



KOTL

JinLong Machinery

[Home](#) | [Product Info](#) | [About us](#) | [Factory tour](#) | [ISO Certifications](#) | [RoHS Info](#) | [Sample Request](#) | [Contact us](#) | [Email us](#)

Part No. Z4TH5B1462252

Download



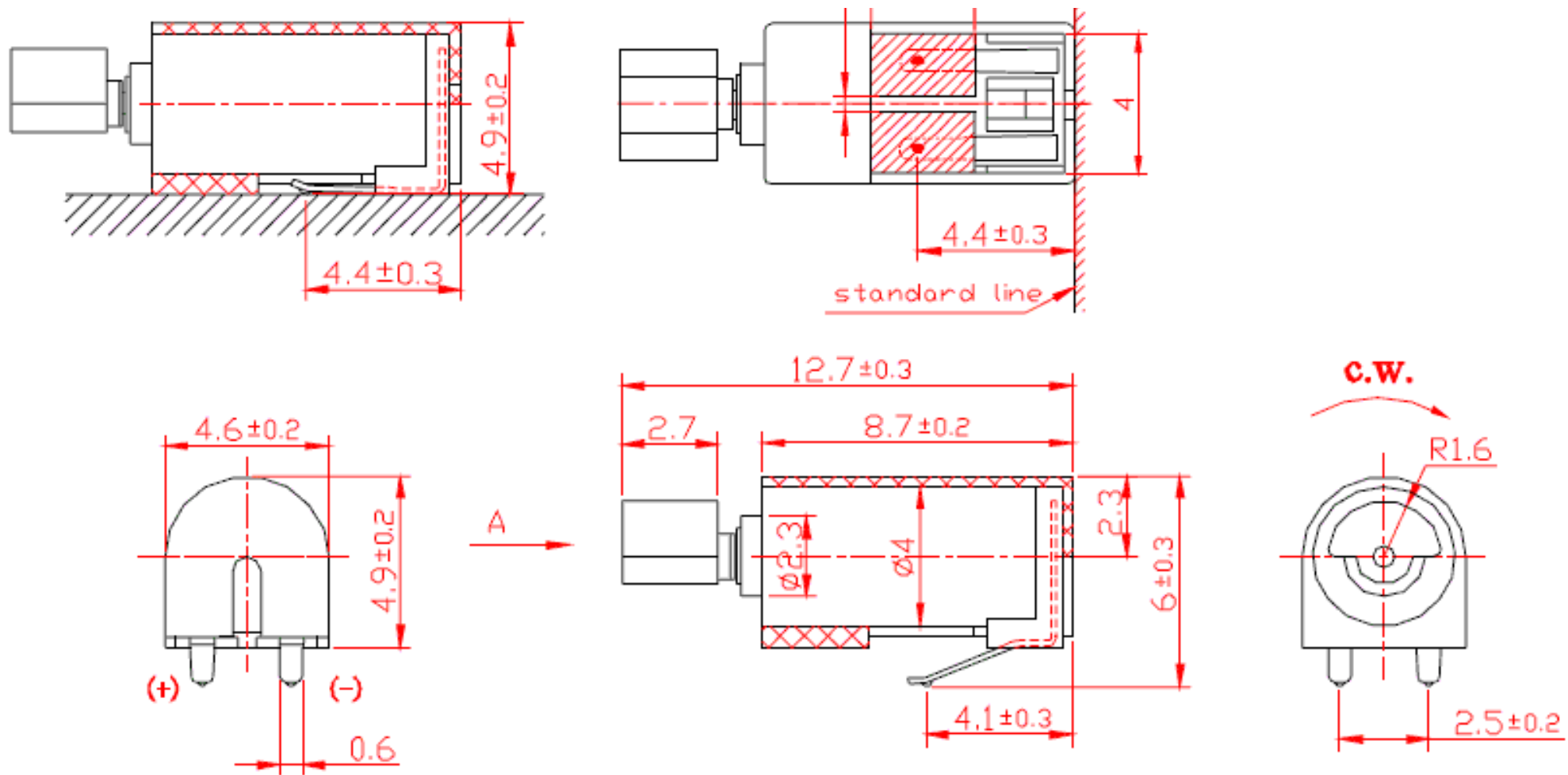
PDF Format

Technical requirements

1. Rated voltage: 3.0V
2. Rated current: 30mA Max
3. Rated speed: 13000 ± 2500rpm
4. Stall current: 40mA Max
5. Terminal resistance: 93Ω (±20%)
6. Starting voltage: 2.4V Max
7. Shaft end play: 0.05~0.2mm
8. Overall length is measured after counterweight being pressed against body in direction A. (Shaft end play is not included.)
9. Unmarked tolerance: ± 0.1mm

PCB Land drawing
(working)





1. General scope

This specification applies to cylindrical permanent-magnetic motors DC model **Z4TH5B1462252**.

2. Operating conditions

Items		Specifications	Condition & Remarks
2-1	Rated voltage	3.0V DC	

2-2	Rated load	Counter weight	As specified in 10. Outline drawing.
2-3	Rotation	C.W/C.CW (clockwise or counter clockwise)	
2-4	Motor position	All positions	
2-5	Operating voltage	2.2~3.6V DC	
2-6	Operating environment	Humidity : $65 \pm 20\%RH$	No condensation of moisture.
2-7	Storage environment	Humidity : $65 \pm 20\%RH$	No condensation of moisture.

3. Measuring conditions

Items	Specifications	Condition & Remarks
3-1	Temperature	$20 \pm 2^\circ C$
3-2	Humidity	63% ~ 67% RH
3-3	Motor position	Motor shaft horizontal Lock the motor in a test fixture.

The measurement at $20^\circ C$ & $65\%RH$ is standard. If the judgment is not questionable, recognize measurement at $5^\circ C$ to $35^\circ C$ & relative humidity 45% to 85%. Direction of motor is shaft horizontal.

4. Mechanical specifications

Items	Specifications	Condition & Remarks
4-1	Configuration	As specified in 10. outline drawing Outline drawing No: Z4TH5B1462252.

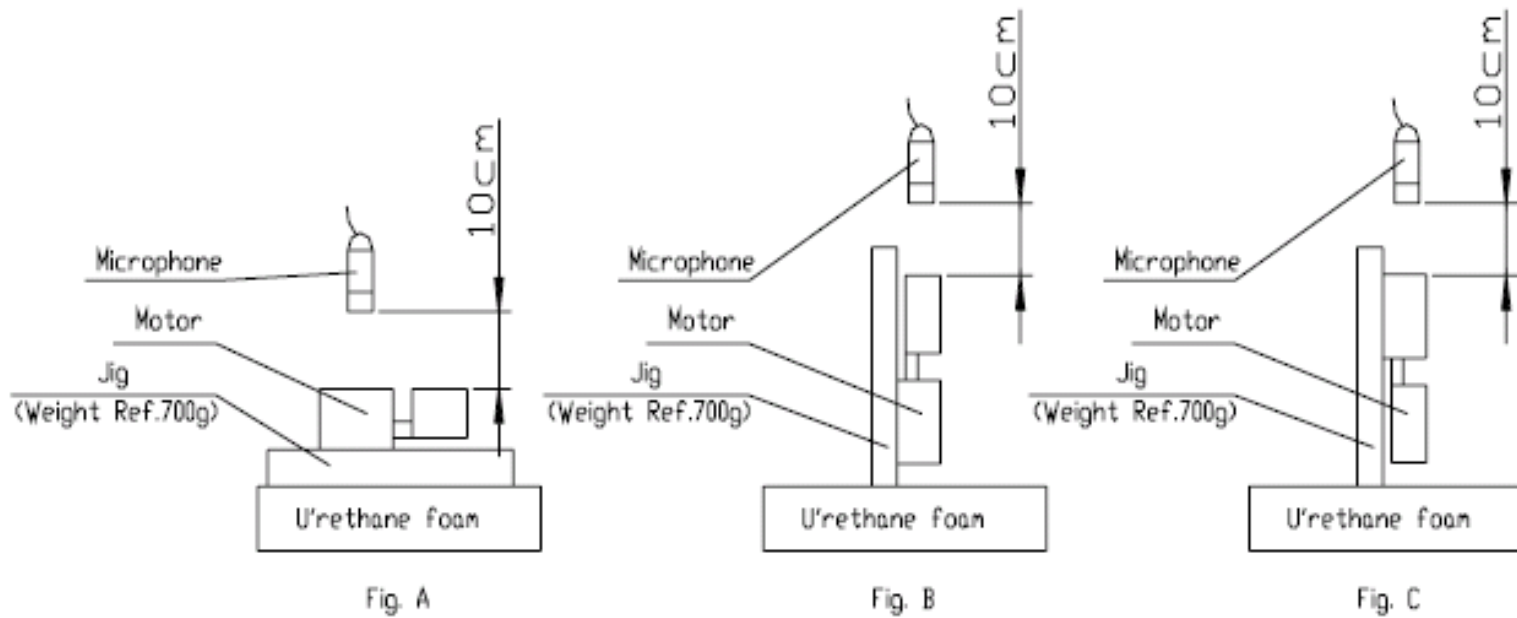
4-2	Appearance	There shall be no evidence of mechanical damage and shall not have inadequate corrosion, etc.	Visual examination (allowable extent is based on boundary sample).
4-3	Shaft end play	0.05mm•0.2mm	
4-4	Holding strength of vibration weight	49N (5kgf) Min	

5. Performance and characteristics

Items		Specifications	Condition & Remarks
5-1	Rated speed	13,500rpm± 2500rpm	At rated voltage and rated load (Counterweight).
5-2	Rated current	30 mA Max	
5-3	Stall current	40 mA Max	At rated voltage.
5-4	Starting voltage	2.4V DC max	At rated load (Counterweight) any position of rotor.
5-5	Insulation resistance	1M• min	At DC 100V between Terminal and case.
5-6	Terminal resistance	93 • (± 20%)	At 20°C.
	Mechanical noise	50db (A) max	

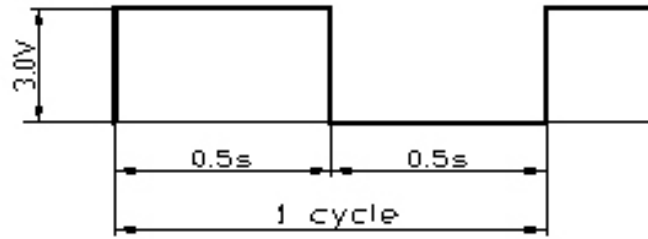
5-7

At rated voltage and rated load (Counterweight).
 Background noise: 28db (A) Max
 Measuring instruments: B & K.
 Weight of jig: 700g.



6. Reliability Test

Items	Standard test conditions	Condition & Remarks
-------	--------------------------	---------------------



6-1 Life time

Position	Voltage	Load	Temp	Humidity	Life
Horizontal	Rated	weight	20 °C	65 %	200,000 cycles

After 2 hours exposure in ordinary Motors shall be approved as specified in item 7-1.

6-2 Low temp exposure

Temperature: $-40 \pm 2^{\circ}\text{C}$
 Time: 96hrs

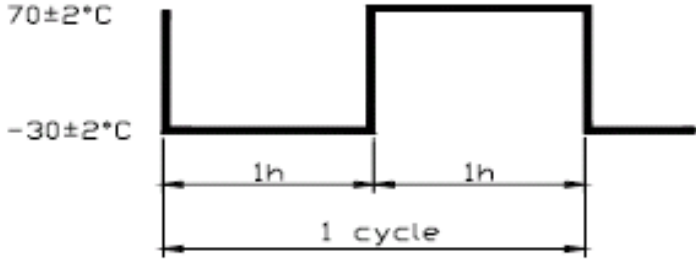
6-3 High temp exposure

Temperature: $80 \pm 2^{\circ}\text{C}$
 Time: 96hrs

6-4 Humidity exposure

Temperature: $40 \pm 2^{\circ}\text{C}$
 Humidity: 90~95%RH
 Exposure time: 96hrs
 No condensation of moisture

After the test motors shall be approved as specified in item 7-2.

6-5	Vibration	<p>Frequency: 10~55~10Hz</p> <p>Displacement: 1.5mm (p-p)</p> <p>Period: 20 Minutes log sweep 10~55~10Hz</p> <p>Direction: x, y, z</p> <p>Time: Each 2 hours</p>	<p>After the test motors shall be approved as specified in item 7-2.</p>
6-6	Free Fall	<p>Set the motor to the approximately 100g (include the motor) weight of block drop the motor on the concrete floor.</p> <p>Height: 1.5 meters</p> <p>Direction: 6 faces</p> <p>Number of times: Twice 2 each</p>	<p>After the test motors shall be approved as specified in item 7-2.</p>
6-7	Heat stock	<p>Test cycle : 20 cycles</p> 	<p>After the test motors shall be approved as specified in item 7-2.</p>

7. Requirements

Items	Requirements
-------	--------------

7-1	Table A	1) Rated speed:	Initial data -30% min, Initial data +60% max.
		2) Rated current:	Initial data $\pm 30\%$ max
		3) Starting voltage:	2.8 V DC max
7-2	Table B	1) Rated speed:	Initial data $\pm 30\%$ max.
		2) Rated current:	Initial data $\pm 30\%$ max.
		3) Starting voltage:	2.8 V DC max

8. Matters to be paid attention to when using motor

8-1 Please lay the motors carefully in transportation to avoid any serious damage to the motor body or its electric function because of collision.

8-2 Please use and storage motors according to N0.2 item (Operating Conditions) in specification, or else motor characteristics would be affected.

8-3 Make arrangement to limit the storage period to 6 months or less. Condensation of atmosphere must be avoided in motor usage or opening the packaging of the motor.

8-4 For proper operation. storage and operating environment must not contain corrosive gases. For example H₂S. SO₂. NO₂. Cl₂. etc. In addition storage environment must not have materials that emit corrosive gases especially from silicon. cyanic. formalin and phenol group. In the mechanism or the set. existence of corrosive gases may cause no rotation in motor.

8-5 Please don't stall the shaft for a long time after powering, and not to touch the weight when motor is rotating.

8-6 There should be no sundries (such as grain, fibre, hair, small tape, glue etc.) in the shaft end play.

