

# PERFORMANCE SPECIFICATION

PRODUCT TITLE : DC BRUSHLESS FAN

MODEL NO : BP402024H

## 1、SCOPE：

THIS SPECIFICATION DEFINES THE ELECTRICAL AND MECHANICAL CHARACTERISTICS OF THE DC BRUSHLESS AXIAL FLOW FAN·THE FAN MOTOR IS WITH TWO PHASES AND FOUR POLES·

## 2、ELECTRICAL CHARACTERISTICS：

ALL MEASUREMENTS PERFORMED AT 20-30℃ ROOM TEMPERATURE &50-70% R.H.  
UNLESS OTHERWISE SPECIFIED. SPEED MEASURED AFTER CONTINUOUS 10 MINUTE OPERATION AT RATED VOLTAGE IN CLEAN AIR.

| ITEM | DESCRIPTION               | UNIT               | SYMBOL | SPEC.                                        | CONDITION                                         |
|------|---------------------------|--------------------|--------|----------------------------------------------|---------------------------------------------------|
| 1    | RATED VOLTAGE             | VOLTS              | V      | 24                                           |                                                   |
| 2    | OPERATION VOLTAGE         | VOLTS              | V      | 20.4~27.6                                    |                                                   |
| 3    | INPUT CURRENT             | AMP                | A      | 0.18MAX                                      | AT RATED VOLTAGE                                  |
| 4    | INPUT POWER               | WATTS              | W      | 4.32MAX                                      | AT RATED VOLTAGE                                  |
| 5    | ROTATION SPEED            | RPM                | RPM    | 7000±10%                                     | AT RATED VOLTAGE<br>FREE AIR                      |
| 6    | ACOUSTICAL NOISE<br>(AVG) | dB(A)              | dB(A)  | 31±10%                                       | DETAILS SEE ATTACHED PAGE.                        |
| 7    | MAX. AIR-FLOW             | CFM                | Q      | 7.77±10%                                     | TWO-CHAMBER METHODS<br>DETAILS SEE ATTACHED PAGE. |
| 8    | MAX. AIR-PRESSURE         | mmH <sub>2</sub> O | P      | 3.8±10%                                      | TWO-CHAMBER METHODS<br>DETAILS SEE ATTACHED PAGE. |
| 9    | STARTING VOLTAGE          | VOLTS              | V      | 12                                           | AT RATED VOLTAGE                                  |
| 10   | INSULATION<br>RESISTANCE  | MEG.<br>OHM        | MΩ     | 10MΩ MIN.<br>AT 500V DC                      | BETWEEN FRAME AND<br>(+)LEADWIRE.                 |
| 11   | DIELECTRIC STRENGTH       | MILLI-AMP          | mA     | 5mA MAX.<br>AT 500V AC 60Hz.<br>FOR 1 MINUTE | BETWEEN FRAME AND<br>(+)LEADWIRE.                 |

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REVISIONS：

| ITEM | DESCRIPTION        | SPEC.                        |   |
|------|--------------------|------------------------------|---|
| 12   | ROTATION           | CW VIEW FROM NAME PLATE SIDE |   |
| 13   | AIR-FLOW DIRECTION | AIR INTAKE OVER THE STRUTS   |   |
| 14   | INSULATION RANK    | CLASS A                      |   |
| 15   | LIFE EXPECTANCY    | 50000 HOURS CONTINUOUS       | □ |
|      |                    |                              |   |

□ LIFE IS DEFINED AS THE TIME MOTOR SPEED DECREASED MORE THAN 30% COMPARED WITH INITIAL VALUE·

### 3、MECHANICAL

- 3-1. DIMENSIONS----- SEE SECTION 8
- 3-2. FRAME ----- PLASTIC PBT UL : 94V-0 RATING + FIBRE GLASS.
- 3-3. FAN BLADE ----- PLASTIC PBT UL : 94V-0 RATING + FIBRE GLASS.
- 3-4. BEARING SYSTEM ----- BALL BEARING
- 3-5. WEIGHT ----- 40 GRAMS
- 3-6. LEAD WIRE ----- 1007 AWG # 26
  - + POSITIVE ..... RED
  - NEGATIVE ..... BLACK

### 4、ENVIRONMENTAL :

- 4-1. OPERATING TEMPERATURE ----- -10 TO +70°C
- 4-2. STORAGE TEMPERATURE ----- -40 TO +75°C
- 4-3. DROP TEST
  - IN MINIMUM PACKAGING CONDITION FAN WITHSTANDS EACH ONE DROP OF THREE FACES FROM 30CM DISTANCE HEIGHT ONTO 10mm THICKNESS OF WOODEN BOARD·
- 4-4. VIBRATION TEST
  - FREQUENCY : 10—55Hz      AMPLITUDE : 4MM
  - X , Y , Z DIRECTION EACH FOR 1 HR·

|                                  |           |              |             |  |
|----------------------------------|-----------|--------------|-------------|--|
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#### 4-5. SHOCK TEST

APPLY PEAK ACCELERATION 50g AND KEEP DURATION OF THE PULSE FOR 11ms ( HALF SINE WAVE ) .

#### 5 、 PROTECTION :

##### 5-1. POLARITY PROTECTION

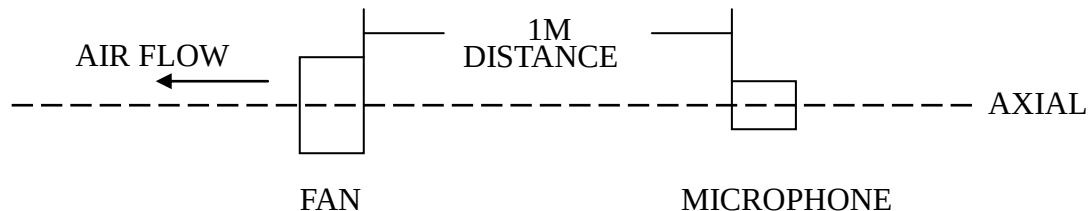
BUILT-IN ELECTRONIC CIRCUIT PROTECTS THE FAN AGAINST REVERSE CONNECTION OF POSITIVE AND REVERSE LEADS.

##### 5-2. LOCKED ROTOR PROTECTION

IMPEDANCE OF MOTOR COIL WINDING PROTECTS MOTOR FROM FLAMING IN THE CONDITION OF 72 Hrs LOCKED ROTOR AT RATED VOLTAGE.

#### 6 、 ACOUSTICAL NOISE :

##### 6-1. MEASUREMENT SET-UP



6-2. MEASUREMENT PERFORMED IN ANECHOIC TEST CHAMBER UNDER FREE AIR CONDITION .

6-3. CHAMBER BACKGROUND NOISE 17dB MAX .

6-4. READING TAKEN FROM SPECTRUM ANALYZER .

6-5. NOISE DISTRIBUTION CURVE SEE ATTACHED PAGE .

#### 7 、 STATICS PRESSURE VS AIR FLOW CURVE :

MEASURED PER TWO CHAMBER METHOD .

DATA-CURVE SEE ATTACHED PAGE .

8、DIMENSIONS DRAWING：

UNIT:mm

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