



客戶承認書
SPECIFICATION FOR APPROVAL

CUSTOMER: _____

DESCRIPTION: _____ DC BLOWER _____

CUSTOMER P/N: _____ REV: _____

DELTA MODEL: BUB0812DD-SM007PW REV: 00

SAMPLE ISSUE DATE: 10/19/2022

QUANTITY: _____

**PLEASE SIGN BACK ONE COPY OF THIS SPECIFICATION
AFTER COMPLETION OF APPROVAL**

APPROVED BY: _____

DATE: _____

STATEMENT OF DEVIATION

NONE

DESCRIPTION :

DELTA DOC CENTER

SPECIFICATION FOR APPROVAL

Customer:

Description: DC BLOWER

Customer P/N:

REV:

Delta Model NO.: BUB0812DD-SM007PW Delta Safety Model NO.: BUB0812DD-SM00

Sample Rev: 00

Issue NO:

Sample Issue Date: OCT-19-2022

Quantity:

1. SCOPE:

THIS SPECIFICATION DEFINES THE ELECTRICAL AND MECHANICAL CHARACTERISTICS OF THE DC BRUSHLESS BLOWER. THE BLOWER MOTOR IS WITH SINGLE PHASE AND FOUR POLES.

2. CHARACTERS:

ITEM	DESCRIPTION
RATED VOLTAGE	12.0 VDC
OPERATION VOLTAGE	10.8 - 12.6 VDC
INPUT CURRENT (AVG.)	0.38 (MAX. 0.58) A (CURRENT ON SAFETY LABEL: 0.58A)
INPUT POWER (AVG.)	4.56 (MAX. 6.96) W
SPEED	3800±10%
MAX. AIR FLOW (AT ZERO STATIC PRESSURE)	0.580 (MIN. 0.522) M ³ /MIN. 20.48 (MIN. 18.43) CFM
MAX. AIR PRESSURE (AT ZERO AIRFLOW)	23.20 (MIN. 18.80) mmH ₂ O 0.913 (MIN. 0.740) inchH ₂ O
ACOUSTICAL NOISE (AVG.) DISTANCE : 50cm	51.5 (MAX. 55.5) dB-A
INSULATION TYPE	UL: CLASS A

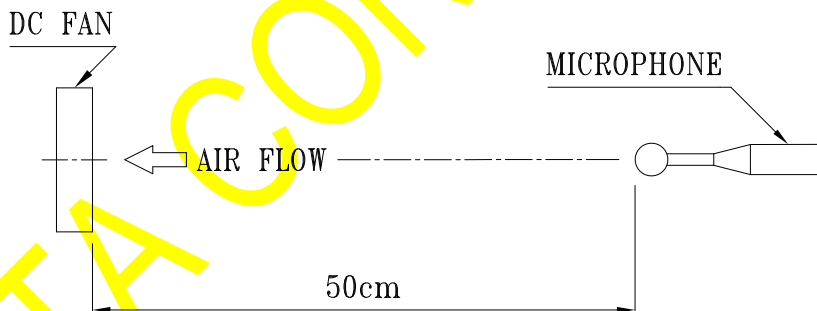
(continued)

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INSULATION STRENGTH	10 MEG OHM MIN. AT 500 VDC (BETWEEN FRAME AND (+) TERMINAL)
DIELECTRIC STRENGTH	5 mA MAX. AT 500 VAC 50/60 Hz ONE MINUTE, (BETWEEN FRAME AND (+) TERMINAL)
LIFE EXPECTANCE AT LABEL VOLTAGE	50,000 HOURS CONTINUOUS OPERATION AT 40 °C WITH 15 ~ 65 %RH. (REF)
ROTATION	CLOCKWISE VIEW FROM TOP SIDE VIEW

- NOTES: 1. ALL READINGS ARE MEASURED AFTER STABLY WARMING UP THROUGH 10 MINUTES.
2. STANDARD AIR PROPERTY IS AIR AT (Td) 25°C TEMPERATURE, (RH) 65% RELATIVE HUMIDITY, AND (Pb) 760 mmHg BAROMETRIC PRESSURE.
3. THE VALUES WRITTEN IN PARENS , (), ARE LIMITED SPEC.
4. ACOUSTICAL NOISE MEASURING CONDITION:



NOISE IS MEASURED AT RATED VOLTAGE IN FREE AIR IN SEMI-ANECHOIC CHAMBER METER WITH MICROPHONE AT A DISTANCE OF ONE METER FROM THE FAN INTAKE.

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3. MECHANICAL:

- 3-1. DIMENSIONS ----- SEE DIMENSIONS DRAWING
- 3-2. PILLOW ----- PLASTIC UL: 94V-0
- 3-3. IMPELLER ----- PLASTIC UL: 94V-0
- 3-4. COVER ----- SECC
- 3-5. BEARING SYSTEM ----- SUPERFLO BEARING
- 3-6. WEIGHT ----- 84.0 GRAMS

4. ENVIRONMENTAL:

- 4-1. OPERATING TEMPERATURE ----- 0 TO +60 DEGREE C
- 4-2. STORAGE TEMPERATURE ----- -10 TO +70 DEGREE C
- 4-3. OPERATING HUMIDITY ----- 5 TO 90 % RH
- 4-4. STORAGE HUMIDITY ----- 5 TO 95 % RH

5. PROTECTION:

5-1. LOCKED ROTOR PROTECTION

IMPEDANCE OF MOTOR WINDING PROTECTS MOTOR FROM FIRE IN 96 HOURS OF LOCKED ROTOR CONDITION AT THE RATED VOLTAGE.

5-2. POLARITY PROTECTION

BE CAPABLE OF WITHSTANDING IF REVERSE CONNECTION FOR POSITIVE AND NEGATIVE LEADS.

5-3. SOFT START FUNCTION (ENVIRONMENT TEMPERATURE AT 25°C)

WHEN IT CHANGES PWM DUTY CYCLE FROM 0% TO 100%, THE SOFT START TIME IS LARGER THAN 13 SECONDS TO REACH MAXIMUM SPEED.

6. RE OZONE DEPLETING SUBSTANCES:

- 6-1. NO CONTAINING PBBs, PBB0s, CFCs, PBBEs, PBDPEs AND HCFCs.

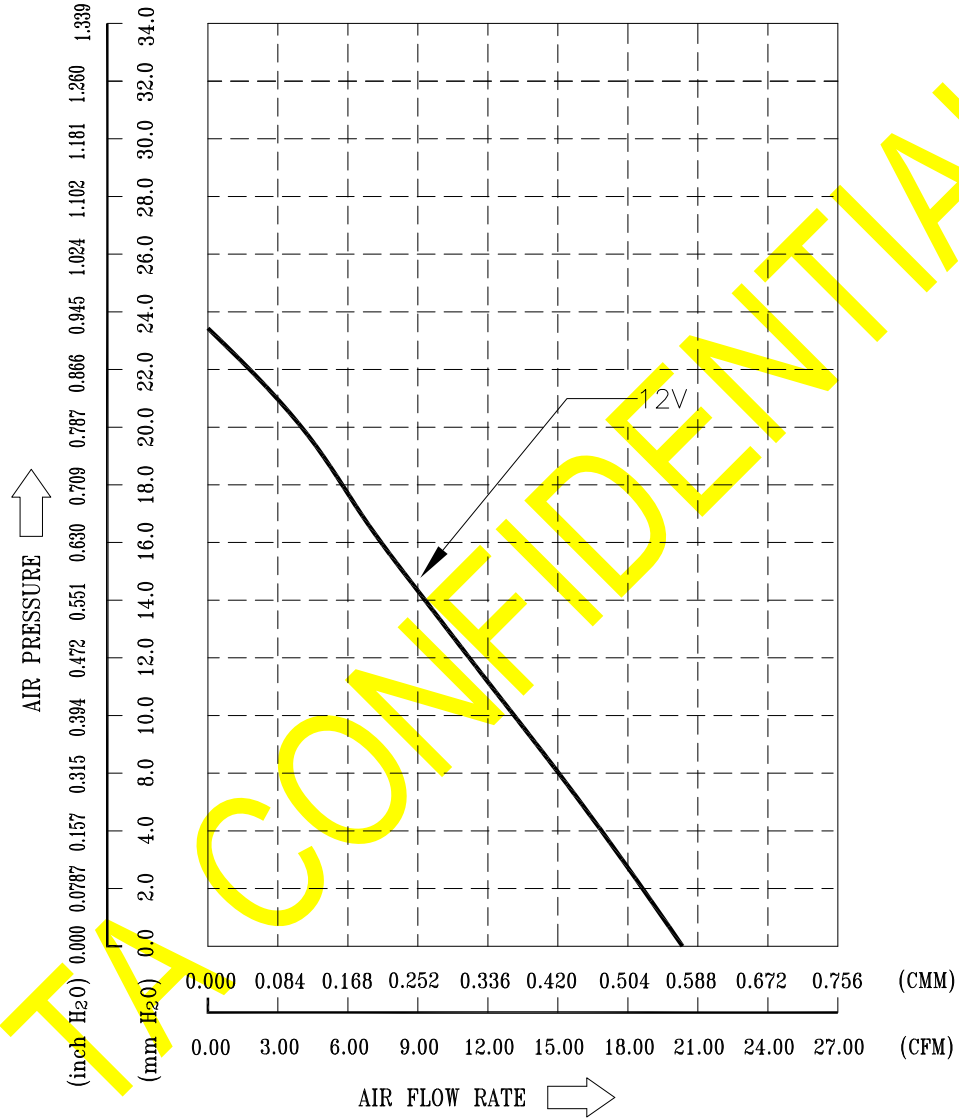
7. PRODUCTION LOCATION

- 7-1. PRODUCTS WILL BE PRODUCED IN CHINA .

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8. P & Q CURVE:

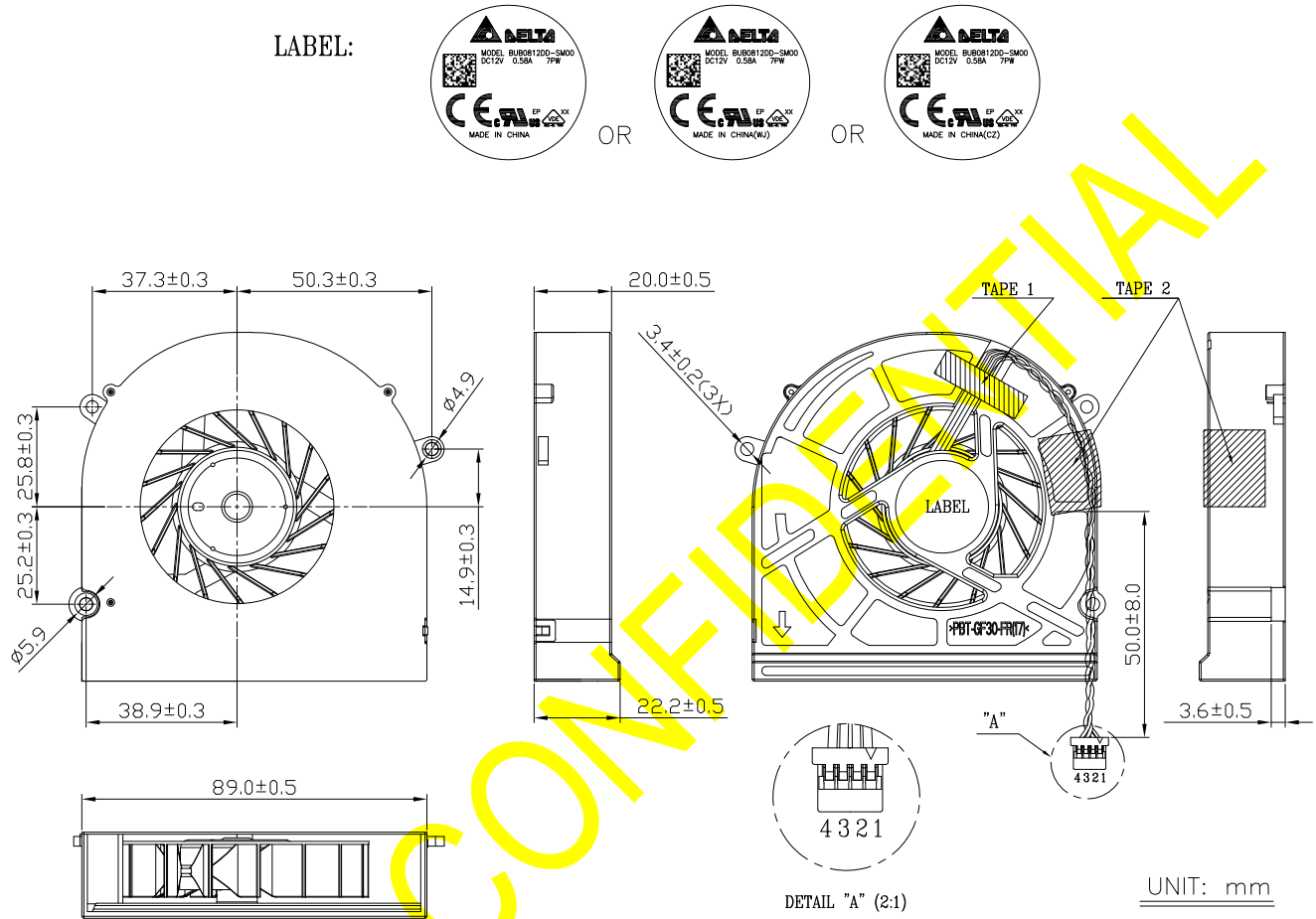


* TEST CONDITION: INPUT VOLTAGE ----- OPERATION VOLTAGE
TEMPERATURE ----- ROOM TEMPERATURE
HUMIDITY ----- 65%RH

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9. DIMENSION DRAWING:



NOTES:

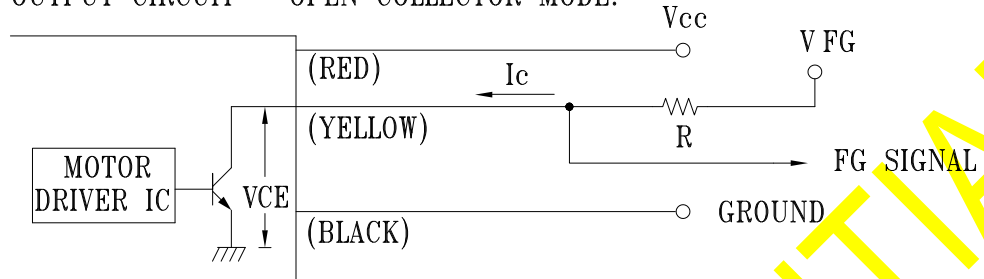
- LEAD WIRE: UL1061 AWG#28
PIN 1: RED WIRE ----(+)
PIN 2: BLUE WIRE -----(PWM)
PIN 3: YELLOW WIRE----(F00)
PIN 4: BLACK WIRE ----(-)
- HOUSING: JVT 1225HN0-04L
- TERMINAL: JVT 1225TP-SNSL
- THIS PRODUCT IS RoHS COMPLIANT

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10. FREQUENCY GENERATOR (FG) SIGNAL:

1. OUTPUT CIRCUIT - OPEN COLLECTOR MODE:



CAUTION: THE FG SIGNAL LEAD WIRE MUST BE KEPT AWAY FROM "+" LEAD WIRE & "-" LEAD WIRE.

2. SPECIFICATION:

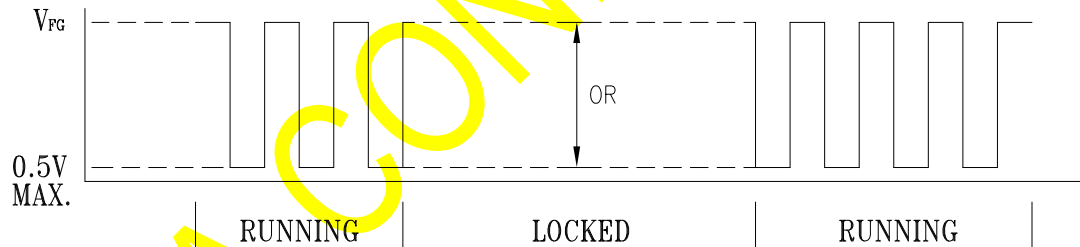
$V_{CE}(\text{sat}) = 0.5\text{V MAX.}$

$V_{FG} = 5.0\text{V TYP.}$

$I_c = 5\text{mA MAX.}$

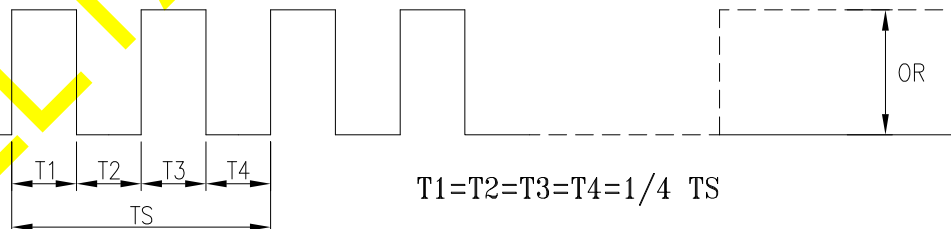
$R \geq V_{FG} / I_c$

3. FREQUENCY GENERATOR WAVEFORM:



FAN RUNNING FOR 4 POLES

BLADE LOCKED



$N = \text{R.P.M}$

$TS = 60 / N(\text{SEC})$

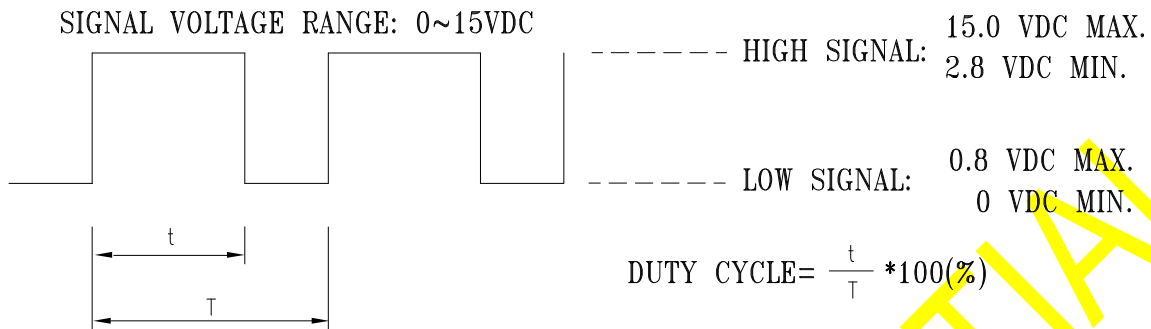
*VOLTAGE LEVEL AFTER BLADE LOCKED

*4 POLES

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11. PWM CONTROL SIGNAL:



- THE PREFERRED OPERATING POINT FOR THE FAN IS 25K HZ.
- AT 100% DUTY CYCLE, THE ROTOR WILL SPIN AT MAXIMUM SPEED.
- AT 0%~20% DUTY CYCLE, THE ROTOR WILL SPIN AT MINIMUM SPEED.
- WITH CONTROL SIGNAL LEAD DISCONNECTED, THE FAN WILL SPIN AT MAXIMUM SPEED.

12. SPEED VS PWM CONTROL SIGNAL:

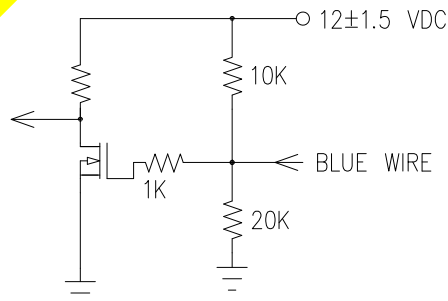
(AT RATED 12V & PWM FREQUENCY=25K HZ & TEMPERATURE AT 25 DEGREE C)

DUTY CYCLE (%)	SPEED R.P.M. (REF.)	CURRENT (A) REF.
0~20	750±250	0.02
100	3800±10%	0.38

- MIN. START DUTY CYCLE : 35%. (MAX.)
WHEN DUTY CYCLE IS SET FOR MORE THAN 35%, THE FAN WILL BE ABLE TO START FROM A DEAD STOP.

NOTE: THE SPEED AT 0%~35% DUTY CYCLE IS AVAILABLE ONLY AFTER FAN STARTING FROM A DEAD STOP.

13. PWM CONTROL LEAD WIRE INPUT IMPEDANCE:

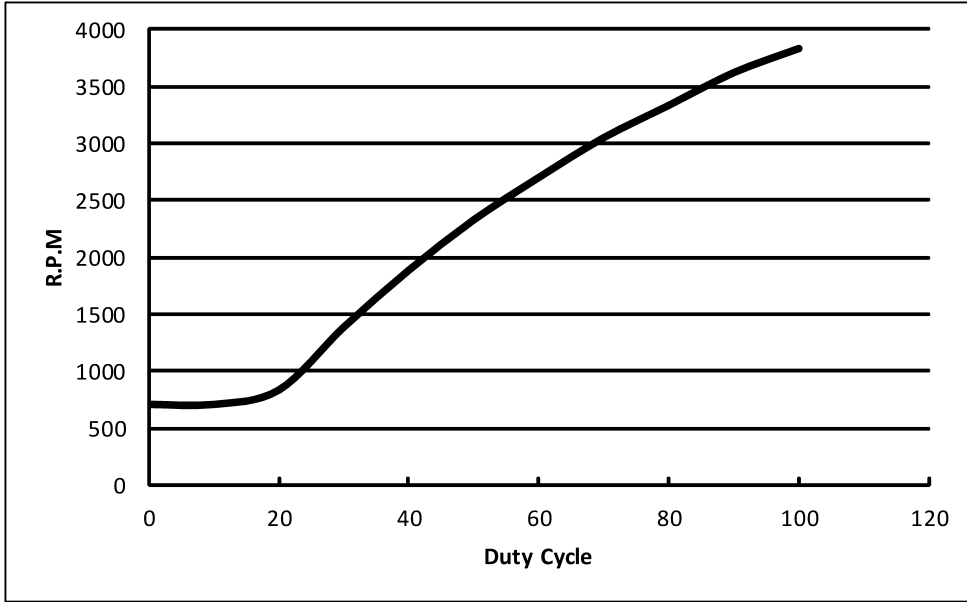


- 13-1. THE FAN SPEED WILL DEFAULT TO MAXIMUM WHEN THE SPEED CONTROL INPUT IS LEFT UNCONNECTED.

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14. PWM DUTY V.S. RPM



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Application Notice

- 1. Delta will not guarantee the performance of the products if the application condition falls outside the parameters set forth in the specification.**
- 2. A written request should be submitted to Delta prior to approval if deviation from this specification is required.**
- 3. Please exercise caution when handling fans. Damage may be caused when pressure is applied to the impeller, if the fans are handled by the lead wires, or if the fan was hard-dropped to the production floor.**
- 4. Except as pertains to some special designs, there is no guarantee that the products will be free from any such safety problems or failures as caused by the introduction of powder, droplets of water or encroachment of insect into the hub.**
- 5. The above-mentioned conditions are representative of some unique examples and viewed as the first point of reference prior to all other information.**
- 6. It is very important to establish the correct polarity before connecting the fan to the power source. Positive (+) and Negative (-). Damage may be caused to the fans if connection is with reverse polarity, if there is no foolproof method to protect against such error specifically mentioned in this spec.**
- 7. Delta fans without special protection are not suitable where any corrosive fluids are introduced to their environment.**
- 8. Please ensure all fans are stored according to the storage temperature limits specified. Do not store fans in a high humidity environment. We highly recommend performance testing is conducted before shipping, if the fans have been stored over 6 months.**
- 9. Not all fans are provided with the Lock Rotor Protection feature. If you impair the rotation of the impeller for the fans that do not have this function, the performance of those fans will lead to failure.**
- 10. Please be cautious when mounting the fan. Incorrect mounting of fans may cause excess resonance, vibration and subsequent noise.**
- 11. It is important to consider safety when testing the fans. A suitable fan guard should be fitted to the fan to guard against any potential for personal injury.**
- 12. Except where specifically stated, all tests are carried out at room (ambient) temperature and relative humidity conditions of 25°C, 65% RH. The test value is only for fan performance itself.**
- 13. Be certain to connect an “ 4.7μF or greater” capacitor to the fan externally when the application calls for using multiple fans in parallel, to avoid any unstable power.**