



Model No.
NFP-FLAT-C1020

1. Application

This article regulates the relevant technical requirements and test methods of motor model NFP-FLAT-C1020 Coin Permanent Magnetic Motor.

2. Operating condition

Item		Specification
2-1	Rated voltage:	3.0V DC
2-2	Operating voltage:	2.3~3.3V DC
2-3	Rotation:	CW(clockwise) or CCW(Contrary clockwise)
2-4	Operating environment:	-20~+60°C, Ordinary Humidity
2-5	Storage environment:	-30~+70°C, Ordinary Humidity

3. Measuring Conditions

Item		Specification
3-1	Temperature:	25±3°C
3-2	Humidity:	62±20% RH
3-3	Air pressure:	1011±40 hPa
3-4	Current:	Stabilized current

4. Electrical initial characteristics

Item		Specification	Condition
4-1	Rated speed:	12000±2500rpm min	At rated voltage
4-2	Rated current:	80mA Max	
4-3	Starting current:	120mA Max	
4-4	Starting voltage:	2.3V DC Max	Motor is rotating at min starting voltage
4-5	Insulation resistance:	10MΩ Min	At DC 100V between lead wire and case
4-6	Terminal resistance:	28Ω±15%(single posture) 52Ω±15%(double posture)	At 25°C
4-7	Vibration acceleration:	1.10G	

5. Mechanical characteristics

Item		Specification
5-1	Bracket deflection strength:	9.8N or more
5-2	Mechanical noise:	50dB(A)Max
		At rated voltage Back ground noise: 28dB(A)Max

6. Durability characteristics

Item		Specification	Judgment
6-1	Life:	Test cycle: 50,000 cycles	After the test, motors shall be approved as specified in item 7-1
6-2	Low temp exposure:	Temperature: -30 Time: 96h	After 4 hours exposure in ordinary temperature and humidity, motors shall be approved as specified in item7-2
6-3	High temp Exposure:	Temperature: +70 Time: 96h	
6-4	Humidity exposure:	Temperature: +40 Humidity: 95%RH Exposure time: 96h NO condensation of moisture	
6-5	Vibration:	Displacement: 1.5mm (p-p) Frequency: 10~54Hz Acceleration: 22m/s 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 perpend axis	After the test motors shall be approved in item7-2
6-6	Free fall:	Test state: Set the motor to the approximately 100g(include the motor) Weight of block drop the motor on the concrete floor Height: 1.5m Direction: $\pm x$. $\pm y$ $\pm z$. Number of times: Each 3 times Shock: 29420m/s Equivalent(3000G)	After the test motors shall be approved as specified in item7-2
6-7	Heat stock test:		After the test motors shall be approved as specified in item7-2

7. Requires

Item		Judgment
7-1	Table A:	1) Rated speed: data+30% Initial Min : data+50% Initial Max 2) Rated current: data+30% Initial Min : data+50% Initial Max 3) Starting voltage: 2.5V DC Max 4) Insulation resistance: 10MΩ Min 5) Terminal resistance: Initial data±15% Max
7-2	Table B:	1) Rated speed: Initial data±20% Max 2) Rated current: Initial data±20% Max 3) Starting voltage: 2.5V DC Max 4) Terminal resistance: Initial data±15% Max

8. Caution for use

Matters to be paid attention to when using motor	
8-1	Please apply motors in accordance with specifications, especially aware of ranges of operation voltage, or its performance and life durability may be consider ably reduced.
8-2	Advice use this motor within 6 month as avoiding as possible, avoid use or save the motors in the following environment: 1) High temperature and high humidity area 2) Corrosive gas such as H ₂ S, SO ₂ , NO ₂ , C ₁₂ , 3) Dusty area
8-3	Please pay much attention to the working environment to avoid iron sundries from being sucked in the motors, possible to trigger noise, reduce performance, and decrease 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) ad similar edge should be OK.

9. Outline Drawing

