



**SPECIFICATION FOR APPROVAL**

Customer \_\_\_\_\_

Description DC FAN

Part No. \_\_\_\_\_ REV. \_\_\_\_\_

Delta Model No. AFB0424HHB REV. 01

Sample Issue No. \_\_\_\_\_

Sample Issue Date OCT.24.2012

PLEASE SEND ONE COPY OF THIS SPECIFICATION BACK AFTER YOU SIGNED APPROVAL FOR PRODUCTION PRE-ARRANGMENT.

APPROVED BY: \_\_\_\_\_

DATE : \_\_\_\_\_

DELTA ELECTRONICS, INC.  
TAOYUAN PLANT  
252, SHANG YING ROAD, KUEI SAN INDUSTRIAL ZONE TAOYUAN  
SHIEN, TAIWAN, R.O.C.  
TEL:886-(0)3-3591968  
FAX:886-(0)3-3591991

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:

Description: DC FAN

Customer P/N: REV:

Delta Model NO.: AFB0424HHB

Sample Rev: 01 Issue NO:

Sample Issue Date: Quantity:

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. CHARACTERS:

ITEM	DESCRIPTION
RATED VOLTAGE	24 VDC
OPERATION VOLTAGE	14.0 - 27.6 VDC
INPUT CURRENT	0.09 (MAX. 0.13) A
INPUT POWER	2.16 (MAX. 3.12) W
SPEED	8300 R.P.M. <sup>+15%</sup> <sub>-10%</sub>
MAX. AIR FLOW (AT ZERO STATIC PRESSURE)	0.325 (MIN. 0.292 ) M <sup>3</sup> /MIN. 11.48 (MIN. 10.31 ) CFM
MAX. AIR PRESSURE (AT ZERO AIRFLOW)	9.13 (MIN. 7.40 ) mmH <sub>2</sub> O 0.359 (MIN. 0.291 ) inchH <sub>2</sub> O
ACOUSTICAL NOISE (AVG.)	32.0 (MAX. 37.0) dB-A
INSULATION TYPE	UL: CLASS A

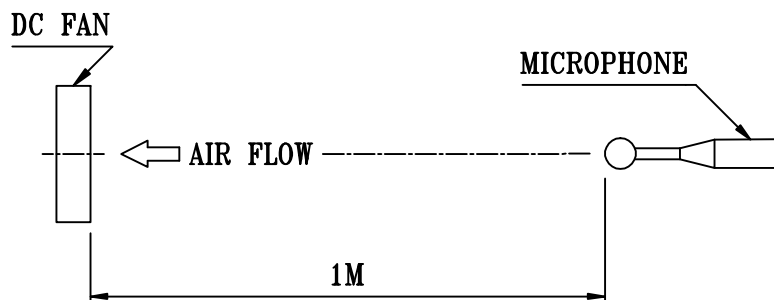
(continued)

PART NO:

DELTA MODEL: AFB0424HHB

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)
EXTERNAL COVER	OPEN TYPE
LIFE EXPECTANCE	70,000 HOURS CONTINUOUS OPERATION AT 40 °C WITH 15 ~ 65 %RH.
ROTATION	CLOCKWISE VIEW FROM NAME PLATE SIDE
LEAD WIRE	UL 1007 -F- AWG #24 BLACK WIRE NEGATIVE(-) RED WIRE POSITIVE(+)

- NOTES: 1. ALL READINGS ARE MEASURED AFTER STABLY WARMING UP THROUGH 10 MINUTES.  
2. THE VALUES WRITTEN IN PARENS , ( ), ARE LIMITED SPEC.  
3. 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:           AFB0424HHB  
-----

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 ----- 25.0 GRAMS

4. ENVIRONMENTAL:

- 4-1. OPERATING TEMPERATURE ----- -10 TO +70 DEGREE C
- 4-2. STORAGE TEMPERATURE ----- -40 TO +75 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.

---

PART NO:

---

DELTA MODEL:        AFB0424HHB

---

8. BASIC RELIABILITY REQUIREMENT:

8-1. THERMAL CYCLING        LOW TEMPERATURE: -40°C  
                                  HIGH TEMPERATURE: +80°C  
                                  SOAK TIME: 30 MINUTES  
                                  TRANSITION TIME < 5 MINUTES  
                                  DUTY CYCLES: 5

8-2. HUMIDITY EXPOSURE      TEMPERATURE: +25°C ~ +65°C  
                                  HUMIDITY: 90-98% RH @ +65°C  
  FOR 4 HOURS/CYCLE  
                                  POWER: NON-OPERATING  
                                  TEST TIME: 168 HOURS

8-3. VIBRATION                TEMPERATURE: +25°C  
                                  ORIENTATION: X, Y, Z  
                                  POWER: NON-OPERATING  
                                  VIBRATION LEVEL: OVERALL  $g_{RMS}=3.2$

FREQUENCY(Hz)	PSD( $G^2/Hz$ )
10	0.040
20	0.100
40	0.100
800	0.002
1000	0.002

TEST TIME: 2 HOURS ON EACH ORIENTATION

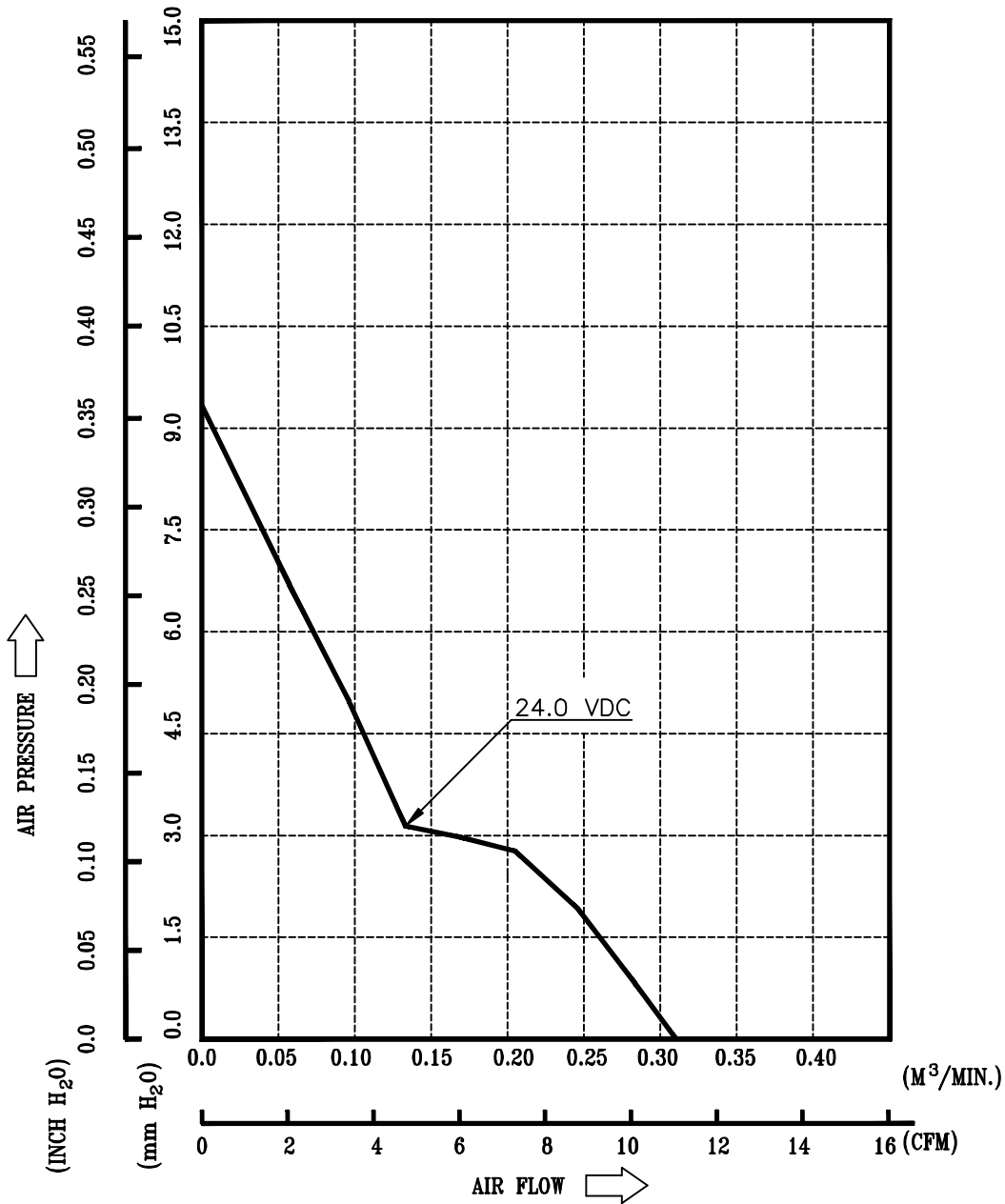
8-4. MECHANICAL SHOCK        TEMPERATURE: +20°C  
                                  ORIENTATION: X, Y, Z  
                                  POWER: NON-OPERATING  
                                  ACCELERATION: 20 G MIN.  
                                  PULSE: 11 ms HALF-SINE WAVE  
                                  NUMBER OF SHOCKS: 5 SHOCKS  
  FOR EACH DIRECTION

8-5. LIFE                        TEMPERATURE: MAX , OPERATING TEMPERATURE  
                                  POWER: OPERATING  
                                  DURATION: 1000 HOURS MIN.

PART NO:

DELTA MODEL: AFB0424HHB

9. P & Q CURVE:



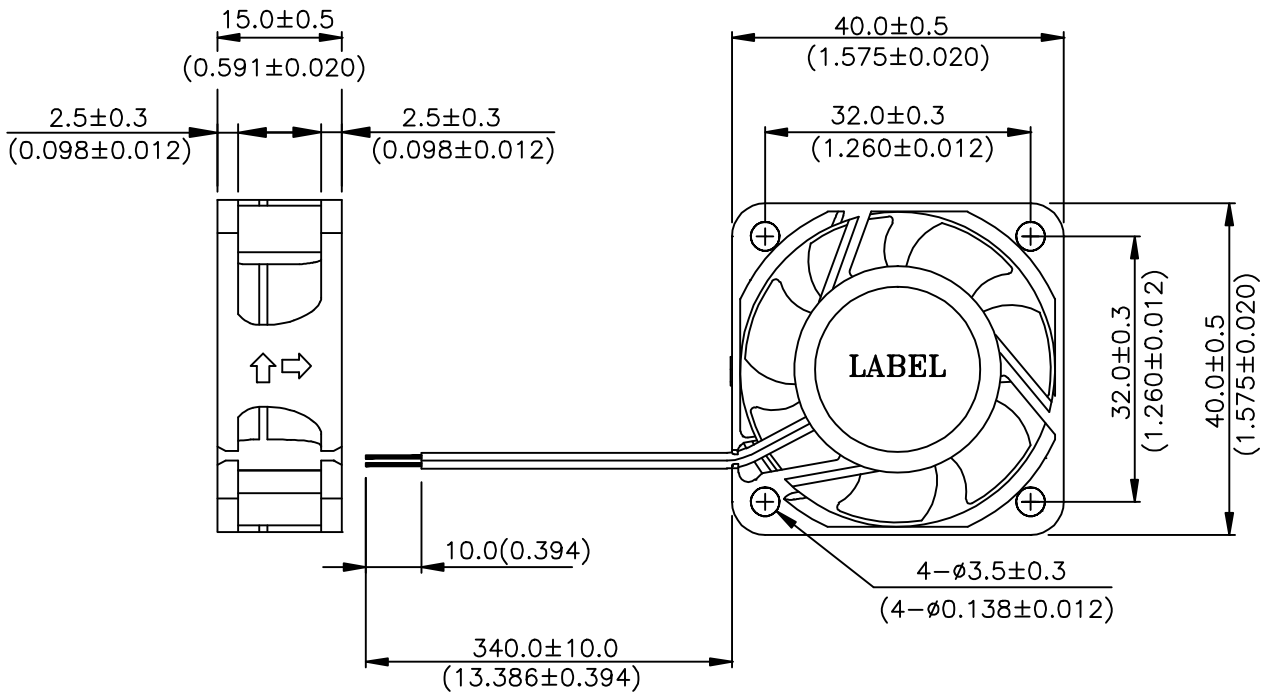
\* TEST CONDITION: INPUT VOLTAGE ----- OPERATION VOLTAGE  
TEMPERATURE ----- ROOM TEMPERATURE  
HUMIDITY ----- 65%RH

-----  
PART NO:  
-----

DELTA MODEL:        AFB0424HHB  
-----

10. DIMENSION DRAWING:

LABEL:



UL 1007 -F- AWG #24  
BLACK WIRE NEGATIVE(-)  
RED WIRE POSITIVE(+)

UNIT:  $\frac{\text{mm}}{(\text{INCH})}$