

# PERFORMANCE SPECIFICATION

PRODUCT TITLE : DC BRUSHLESS FAN

MODEL NO : BP402012M

## 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°C 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	12	
2	OPERATION VOLTAGE	VOLTS	V	10.2~13.8	
3	INPUT CURRENT	AMP	A	0.1 MAX	AT RATED VOLTAGE
4	INPUT POWER	WATTS	W	1.2 MAX	AT RATED VOLTAGE
5	ROTATION SPEED	RPM	RPM	5000±10%	AT RATED VOLTAGE FREE AIR
6	ACOUSTICAL NOISE (AVG)	dB(A)	dB(A)	23 ±10%	DETAILS SEE ATTACHED PAGE.
7	MAX. AIR-FLOW	CFM	Q	5 ±10%	TWO-CHAMBER METHODS DETAILS SEE ATTACHED PAGE.
8	MAX. AIR-PRESSURE	mmH <sub>2</sub> O	P	2.0 ±10%	TWO-CHAMBER METHODS DETAILS SEE ATTACHED PAGE.
9	STARTING VOLTAGE	VOLTS	V	7	AT RATED VOLTAGE
10	INSULATION RESISTANCE	MEG. OHM	MΩ	10MΩ MIN. AT 500V DC	BETWEEN FRAME AND (+)LEADWIRE.
11	DIELECTRIC STRENGTH	MILLI-AMP	mA	5mA MAX. AT 500V AC 60Hz. FOR 1 MINUTE	BETWEEN FRAME AND (+)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 ..... BLUE

### 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

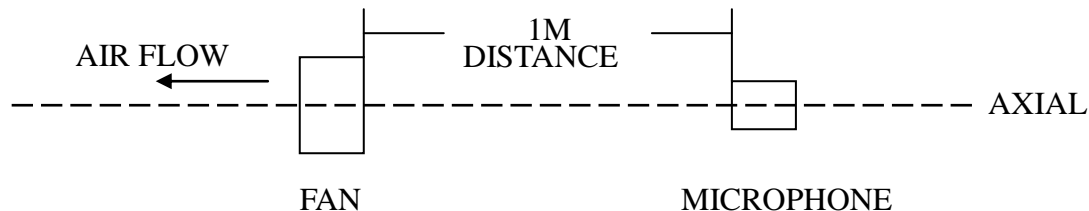
BUILT-IN ELECTRONIC CIRCUIT PROTECTS THE FAN AGAINST REVERSE CONNECTION OF POSITIVE AND REVERSE LEADS .

##### 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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