

1. SCOPE

This specification sheet specifies MITACHI DC BRUSHLESS FAN

Model : MD1203812HHB

2. MECHANICAL PART

2-a Dimension	As per attached drawing No.
2-b Unit As per	attached sheet No.
2-c Bearing type	BALL BEARING

3. ELECTRICAL PART

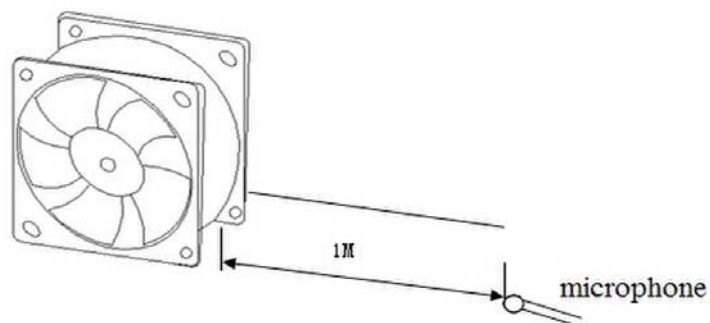
3-a Rated Voltage	12 VDC
3-b Starting Voltage	< 6 VDC
3-c Rated Current	0.70A (+ - 10%)
3-d Operating Voltage	DC 6-14V
3-e Operating Temperature	-10°C ~ 70°C
3-f Storage Temperature	-30°C ~ 70°C
3-g Max . Air flow	132CFM
3-h Max . Air pressure	4.40 mm-H ₂ O
3-i Speed	3100 R.P.M(±10%)
3-j Noise level	52db
3-k Insulation Resistance	Min 10M ohm (When a voltage of AC 500V is impressed between terminal (+) and frame)
3-l Withstand voltage	No abnormality shall not be occur (When a voltage of AC 500V is impressed 1 minute between terminal (+) and frame)
3-m Expected durability	50,000 hours

4. OTHER

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|-----|-------------------------------|---|
| 4-a | Restriction Burn | Fan shall be free of damage when it is subjected to a 2 days loading the fan blade at the rated voltage |
| 4-b | Dielectric Strength | No damage can be occur at 500V DC 60 Sec or 600 V DC 2 sec between housing And plus end of lead wire |
| 4-c | Air flow & rotation direction | It is clearly marked on the flame |
| 4-d | Tachometer output | FG signal |
| 4-e | Weight | 300g |

5. CHARACTERISTICS

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|-----|---------------------|--|
| 5-a | Rate current | shall be measured after 5 minutes continue rotate at rate voltage |
| 5-b | Rate speed | shall be measured after 5 minutes continue rotate at rate voltage |
| 5-c | Start voltage | 6 V enable to start when the fan be switch on |
| 5-d | Free drop shock | The fan no damage each one drop of three faces |
| 5-e | Vibration test | fan shall be free of damage after avibration of 2mm 1000 cpm is applied to each direction of x..y.z. for 30 minutes |
| 5-f | Noise level measure | In noise measuring the two method according JIS B8330 applying to a blower and JIS C9603 applying to a ventilator . a microphone 1 meter apart from the external surface |



5-g Unit for static pressure and air flow

Meter	Inch	Reduced Value
Static mmAq	IN Aq	1 IN Aq=25.4mmAq
Preaature(mmH2O) Air flow m3/min 1/sec	CFM	1CFM=0.028317m3/min =0.472 1/sec =1.699 m3/min

5-h Fan motor life caculation:

$$\text{Log}(L)=4.73-(T-17.2)*(0.0104+8.46n*10^{-7})-0.03 \frac{N.F^{1.6}}{C^{1.9}}$$

T : Temp

F : Weight(Kg)

N : Speed (R.P.M)

L : Life (time)

C : Weight (Kg) normal

6. Product Drawing : AS attachments

