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SPECIFICATION FOR APPROVAL

Customer:	STANDARD
Description:	DC BLOWER
Customer P/N:	REV:00
Delta Model NO.:	BFB0712HHD77
Sample Rev: 00	Issue NO:
Sample Issue Date: MAY.15 2017	Quantity:

1. SCOPE:

THIS SPECIFICATION DEFINES THE ELECTRICAL AND MECHANICAL CHARACTERISTICS OF THE DC BRUSHLESS BLOWER.

2. CHARACTERS:

ITEM	DESCRIPTION
RATED VOLTAGE	12.0 VDC
OPERATION VOLTAGE	9.0 - 16.0 VDC
INPUT CURRENT (AVG.)	0.53 (0.68 MAX.) A SAFETY CURRENT ON LABEL: 0.68 A
INPUT POWER (AVG.)	8.15 MAX (6.35 TYP.) W
SPEED	5500±10% R.P.M.
MAX. AIR FLOW (AT ZERO STATIC PRESSURE)	0.41 (MIN. 0.37) M ³ /MIN 14.7 (MIN. 13.2) CFM
MAX.AIR PRESSURE (AT ZERO AIR FLOW)	35.9 (MIN. 32.3)mmH ₂ O 1.41 (MIN. 1.27)inchH ₂ O
ACOUSTICAL NOISE (AVG.)	50 (MAX 53.5) dB-A(DISTANCE OF 1M)

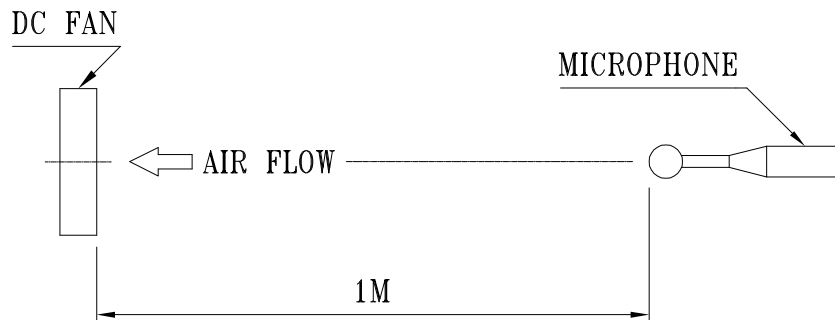
(continued)

PART NO:

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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)
ROTATION	COUNTERCLOCKWISE FROM AIR INTAKE SIDE

- 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 ANECHOIC CHAMBER WITH B & K SOUND LEVEL 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. FRAME _____ PLASTIC UL: 94V-0
- 3-3. IMPELLER _____ PLASTIC UL: 94V-0
- 3-4. BEARING SYSTEM _____ TWO BALL BEARINGS
- 3-5. WEIGHT _____ 85 GRAMS(Ref.)

4. ENVIRONMENTAL:

- 4-1. OPERATING TEMPERATURE -40 TO +85 DEGREE C
- 4-2. STORAGE TEMPERATURE -40 TO +95 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.

6. RE OZONE DEPLETING SUBSTANCES:

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

7. PRODUCTION LOCATION

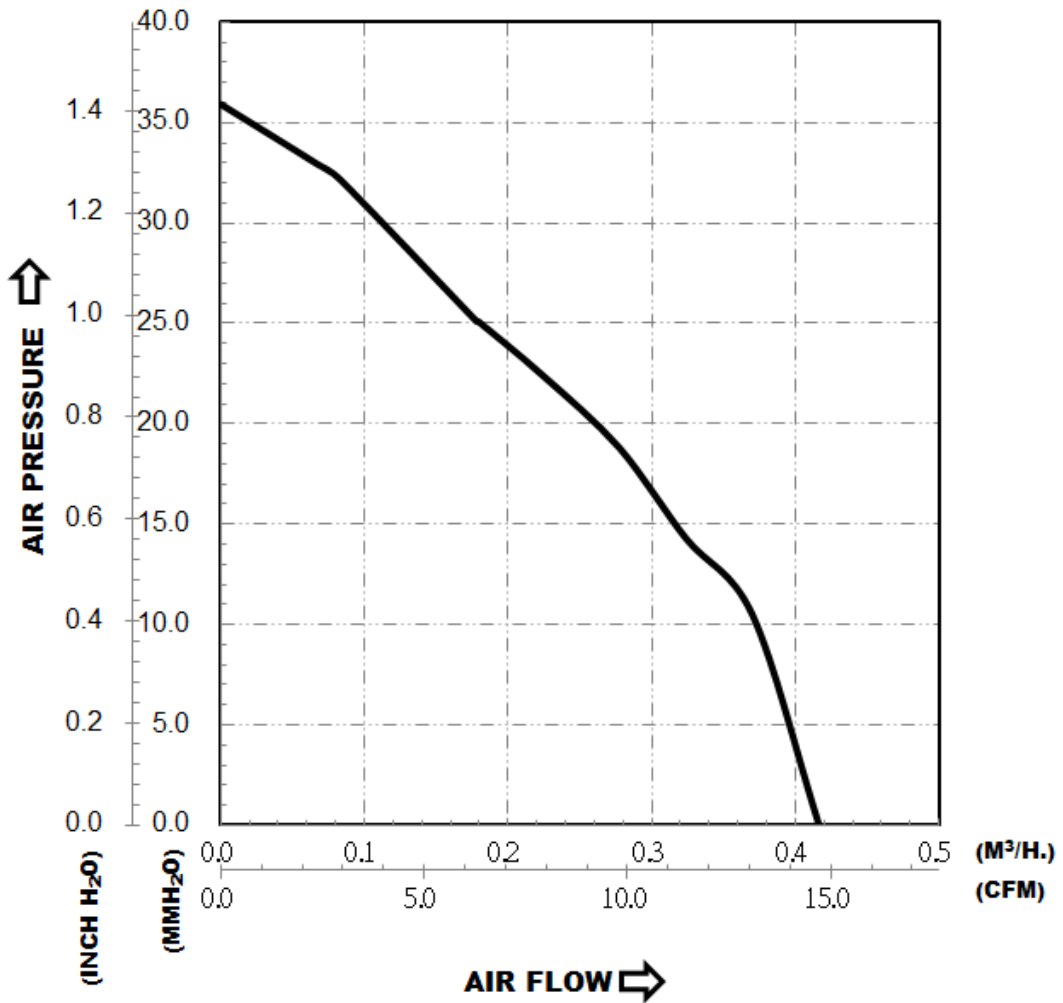
- 7-1. PRODUCTS WILL BE PRODUCED IN CHINA OR THAILAND.

8. THIS MODEL MUST MEET IP55 REQUEST COATING TO PROTECT WHOLE MOTOR ASSY

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9. P & Q CURVE:



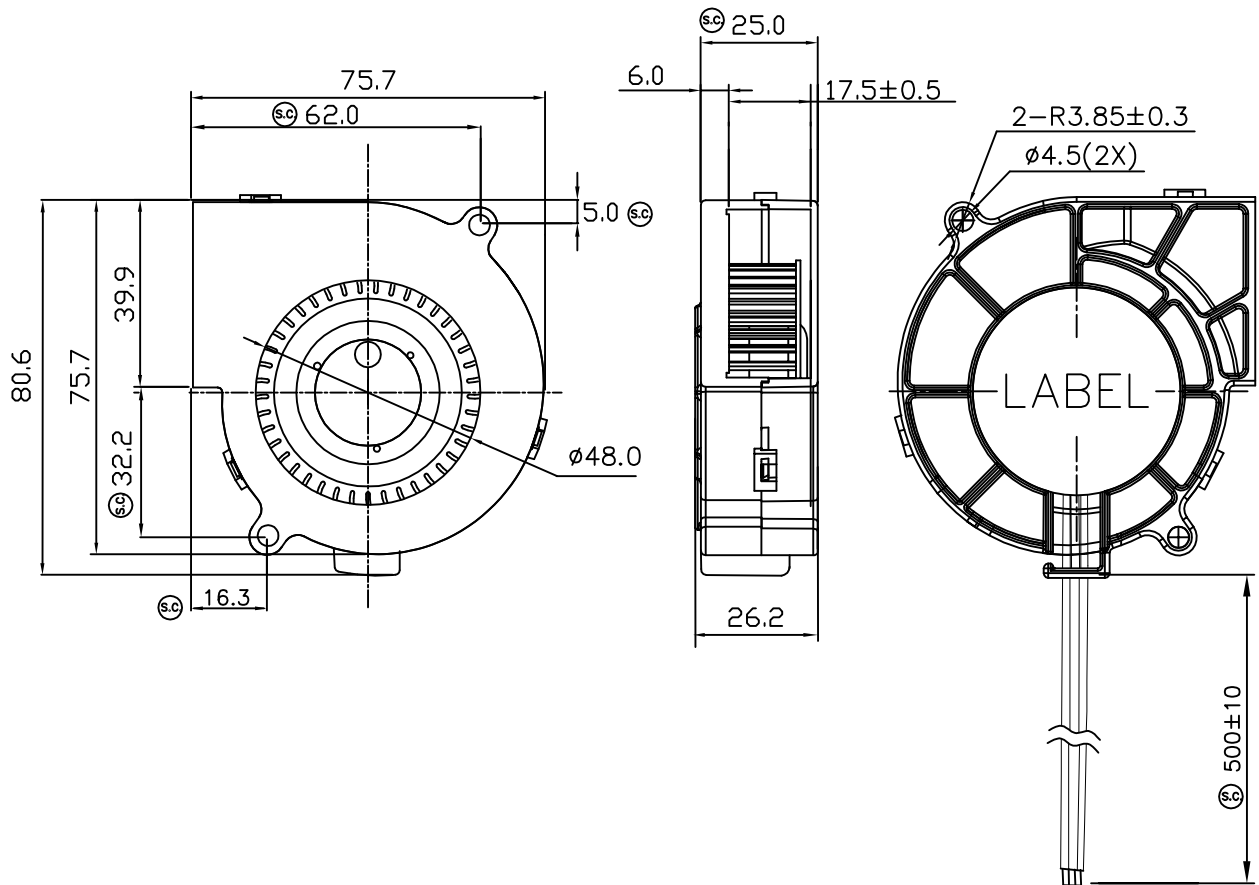
* TEST CONDITION: INPUT VOLTAGE ——— OPERATION VOLTAGE
TEMPERATURE ——— ROOM TEMPERATURE
HUMIDITY ——— 65%RH

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10. Attach: DIMENSIONS DRAWING

LABEL:



NOTE.

1. THIS PRODUCT IS RoHS COMPLIANT.
2. LEAD WIRE FLRY-A AWG22
RED WIRE POSITIVE (+)
BLACK WIRE NEGATIVE (-)
BLUE WIRE PWM CONTROL (PWM)

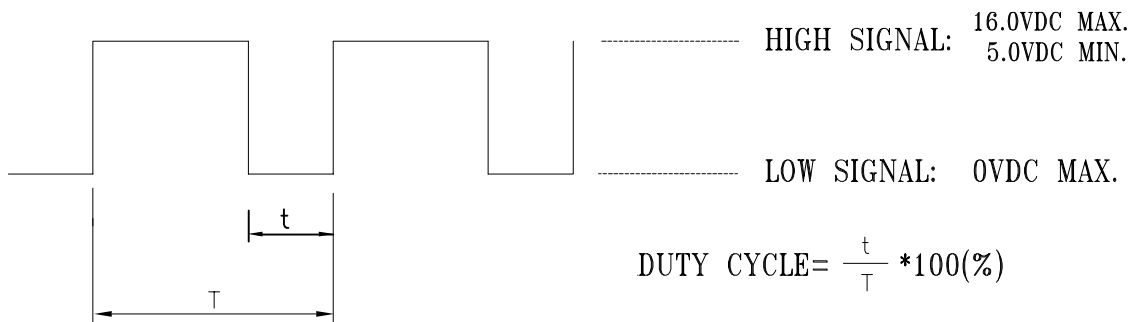
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11. PWM CONTROL SIGNAL:

11-1. PWM SPECIFICATION:

SIGNAL VOLTAGE RANGE: 0~16VDC



THE FAN WILL BE CONTROLLED USING A PULSE WIDTH MODULATED (PWM) SIGNAL FROM THE ELECTRONICS WITHIN THE ENCLOSURE. THE FAN MUST ACCEPT A CMOS COMPATIBLE PWM SIGNAL WITH A FREQUENCY RANGE OF 90HZ TO 110HZ. THE PWM SIGNAL WILL HAVE A DUTY CYCLE FROM 0% TO 100%. A 100% DUTY CYCLE WILL BE DEFINED AS A CONTINUOUS LOGIC HIGH (V_{INH}) AND WILL CAUSE THE FAN TO STOP SPINNING. A DUTY CYCLE OF 0% WILL BE DEFINED AS A CONTINUOUS LOGIC LOW (V_{INL}) AND WILL CAUSE THE FAN TO STOP SPINING. A DUTY CYCLE AT 6~30%,50%,94% THE FAN SPEED WILL BE 1700,2800,5500 RPM. IF THE PWM CONTROL WIRE IS OPEN,THE ROTOR WILL STOP SPINNING.

12. SPEED VS PWM WITHOUT LOAD (DC:12.0V): DUTY CYCLE TOLERANCE $\pm 1\%$.

DUTY CYCLE (%)	SPEED R.P.M.
0~4	0
6~30	1700 \pm 300
50	2800 \pm 10%
94	5500 \pm 10%
96~100	0