

DELTA ELECTRONICS, INC.  
 252, SHANG YING ROAD, KUEI SAN  
 TAOYUAN HSIEN 333, TAIWAN, R. O. C.

TEL : 886-(0)3-3591968  
 FAX : 886-(0)3-3591991

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.)	<b>0.53 (0.68 MAX.) A</b> <b>SAFETY CURRENT ON LABEL: 0.68 A</b>
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 <sup>3</sup> /MIN 14.7 ( MIN. 13.2) CFM
MAX.AIR PRESSURE (AT ZERO AIR FLOW)	35.9 ( MIN. 32.3 )mmH <sub>2</sub> O 1.41 ( MIN. 1.27)inchH <sub>2</sub> O
ACOUSTICAL NOISE (AVG.)	50 (MAX 53.5) dB-A(DISTANCE OF 1M)

(continued)

---

PART NO:

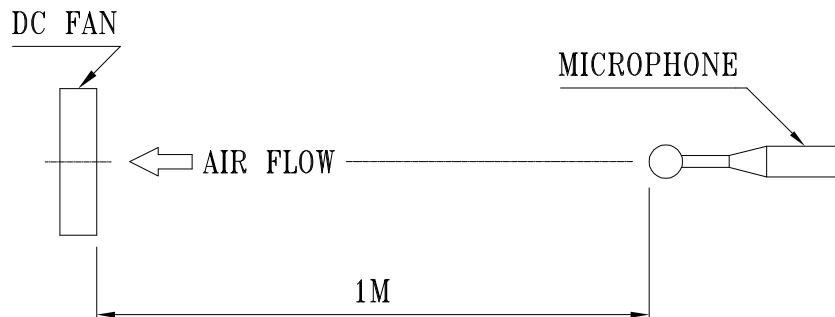
---

DELTA MODEL: BFB0712HHD77

---

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.

---

PART NO:

---

DELTA MODEL: BFB0712HHD77

---

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

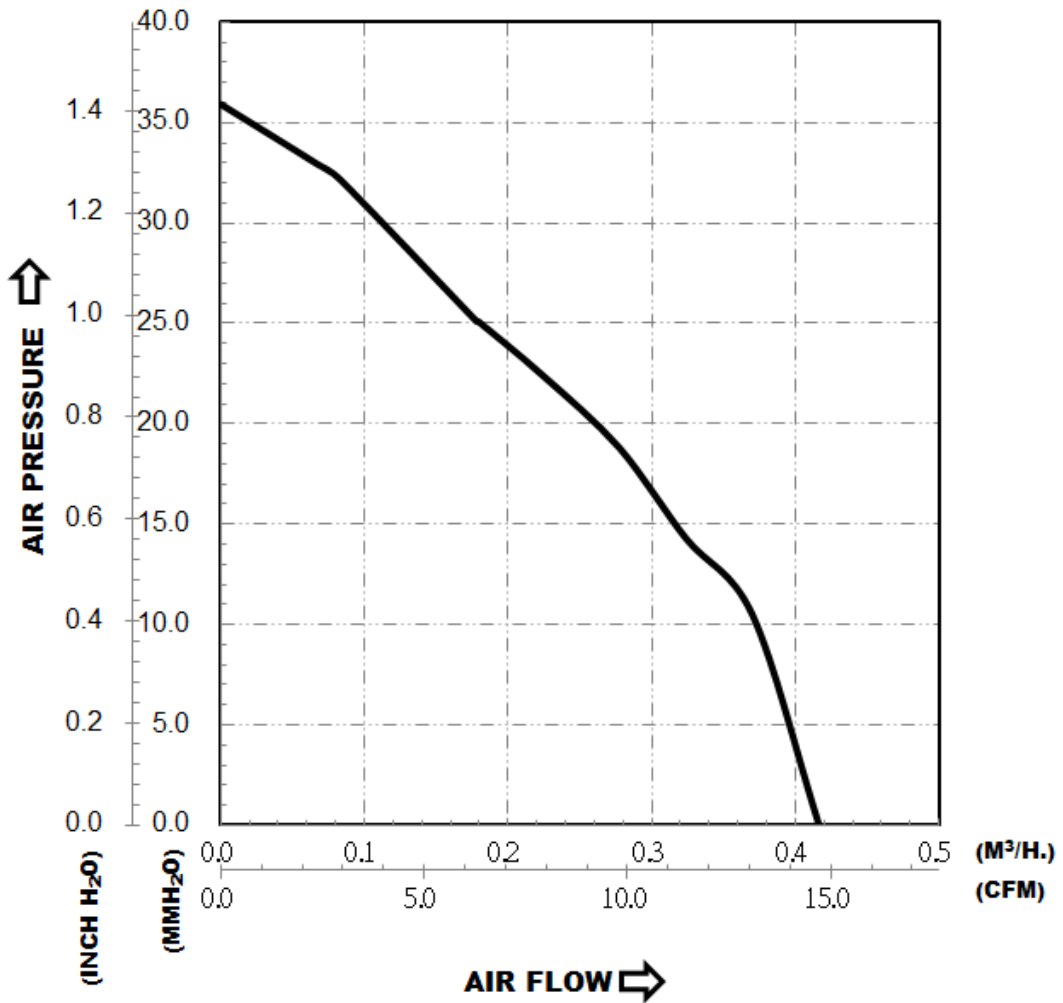
- 7-1. PRODUCTS WILL BE PRODUCED IN CHINA OR THAILAND.

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

PART NO:

DELTA MODEL: BFB0712HHD77

9. P & Q CURVE:



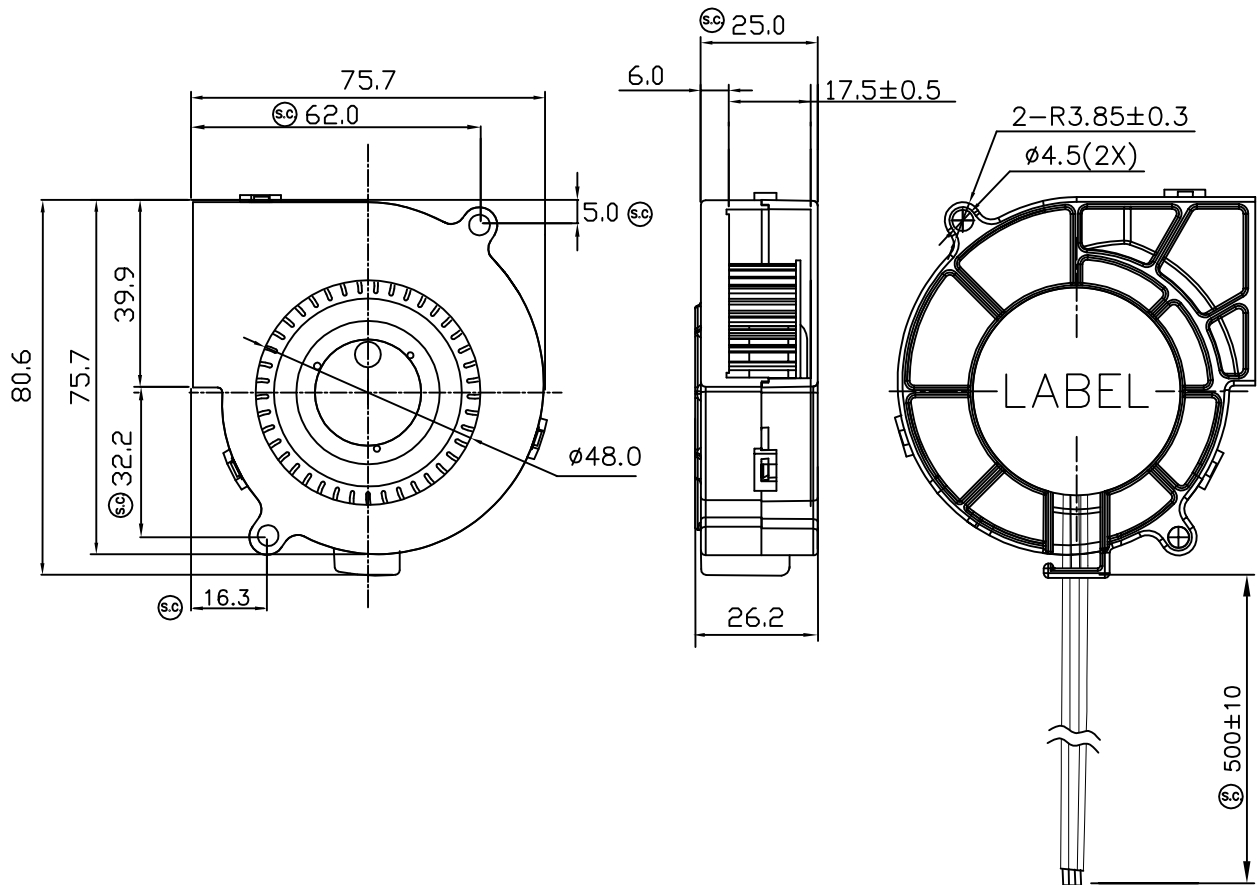
\* TEST CONDITION: INPUT VOLTAGE ——— OPERATION VOLTAGE  
TEMPERATURE ——— ROOM TEMPERATURE  
HUMIDITY ——— 65%RH

PART NO:

DELTA MODEL: BFB0712HHD77

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)

---

**PART NO:**

---

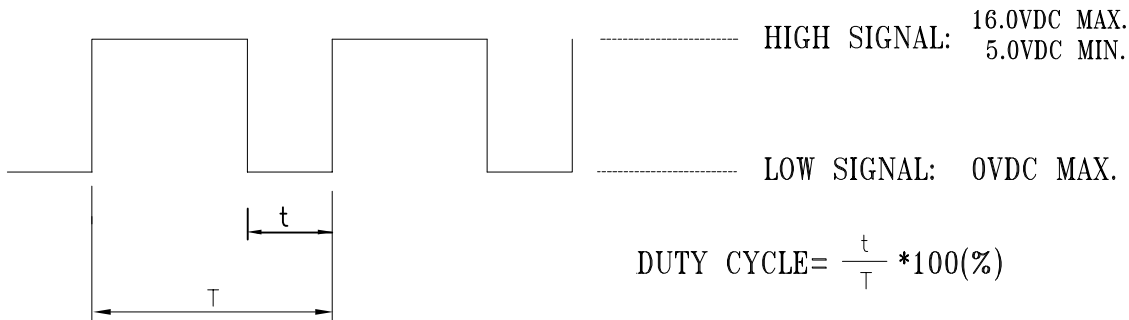
**DELTA MODEL:** BFB0712HHD77

---

**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