

<b>Spec No.</b>	<b>XHL-WI-002</b>
<b>Description</b>	<b>Vibration Motor</b>
<b>Model</b>	<b>1027Z031-100</b>
<b>Issue Date</b>	<b>2016-2-22</b>

### 1、Application:

These specifications are provided by SHENZHEN XINHAILONG CO.,LTD which designs and produces 1027Z031-100motor.

### 2、Standard operating conditions:

NO.	Item	Condition	Remark
2-1	Rated voltage	DC 3.0V	
2-2	Operating voltage range	DC 2.8~3.2V	
2-3	Rated load	With counterweight	Refer to Drawing
2-4	Direction of rotation	C.W. or C.C.W.	
2-5	Motor position	All position	
2-6	Operating temperature range	- 10 °C ~ +50 °C	
2-7	Storage temperature range	- 40 °C ~ +60 °C	

### 3、Test conditions:

NO.	Item	Condition	Remark
3-1	Temperature	25±3 °C	
3-2	Humidity	65%RH ± 20%RH	
3-3	Position	Motor shaft horizontal	Lock the motor in the test fixture

### 4、Electrical characteristics:

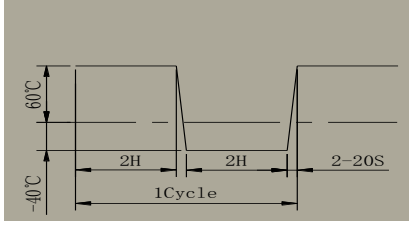
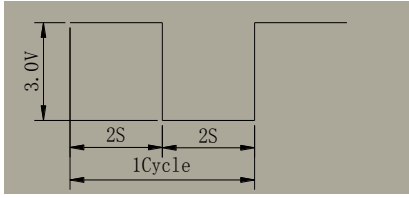
NO.	Item	Unit	SPEC	Remark
4-1	Load speed	RPM	12000±2000	

				At rated voltage and rated load
4-2	Load Current	mA	80 Max	
4-3	Starting voltage	V	2.0 Max	At rated load any position of load
4-4	Starting current	mA	100 Max	At rated voltage
4-5	Coil resistance	$\Omega$	28±15% 55±15%	At 25 °C
4-6	Insulation resistance	M $\Omega$	10 M $\Omega$	Between lead wire and motor case, DC 100V

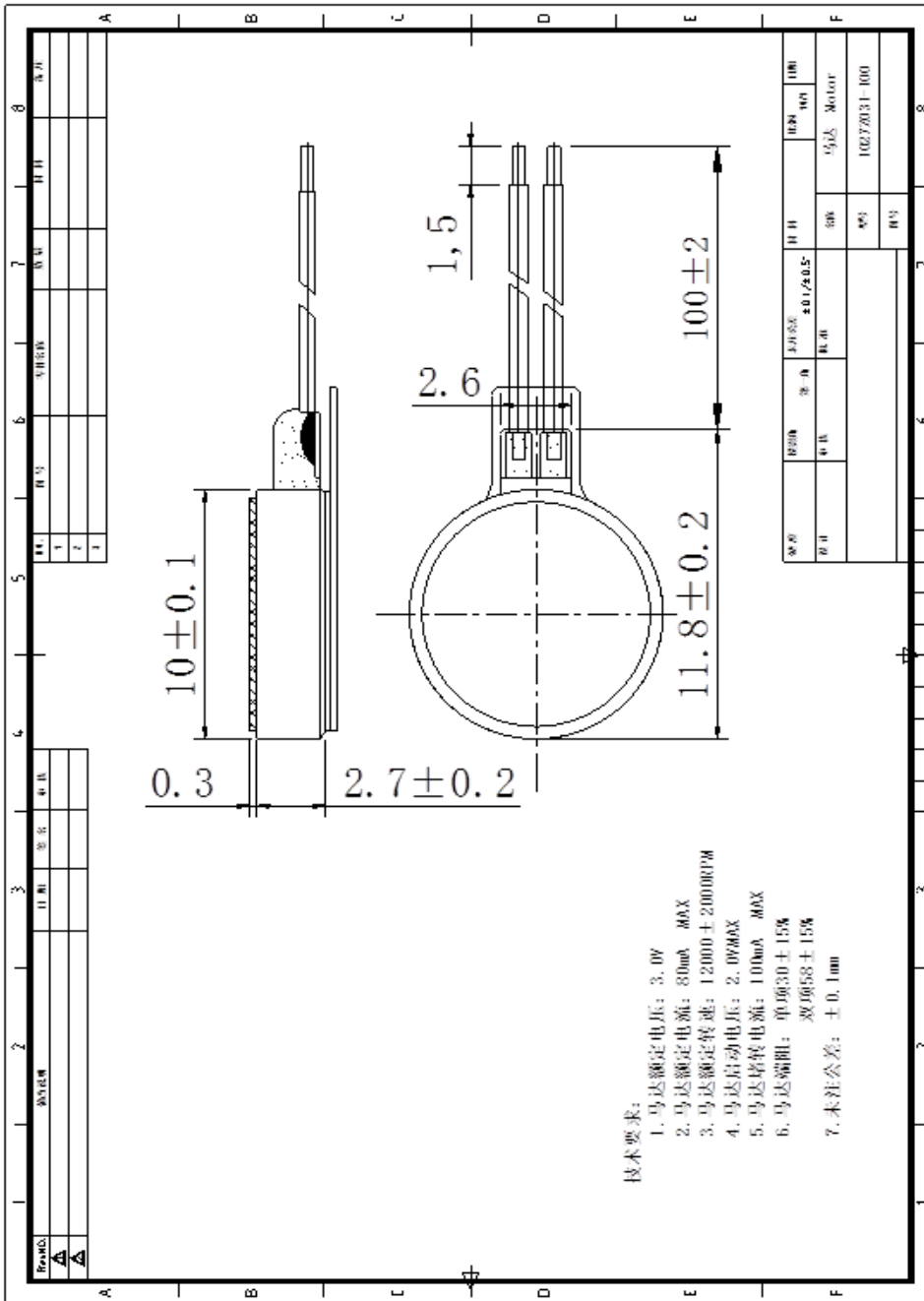
**5. Mechanical characteristics:**

NO.	Item	/Unit	SPEC	Remark
5-1	Configuration	/	Refer to Drawing	
5-2	Appearance	/		It does not contain any harmful phenomena such as mechanical damage and erosion.
5-3	Bracket deflection strength	N	9.8 Min	
5-4	Motor weight	g	About 0.9	
5-5	Mechanical noise	dB(A)	50 Max	28dB(A) Back ground noise 28dBA(max)
		<p>The diagram illustrates the test setup for measuring mechanical noise. It shows a microphone at the top, with a vertical double-headed arrow indicating a distance of 10cm to the motor below it. The motor is supported by a rectangular block labeled 'Test Jig (100g)', which is itself supported by a larger rectangular block labeled 'Horny Sponge'.</p>		

## 6. Reliability tests:

NO.	Item	Condition	Judgment
6-1	Low temperature storage	Temperature: $-40\pm 2^{\circ}\text{C}$ Time: 72 Hours	Measure after exposing at normal temperature and humidity for 2 hours, Motor shall be approved as 6-8.
6-2	High temperature storage	Temperature: $60\pm 2^{\circ}\text{C}$ Time: 72 Hours	Measure after exposing at normal temperature and humidity for 2 hours, Motor shall be approved as 6-8.
6-3	High temperature humidity storage	Temperature: $40\pm 2^{\circ}\text{C}$ humidity: 90%~95%RH Time: 72 Hours	Measure after exposing at normal temperature and humidity for 12 hours, Motor shall be approved as 6-8.
6-4	Free fall	Height: 1.5M Direction: $\pm X, \pm Y, \pm Z$ Time: Each 2 times Jig weight: 70g	Measure after exposing at normal temperature and humidity for 2 hours, Motor shall be approved as 6-8.
6-5	Thermal shock	 <p>Cycle: 20</p>	Measure after exposing at normal temperature and humidity for 2 hours, Motor shall be approved as 6-8.
6-6	Vibration	Amplitude: 1.5mm(P-P) Frequency: 10 to 55 Hz cycle: In 20 Minutes 10~55~10Hz Direction: X、Y、Z Time: Each 2 hours	Measure after exposing at normal temperature and humidity for 2 hours, Motor shall be approved as 6-8.
6-7	Life test	 <p>Test 50, 000 Cycle</p>	Measure after exposing at normal temperature and humidity for 2 hours, Motor shall be approved as 6-8.
6-8	Requirement after the test	Load Current : +30% Max +30% of original readings Load Speed : -30% Min -30% of original readings Starting voltage : 2.5V Max	

## 7、Drawing:



## 8、Caution for use:

- 8-1 During the process of operate motor, please avoid serious collision and knock to protect motor from property damage.
- 8-2 During the process of operate motor, avoid using great strength to pull lead or spring leaf to protect motor from electrical system damage.
- 8-3 Corrosive gas is not allowed to exist in the environment when motor is working and storing, such as H<sub>2</sub>S, SO<sub>2</sub>, NO<sub>2</sub>, CL<sub>2</sub>.
- 8-4 Please use motor within 6 months.
- 8-5 Storing and using motor, please strictly design and implement according to Standards.