



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	LRA 扁平振动马达 LRA Coin vibration motor		
型号Part No.	VG0640001D		
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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1. 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	2021.05.27	/	产品颁布/ Release for Production	
A/1	2021.07.01	/	changed company name from JINLONG MACHINERY to VYBRONICS, changed part # from G0640001D to VG0640001D	Rebranding

2. Application

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

3. Operating , Storage Temperature /Humidity Conditions

No	Item	Condition
3-1	Operating Temperature Range	- 15℃ ~ + 55℃
3-2	Storage Temperature Range	- 20℃ ~ + 60℃
3-3	Operating Humidity Range	Max 65% RH
3-4	Storage Humidity Range	Max 65% RH

4. Measurement Conditions

No	Item	Condition
4-1	Temperature	20 ± 5℃
4-2	Humidity	65 ± 20%RH
4-3	Rated Input Voltage	1.8Vrms AC, Sinewave
4-4	Input Voltage Range	0.5 ~ 1.8 Vrms AC
4-5	Input Frequency	210Hz±0.1Hz Refer to Graph 1
4-6	Operating Attitude	Refer to Figure 1

※ Measurement Method

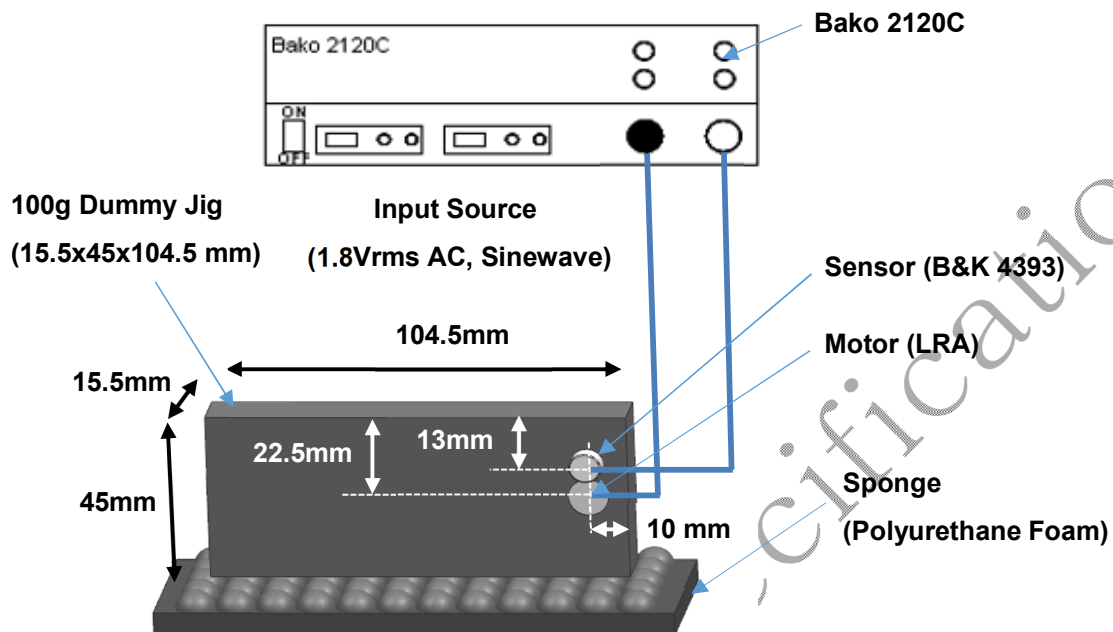


Figure 1. An Example of Measurement Method of Linear Vibrator

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

- Linear Vibrator should be mounted to vibrate 15.5mm direction (y-direction) of Jig.
- Accelerometer also should be installed to measure y-direction vibration of Jig

Position of Dummy Jig

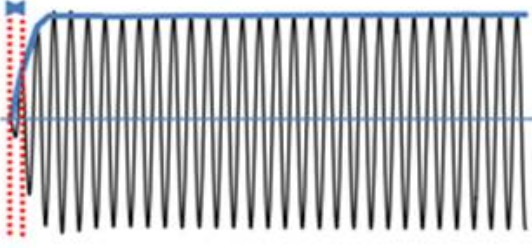
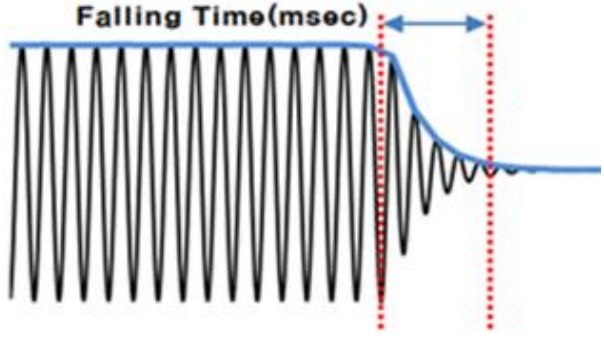
- 15.5mm*104.5mm plane of Dummy Jig should be located on Sponge
- At measurement of acceleration, Dummy Jig should be stabilized

Measurement of Acceleration

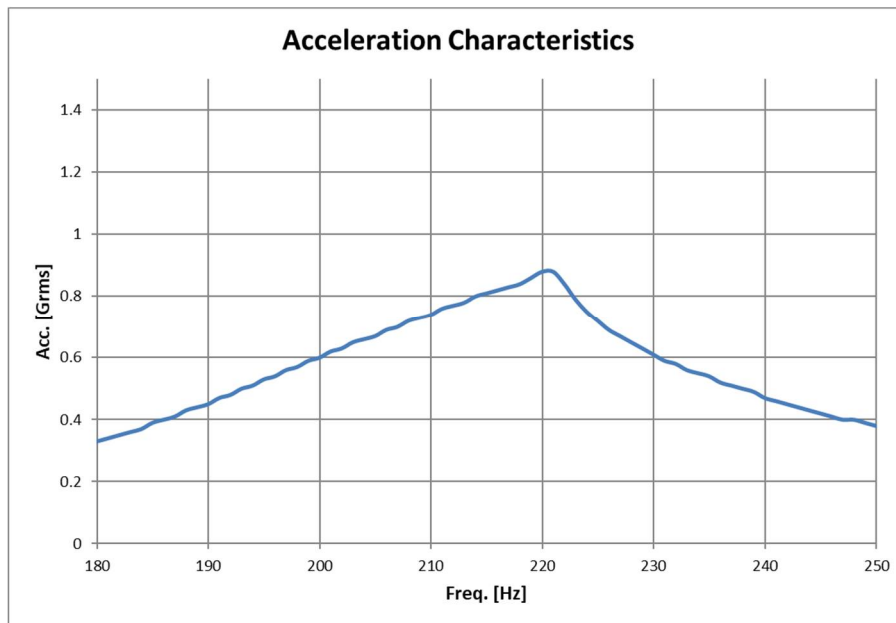
- Acceleration should be measured 2~3 second later when source inputed.
- For the precise measurement, Acceleration should be measured 3 times and adopted average value on each Linear Vibrator

5. Specifications

No	Item	Specification
5-1	Resistance	25.0Ω ± 15%
5-2	Rated Current	Max 80 mArms (Input Source : 210Hz, 1.8Vrms AC, sinewave)
5-3	Acceleration	Min 0.6 Grms (Input Source : 210Hz, 1.8Vrms AC, sinewave)
5-4	Mass	Mass of Motor : 0.71gr
5-5	Frequency Characteristics	Refer to Graph 1
5-6	Motor Height	4.05 ± 0.05mm - Put the Case of the motor on Jig after zero setting and measure center point of bracket by Height Gauge.
5-7	Noise by mechanical touch (Noise_T)	Max 35dB (Input Source : 210Hz, 1.8Vrms AC, sinewave)
5-8	Insulation Resistance	Min 10 MΩ (100V DC input, between case and terminal)

No	Item	Specification
5-9	Rising Time	<p>Max 15msec (@210Hz)</p> <p>- The time reaching to 50% of normal acceleration from power on</p> <p>Rising Time(msec)</p> 
5-10	Falling Time	<p>Max 70msec (@210Hz)</p> <p>- The time reaching to 10% of normal acceleration from power off</p> <p>Falling Time(msec)</p> 

Preliminary



Graph 1. Linear Vibrator Frequency Characteristics

Preliminary Specification

6. Reliability Test Condition

No	Item	Condition
6-1	Life test	Operating at rated input voltage(1.8Vrms AC, Sinewave), input frequency(210Hz) 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 120g dummy jig is dropped to a steel floor 24 times(6 face, 4 times in each of X,Y,Z axis) from 1.5m in height.

Judgement

① After test, The following specifications must be satisfied.

- Acceleration : Within initial Value \pm 30%
- Rated Current : Max 80 mA rms

② There should be no abnormalities in appearance and structure.

Preliminary Specification

7. Cautions for Use

- (1) Do not press the product with more than 0.5Kgf 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℃~35℃, 15%~65% RH, 1year about packing.

8. SPEC Drawing

MB526 TXAV
Rubber Cushion (SRS-40P, 96x90, 55k)

Release Paper
TAPES DOUBLE FACE
TESA 60975(965x0.1)

Dimensions: 7.9, 4.7, 1.15, 2.6, 0.1, 4.05±0.05, 0.6±0.1

Scale: 5 / 1

Part No: LRA0640

Material: PDMA60

Final Size: 96x90

Stock Size: 96x90

Remark:

REVISIONS

ZONE	LTR	DESCRIPTION	DRAWN	CHECKED	APPROVED

***. NOTE**

1. Model : G0640001D
2. This Drawing express Appearance Size, Performance of LRA refer to Specifications of Approval.
3. Marking Classification
 - . M :
 - . B : Year (2020 = A, 2021 = B, ...)
 - . 5 : Month (Jan. = 1, ..., Sep. = 9, Oct. = A, Nov. = B, Dec. = C)
 - . 26 : A Day (EX : 9TH = 09, 10TH = 10)
 - . TX : Model Name(TA, TB, ..., ZZ)
 - . A : Line / Day or Night (A = #1/DAY, B = #1/NIGHT, ...)
 - . V : Manufacturing Site
4. Don't Push "B" (Max : 0.5kg)
5. Don't press External Force more than 1kg

SIGNATURES

DET	NAME	MATERIAL	QTY	FINAL SIZE	STOCK SIZE	REMARK
1	LRA0640		1	0640		

UNLESS OTHERWISE SPECIFIED

DEC.	~ 3	4 ~ 20	20 ~ 100	100 ~ 300	300 ~
X	±0.3	±0.5	±0.7	±1	±1.5
X	±0.1	±0.2	±0.25	±0.5	±0.7
.XX	±0.05	±0.10	±0.15	±0.2	±0.2
.XXX	±0.020	±0.020	±0.020	±0.020	±0.020

TOLERANCES (LENGTH)

UNIT : mm

U.O.S → 6.3A (GRIND)
 "F" → 3.2A ~ 6.3A (FINISH)
 "F" → 1.8A ~ 3.2A (FINE FINISH)
 "G" → 0.2A ~ 0.6A (GRINDING)
 "P" → 0.1A ~ 0.2A (LAPPING)

DEPT: PDMA60

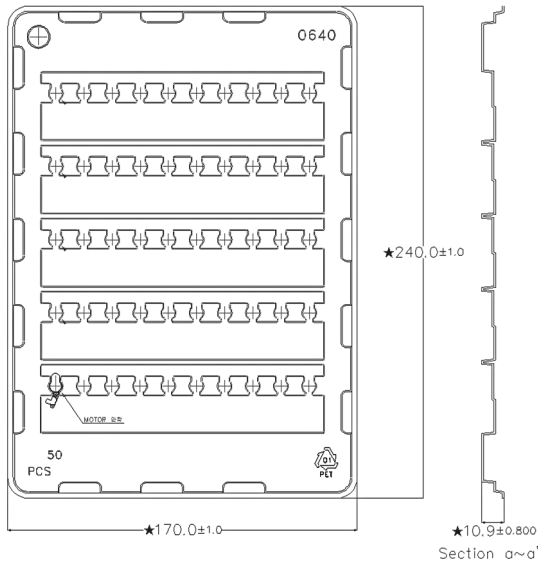
SCALE: 5 / 1

PART NO. LRA0640

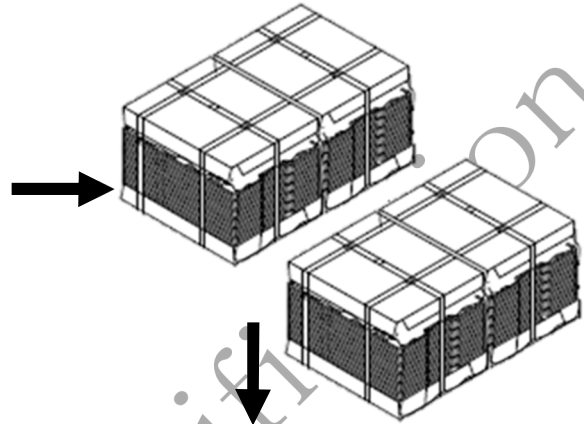
SHEET 1 OF 1

9. Packing

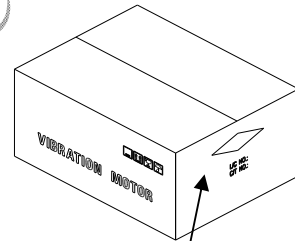
[Pet Tray]



20(21) Trays
+ 2 Pads



[Carton Box]



[Packing quantity]

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



[Halogen Free Marking]

No	Material	Size	Q'ty/Lot	How to Pack
1	PET Tray	170x240x10.1	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		-	