min. 0.03um, Ni: 5 ± 2um)
4. Don't Push "B" (Max: 0.5kg)
5. Don't Press External Force More Than 1kg

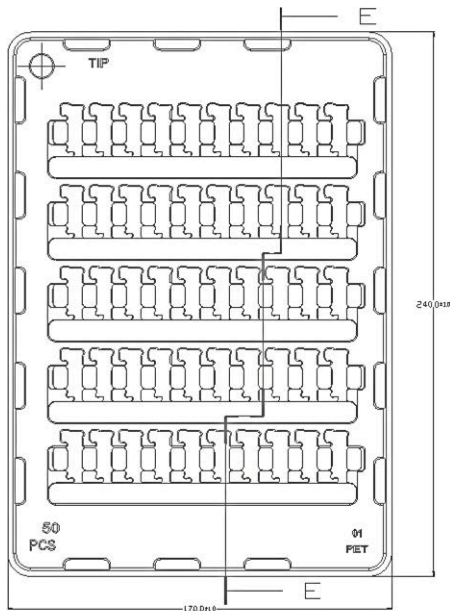
REVISIONS			
ZONE	LTR	DESCRIPTION	DRAWN / CHECKED / APPROVED

SHEET NO.	
REV.	

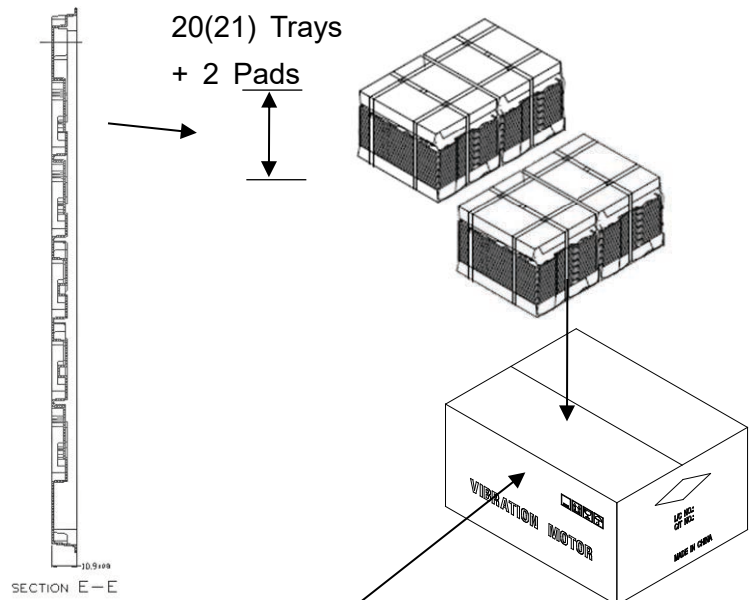
A3 (297 x 420) A-10-011(04.05.17(0))

9. Packing

[Pet Tray]



[Tray Array]



[Packing quantity]

- 50ea/ Tray
- 1 Carton box
 - 80(84) trays with a dummy tray on the top
 - 4000ea/ carton box



Halogen Free Marking

[Box]

No	Material	Size	Q'ty/Lot	How to Pack
1	PET Tray	240x170x10.1	80(84)	<ul style="list-style-type: none"> ● 80(84) trays are packed with packing vinyl. ● The trays are bound with pad and pp band ● One bound trays are put to a carton. ● Lot Numbering ● Delivery ● Loading Capacity : 12
2	Carton Box	510x350x175	1	
3	Pad		8	
4	Packing vinyl		4	
5	PP-band		-	