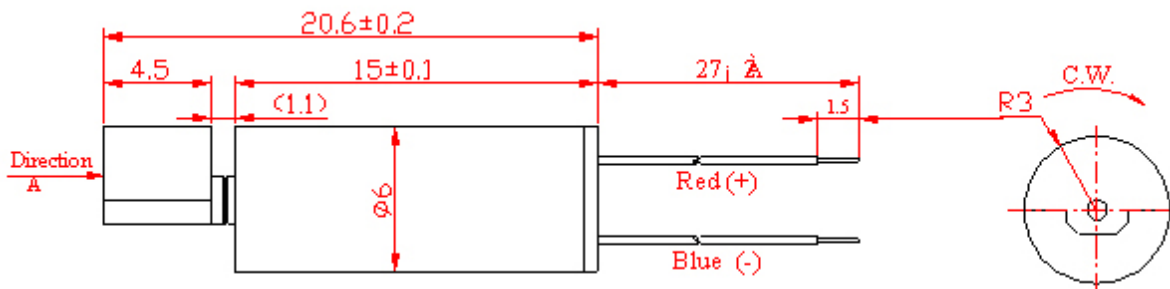




Part No. Z6CL2A0080001 (Old Part Number : 6CL-08WA)



1. General scope

1-1 The specifications apply to the coreless cylindrical permanent magnetic micro vibration motor DC model **Z6CL2A0080001**.

2. Operating conditions

Items	Specifications	Condition & Remarks
2-1 Rated voltage	1.3V DC	
2-2 Rated load	Counterweight	As specified in the outline drawing.
2-3 Rated speed	7500±2000rpm	
2-4 Rotation	C.W. (clockwise)	
2-5 Motor position	All positions	
2-6 Operating voltage	0.9 ~ 1.6V DC	
2-7 Operating conditions	-30 ~ 70°C, ordinary humidity	No condensation of moisture.
2-8 Storage conditions	-40 ~ 80°C, ordinary humidity	No condensation of moisture.

3. Measuring conditions

Items	Specifications	Condition & Remarks
3-1 Temperature	20±2°C	
3-2 Humidity	(63 ~ 67%) RH	
3-3 Motor position	Motor shaft horizontal	Lock the motor in a test fixture.

All data are based on the measuring conditions: Temperature, 20°C and Humidity, 65% RH. However, the ranges of temperature 5~35°C and humidity 45~85 %RH are to be applicable as long as no problems.

4. Mechanical specifications

Items	Specifications	Condition & Remarks
4-1 Configuration	As specified in outline drawing	Outline drawing No: Z6CL2A0080001 .
4-2 Appearance	There shall be no evidence of mechanical damage and shall not have inadequate corrosion, etc.	Visual examination: Inspection carried out on samples.
4-3 Shaft end play	0.1 ~ 0.3mm	
4-4 Weight of motor	2.86g approx.	
4-5 Holding strength of vibration weight	49N (5kgf)	

5. Performance and characteristics

Items	Specifications	Condition & Remarks
5-1 Rated speed	7500±2000rpm	At rated voltage and rated load (vibration weight).
5-2 Rated current	80mA max	
5-3 Stall current	145mA max	At rated voltage.
5-4 Starting voltage	0.75V DC max	At rated load (vibration weight) any position of rotor.
5-5 Insulation resistance	1M• min	At DC 100V between the lead wires and motor body.
5-6 Terminal resistance	11• approx.	At 20°C.
Mechanical noise	50db (A) max	At rated voltage and rated load (counterweight). Back ground noise 28 db (A) max. Measuring instruments: B & K Weight of jig: 700 g

5-7

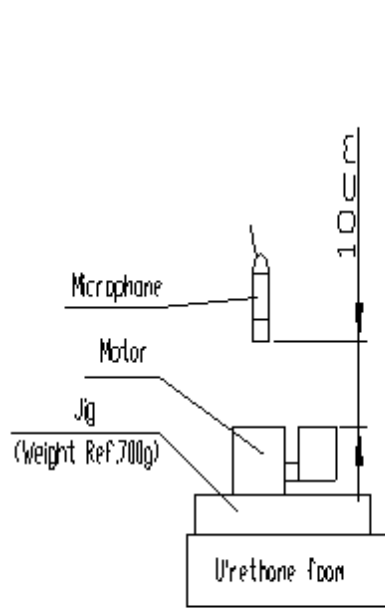


Fig. A

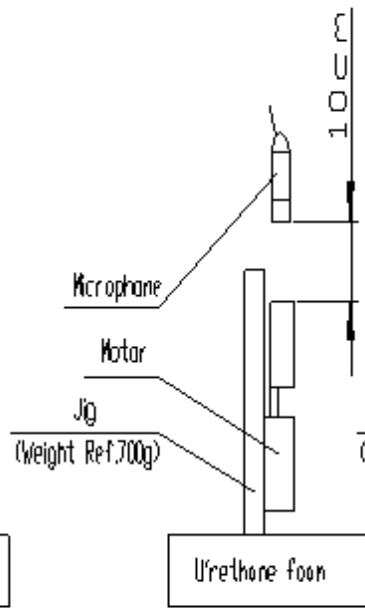


Fig. B

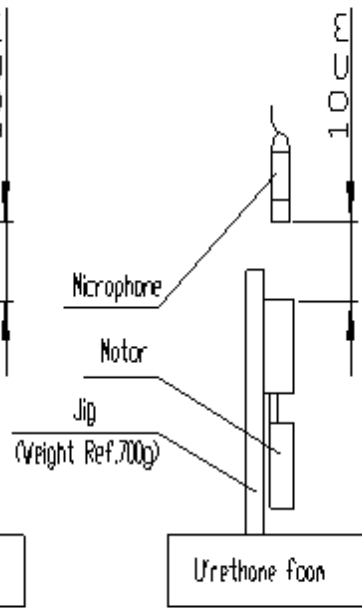
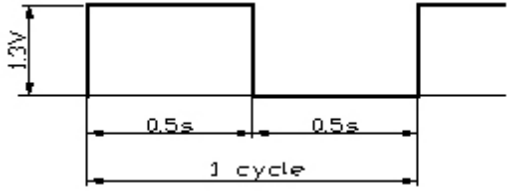
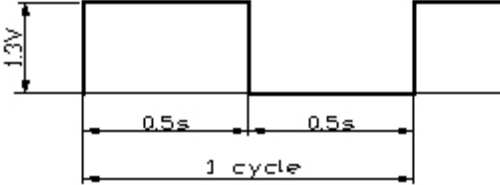


Fig. C

6. Reliability Test

Items		Standard test conditions	Condition & Remarks												
6-1	Life test		After 2 hours exposure in ordinary Motors shall be approved as specified in item 7-1.												
		<table border="1"> <thead> <tr> <th>Position</th> <th>Voltage</th> <th>Load</th> <th>Temperature</th> <th>Humidity</th> <th>Life</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Horizontal</td> <td rowspan="2">Rated</td> <td rowspan="2">Counter weight</td> <td>20 °C</td> <td>65 %</td> <td>200,000 cycles</td> </tr> <tr> <td>40 °C</td> <td>90 %</td> <td>40,000 cycles</td> </tr> </tbody> </table>		Position	Voltage	Load	Temperature	Humidity	Life	Horizontal	Rated	Counter weight	20 °C	65 %	200,000 cycles
Position	Voltage	Load	Temperature	Humidity	Life										
Horizontal	Rated	Counter weight	20 °C	65 %	200,000 cycles										
			40 °C	90 %	40,000 cycles										
6-2	Low temperature	Temperature: $-40 \pm 2^\circ\text{C}$ Time: 96hrs	After 2 hours exposure in ordinary Motors shall be approved as specified in item 7-2.												
6-3	High temperature	Temperature: $85 \pm 2^\circ\text{C}$ Time: 96hrs													
6-4	High humidity exposure test	Temperature: $40 \pm 2^\circ\text{C}$ Humidity: 90 ~ 95% RH Exposure time: 96hrs Dry time: 4hrs No condensation of moisture													
6-5	Vibration test	Displacement: 1.5mm (p-p) Frequency: 10 ~ 55Hz Period: 20 Mins log sweep (10 ~ 55 ~ 10Hz) Direction: x, y, z Time: Every 2 hours	After the test motors shall be approved as specified in item 7-2.												
6-6	Free fall	Test state: Set the motor to the approximately 75 g (include the motor) weight of block drop the motor on the concrete floor. Height: 1.5 m Direction: $\pm x, \pm y, \pm z$ Number of times: Twice each	After the test motors shall be approved as specified in item 7-2.												

6-7	Heat stock test	<p>Test cycle: 5 cycles</p> 	<p>After the test motors shall be approved as specified in item 7-2.</p>
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7. Post environmental

Items	Requirements
7-1 Table A	<ol style="list-style-type: none"> 1) Rated speed: Initial data -30 % min.; Initial data +60 % max. 2) Rated current: Initial data ±30 % max. 3) Insulation resistance: 1 MΩ min. 4) Starting voltage: 1.0 V DC max. 5) Current waveform: Normal
7-2 Table B	<ol style="list-style-type: none"> 1) Rated speed: Initial data -30 % min.; Initial data +60 % max. 2) Rated current: Initial data ±30 % max. 3) Starting voltage: 1.0 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 damage to the motor body or its electric function because of collision.

8-2 Please do not leave the motors in the environment of high temperature, high humidity and gas that will cause rust and corrosion. Please don't store the motors for over 6 months.

8-3 Please do not lock the motor shaft when the electric power is supplied.

8-4 Please do not touch the weights when motor is rotating.