



SPECIFICATION FOR APPROVAL

Customer. \_\_\_\_\_

Description. DC FAN

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

Delta Model No. AFB0524HHD REV. 01

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

Sample Issue Date. MAR.31 2015

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

APPROVED BY:

DATE :

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 Description: DC FAN  
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Customer P/N: REV:

Delta Model NO.: AFB0524HHD Delta safety model NO.: AFB0524HHD

Sample Rev: 01 Issue NO:

Sample Issue Date: Quantity:  
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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. 0.14) A SAFETY CURRENT ON LABEL : 0.14A
INPUT POWER	2.16 (MAX. 3.36) W
SPEED	6400 R.P.M. (REF.)
MAX. AIR FLOW (AT ZERO STATIC PRESSURE)	0.518 (MIN. 0.460 ) M <sup>3</sup> /MIN. 18.30 (MIN. 16.25 ) CFM
MAX. AIR PRESSURE (AT ZERO AIRFLOW)	6.44 (MIN. 4.89 ) mmH <sub>2</sub> O 0.254 (MIN. 0.193 ) inchH <sub>2</sub> O
ACOUSTICAL NOISE (AVG.)	37.0 (MAX. 41.0) dB-A
INSULATION TYPE	UL: CLASS A

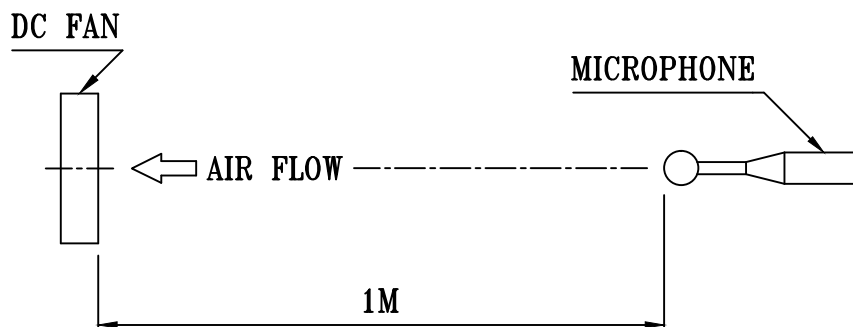
(continued)

PART NO:

DELTA MODEL: AFB0524HHD

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 AT LABEL VOLTAGE	70,000 HOURS CONTINUOUS OPERATION AT 40 °C WITH 15 ~ 65 %RH.
ROTATION	CLOCKWISE VIEW FROM NAME PLATE SIDE
OVER CURRENT SHUT DOWN	THE CURRENT WILL SHUT DOWN WHEN LOCKING ROTOR
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. 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     -----   38 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 .

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8. BASIC RELIABILITY REQUIREMENT:

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

8-2. HUMIDITY           TEMPERATURE: +25°C ~ +65°C  
EXPOSURE               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

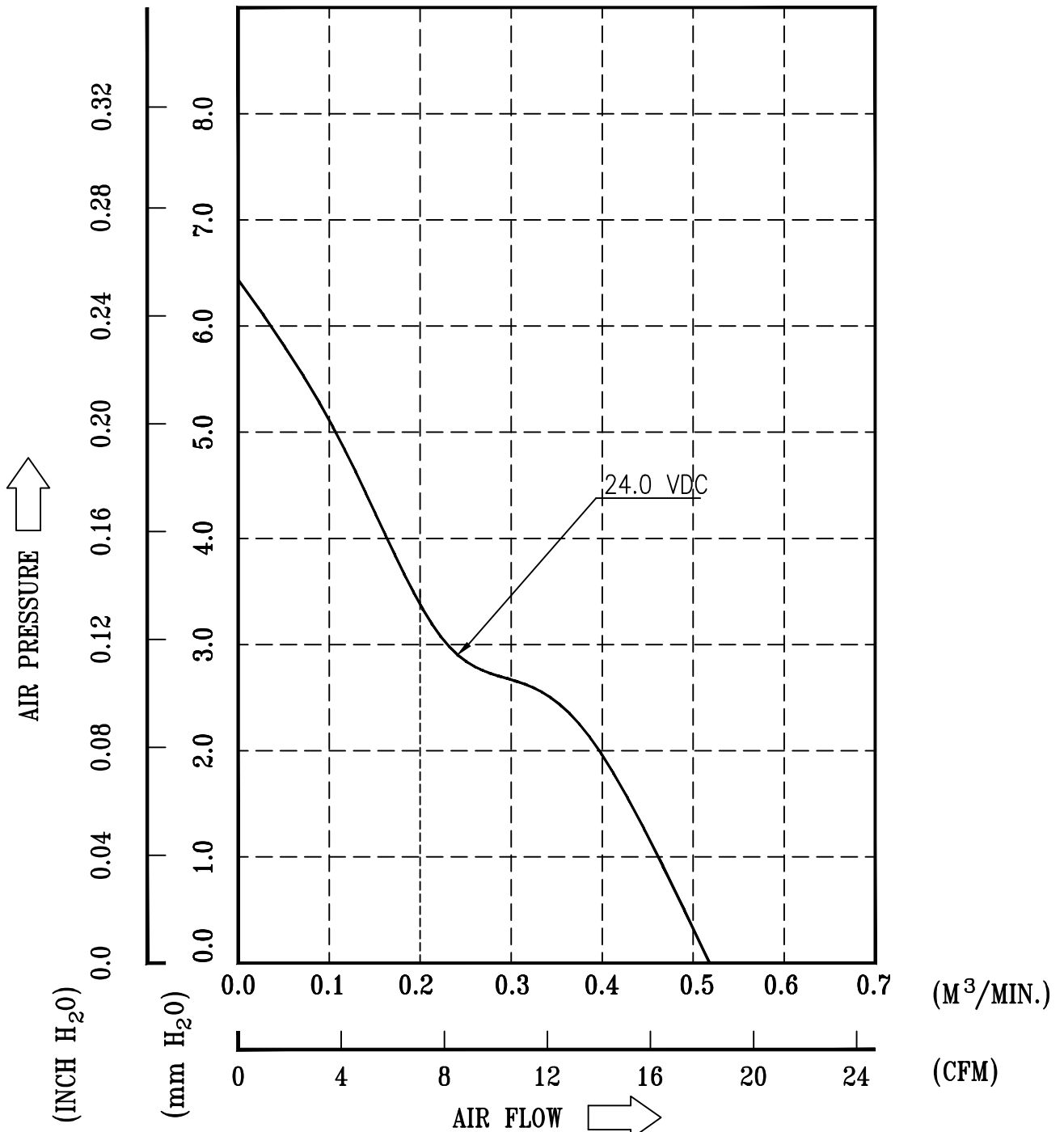
8-4. MECHANICAL       TEMPERATURE: +20°C  
SHOCK                   ORIENTATION: X, Y, Z  
                          POWER: NON-OPERATING  
                          ACCELERATION: 20 G MIN.  
                          PULSE: 11 ms HALF-SINE WAVE  
                          NUMBER OF SHOCKS: 5 SHOCKS 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

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

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9. P & Q CURVE:



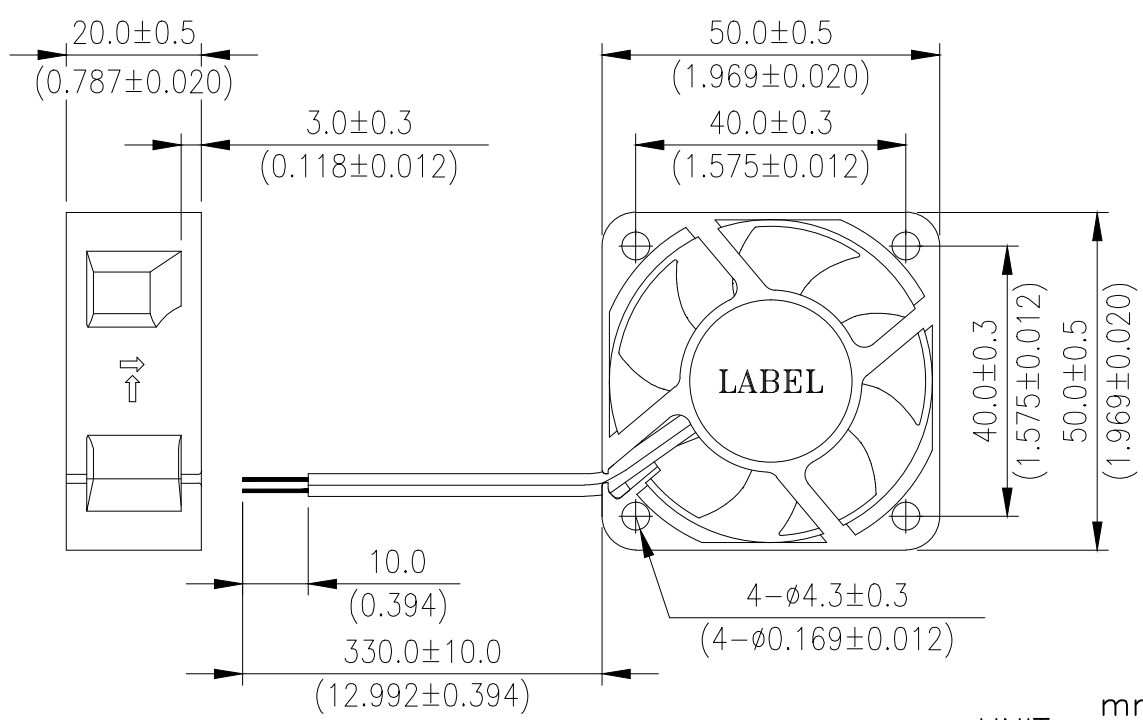
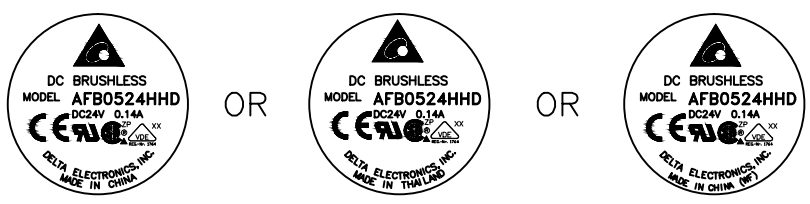
\* TEST CONDITION: INPUT VOLTAGE — — OPERATION VOLTAGE  
TEMPERATURE — — ROOM TEMPERATURE  
HUMIDITY — — — — 65%RH

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10. DIMENSION DRAWING:

LABEL:



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

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