



LJ DEVICE CO., LTD.

力臻股份有限公司

LJ DEVICE CO., LTD.

零件規格書 / 承認書

SPECIFICATION FOR APPROVAL

CUSTOMER : _____

DESCRIPTION : Vibration Motor

MODEL : P0411A-12-P1B

CUSTOMER PART NO : _____

APPROVED SIGNATURES

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Rev	Date	Description	Designed	Checked	Approved
A	2009/10/3	Release		Kevin	

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C u s t o m e r	
Model Name	P0411A-12-P1B (R2*4)
Spec. Number	LJD-0411
Issued Date	09 / 10 / 03
Rev'd Date	
A p p r o v a l	儲存溫度本為-20°C ~60°C 試驗後確認為-40°C ~85°C
Rev'd Date	Revised Record
I s s u e r	

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1. Scope

This specification applies to the coreless dc motor of LJ DEVICE CO., LTD. model no. (P0411A-12-P1B) for use in vibration pager, cellular phone...etc.

2. Standard operating conditions

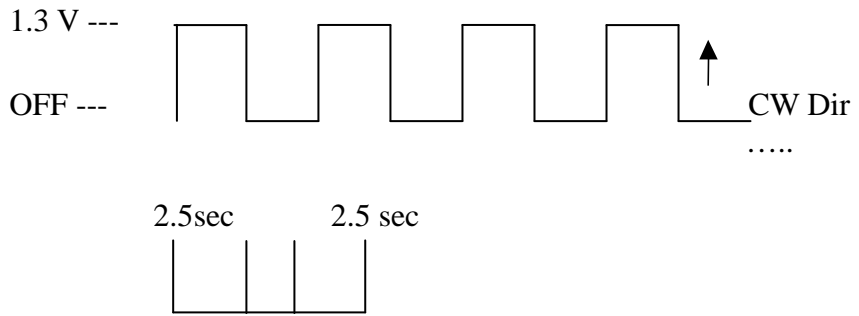
	Item	Specification
2-1	Rated voltage	1.3 VDC
2-2	Rated load	With counterweight
2-3	Rated speed	11500±3000 rpm
2-4	Rated current	Less than 90 mA Max ; 30 mA Min
2-5	Rotate direction	Clock wise
2-6	Motor position	Regardless of output shaft direction
Above specifications are measured by condition at 20±5°C , 65±15%		

3. Appearance

	Item	Measurement	Specification
3-1	Appearance	Visual	No defective
3-2	Dimensions	Caliper, micrometer	Drawing
3-3	Weight	Measure	Appx. 3 grams
3-4	Shaft end play	Dial gauge	0.03—0.3 mm
3-5	Pulling of strength	For 2 sec. by air-pressure gauge	More than 1.3 Kgf/cm ²

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4. Electric performances

	Items	Measurement	Specification
4-1	Rated speed	Measured by rated voltage & load	11500±3000 rpm
4-2	Rated current	Measured by rated voltage & load	90 mA max ; 30 mA min
4-3	Starting voltage	Measured by rated load	1.0 V DC max ; 0.9 V DC min
4-4	Starting current	Measured by rated voltage	Less than 80 mA
4-5	Coil resistance	At 20 ± 5°C	14Ω±20%
4-6	Life Tested by following mode. expire its life when come under following condition. (mode) On-Off test by below pattern. Voltage; 1.3 VDC, with counterweight, room temperature & humidity 1.3 V --- OFF ---  2.5sec 2.5 sec 1 cycle Repeat cycle “ ON – 2.5 sec. OFF- 2.5 sec.”. Life time should more than 20,000 cycles. (Condition) When its speed exceed ±20% from started speed.		

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These items should be measured by under the conditions of $20\pm 5^{\circ}\text{C}$, $65\pm 15\%$.

(Note 1) Article 4-5 “resistance” measured between lead plate.

(Note 2) Article 2-3, 4-1 “rated speed” and 2-4, 4-2 “rated current” measured by horizontal position.

(Note 3) Article 4-3 “starting voltage” measured by horizontal position and motor should start when apply 1.0 VDC max ; 0.9 VDC min

5. Environmental

5-1	Operating Temperature	$-10^{\circ}\text{C} \sim +60^{\circ}\text{C}$
5-2	Test for storage Temperature	After 96 hours storage at -40°C and 85°C , bring back to room temperature for 24 hours. Then motor should meet specifications.
5-3	Test for humidity	After 96 hours storage at $+40^{\circ}\text{C}$ and 90%, bring back to room temperature for 24 hours. Then motor should meet specifications.
5-4	Test for vibration	At max. vibration 1.52 mm and vibrated frequency 60Hz, and this vibrate time appx. 1 min., after take this wave for 30 min. then motor should meet specifications.
5-5	Test for drop	The test fixture shall simulate a 200 gram pager when the motor is mounted in the center of the fixture using the application motor mount scheme. The drop fixture shall be subjected to 2 meter drops onto concrete or steel. Drops shall be performed on 3 perpendicular planes, two drops per plane.

6. Note

- If inconvenient problem occur, take actions after discuss among us.
- Materials, structures and process will change (Under meet this specification) without notice.

7. Remarks when using motor

- Please avoid to storage motor under the atmosphere of high temperature, high humidity and any gas which makes rust, and also avoid to storage more than 6 months.
- Please soldering on lead plate less than 3 seconds, $250^{\circ}\text{C}\pm 10^{\circ}\text{C}$
- Please don't lock the shaft, That may burn the motor if leave motor locked.

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