

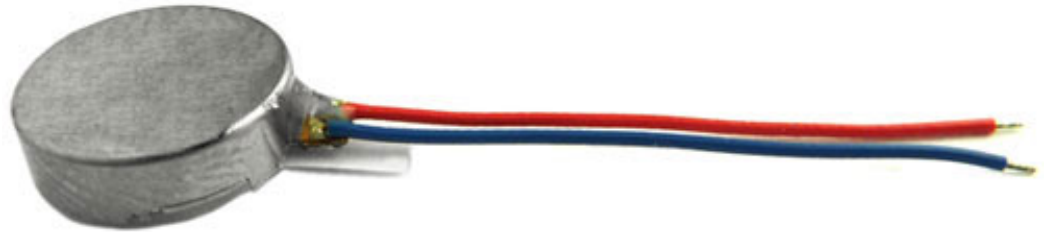


## Part No. **C1020B008F1**

Download

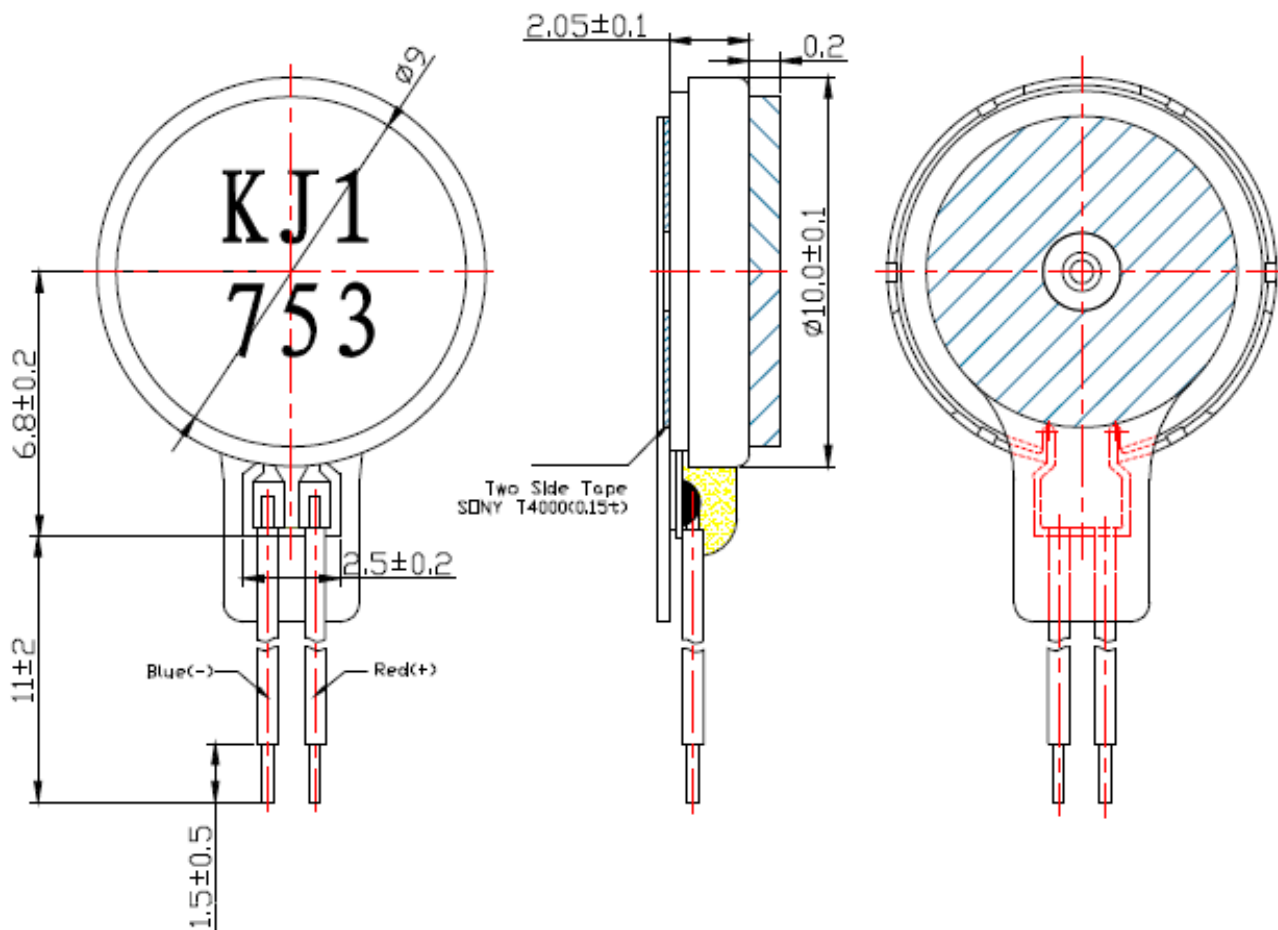


PDF Format



### Technical requirment

1. Rated voltage: 3.0V
2. Rated current: 90mA Max
3. Rated speed: 9,000rpm Min
4. Starting voltage: 2.3V Max
5. Terminal resistance:
  - 31 $\Omega$   $\pm$  15% (Single phase)
  - 59 $\Omega$   $\pm$  15% (Double phase)
6. At DC 100V, that lead wire and case thin out the insulation resistance:  $> 10M\Omega$
7. Lead spec: AWG32 UL1571
8. Unmark tolerance:  $\pm 0.1$



## 1. Application

This specification applies to flat permanent-magnetic motors DC model **C1020B008F1**.

## 2. Operating condition

Item	Specification
2-1	Rated voltage 3.0 V DC
2-2	Operating voltage 2.7~3.3 V DC
2-3	Rotation CW (clockwise) or CCW (counter clockwise)
2-4	Operating environment -20°C ~ +60°C , Ordinary Humidity
2-5	Storage environment -30°C ~ +70°C , Ordinary Humidity

## 3. Test condition

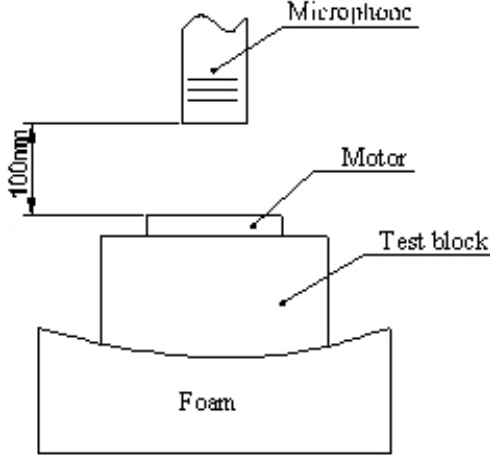
Item	Specification	Conditions
3-1	Temperature	25±3°C

3-2	Humidity	65±20% RH
3-2	Air pressure	1013±40 hPa
3-4	Power supply	DC power supply or battery 3.0V

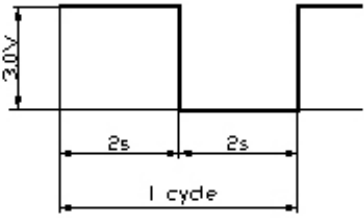
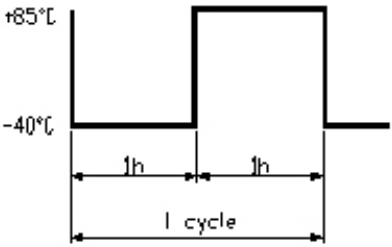
#### 4. Electrical initial characteristics

Item	Specification	Condition
4-1	Rated speed	9,000rpm Min
4-2	Rated current	90 mA Max
4-3	Starting current	120 mA Max
4-4	Starting voltage	2.3 V DC Max
4-5	Insulation resistance	10 MΩ Min
4-6	Terminal resistance	31 Ω ± 15% (Single posture) 59 Ω ± 15% (Compose posture)
		At 25C°

#### 5. Mechanical characteristics

Item	Specification
5-1	Bracket deflection strength
5-2	Mechanical noise
	At rated voltage, back ground noise 28dB(A) Max
	 <p>The diagram illustrates the test setup for measuring mechanical noise. A microphone is positioned 100mm above a motor. The motor is mounted on a test block, which is supported by a layer of foam. The microphone is connected to a measurement device.</p>

#### 6. Durability characteristics

Item	Specification	Requirements
6-1 Lifetime	 <p style="text-align: center;">Test cycle 50,000 cycles</p>	After the test, motors shall be approved as specified in item 7-1.
6-2 Low temperature exposure	Temperature : -30°C Time : 96 h	After 4 hours exposure in ordinary temperature and humidity, motors shall be approved as specified in item 7-2.
6-3 High temp. exposure	Temperature : +70°C Time : 96 h	
6-4 Humidity exposure	Temperature : +40°C Humidity : 95%RH Exposure time : 96 h No condensation of moisture	After 4 hours exposure in ordinary temperature and humidity, Motors shall be approved as specified in item 7-2.
6-5 Vibration	Displacement : 1.5mm (p-p) Frequency: 10~55Hz Acceleration: 22m/s <sup>2</sup> Period: 10 Minutes log sweep (10~55~10Hz) Condition : This motion shall be applied for a period of 10 minutes in each of 3 mutually perpendicular axes.	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 100 g (include the motor) weight of block drop the motor on the concrete floor. Height : 1.5 m Direction : ±x, ±y, ±z Number of times: Each 3 times Shock : 29,420 N m/s <sup>2</sup> Equivalent (3,000 G)	After the test motors shall be approved as specified in item 7-2.
6-7 Heat stock test	 <p style="text-align: center;">Test cycle: 15 cycles.</p>	After the test motors shall be approved as specified in item 7-2.

## 7. Requirements

Item		Requirements
7-1	Table A	1) Rated speed: Initial data-30 % Min/ Initial data+ 50 % Max 2) Rated current: Initial data-30 % Min/ Initial data+ 50 % Max 3) Starting voltage: 2.5 V DC Max 4) Insulation resistance: 10 MΩ Min
7-2	Table B	1) Rated speed: Initial data± 20 % Max 2) Rated current: Initial data± 20 % Max 3) Starting voltage: 2.5 V DC Max 4) Terminal resistance: Initial data± 15% Max

## 8. Caution for Use

8-1 Unless it is used in accordance with the specifications ,the performance and life may be considerably reduced . Due attention should be paid to voltage and range for use.

8-2 Avoid use or save the motor in the following environment.

1. High temperature and high humidity area.
2. Corrosive gas such as H<sub>2</sub>S•SO<sub>2</sub>•NO<sub>2</sub>•Cl<sub>2</sub>.
3. Dusty area.

8-3 Due attention must be paid to the handling and working environments because such objects as iron powder if attracted by the motor magnet, will cause noise, characteristic deterioration thus reducing the reliability.

8-4 Please confirm enough no problem of standards and laws and ordinances on your cellular.

8-5 To handle the motor ,hold the motor case softly.

8-6 Rust of plate (steel) and similar edge should be OK.