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SPECIFICATION FOR APPROVAL  
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Customer:

Description: DC FAN

Customer P/N:

REV:

Delta Model NO.: AFB0712VHB-AFBS

Sample Rev: 00

Issue NO:

Sample Issue Date: APR.04.2006.

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	12 VDC
OPERATION VOLTAGE	4.0 - 12.5 VDC
START VOLTAGE (ENVIRONMENT TEMPERATURE 25°C)	≤ 4.0 VDC.
INPUT CURRENT	0.32 (MAX. 0.55) A
INPUT POWER	3.84(MAX. 6.60) W
SPEED	5400 ±10% R.P.M.
MAX. AIR FLOW (AT ZERO STATIC PRESSURE)	1.158 (MIN. 1.042 ) M <sup>3</sup> /MIN. 40.89 (MIN. 36.80 ) CFM
MAX. AIR PRESSURE (AT ZERO AIRFLOW)	6.300 (MIN. 5.100 ) mmH <sub>2</sub> O 0.248 (MIN. 0.201 ) inchH <sub>2</sub> O
ACOUSTICAL NOISE (AVG.)	39.0 (MAX. 43.0) dB-A
INSULATION TYPE	UL: CLASS A

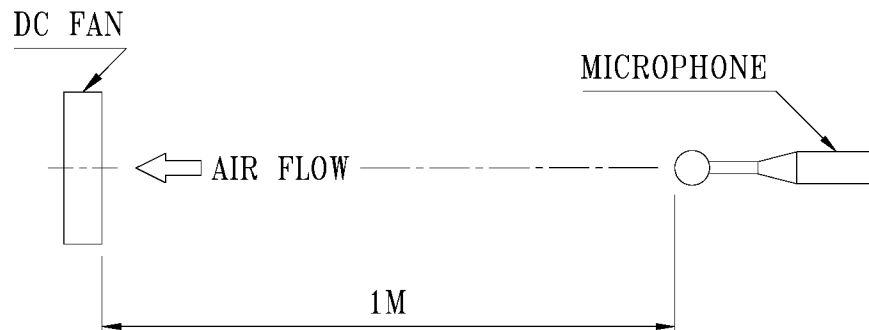
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PART NO:

DELTA MODEL: AFB0712VHB-AFBS

INSULATION STRENGTH	10 MEG OHM MIN. AT 500 VDC (BETWEEN FRAME AND (+) TERMINAL)
DIELECTRIC STRENGTH	5 mA MAX. AT 500 VAC 60 Hz ONE MINUTE, (BETWEEN FRAME AND (+) TERMINAL)
EXTERNAL COVER	OPEN TYPE
LIFE EXPECTANCE	40,000 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(+) BLUE WIRE FREQUENCY(-F00)

- 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.

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PART NO:  
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DELTA MODEL: AFB0712VHB-AFBS  
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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 ----- ONE BALL ONE SLEEVE BEARING
- 3-5. WEIGHT ----- 50 GRAMS

4. ENVIRONMENTAL:

- 4-1. OPERATING TEMPERATURE ----- -10 TO +60 DEGREE C
- 4-2. STORAGE TEMPERATURE ----- -40 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. NO POLARITY PROTECTION

NOT 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.

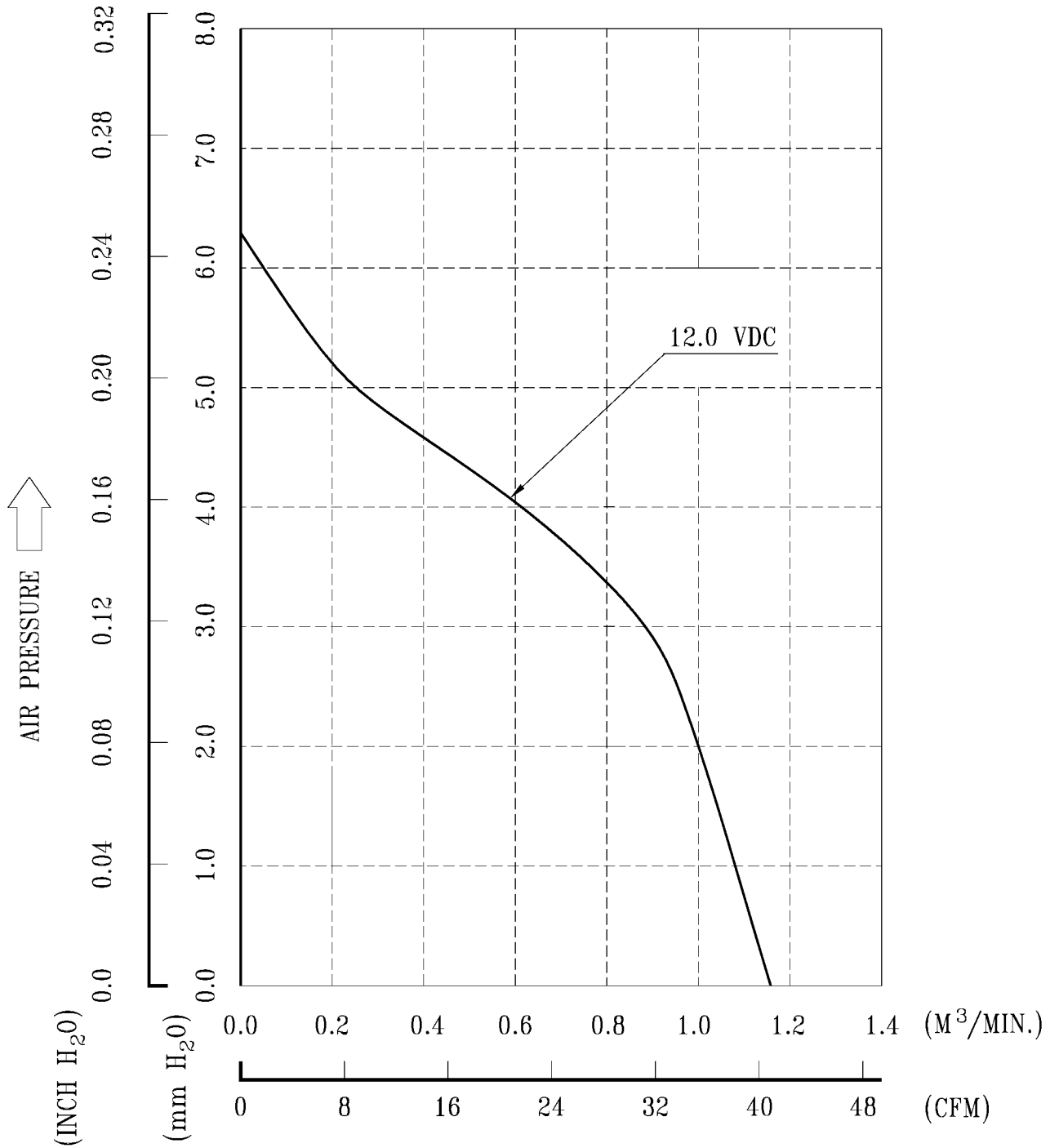
7. PRODUCTION LOCATION

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

PART NO:

DELTA MODEL: AFB0712VHB-AFBS

8. P & Q CURVE:



AIR FLOW →

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

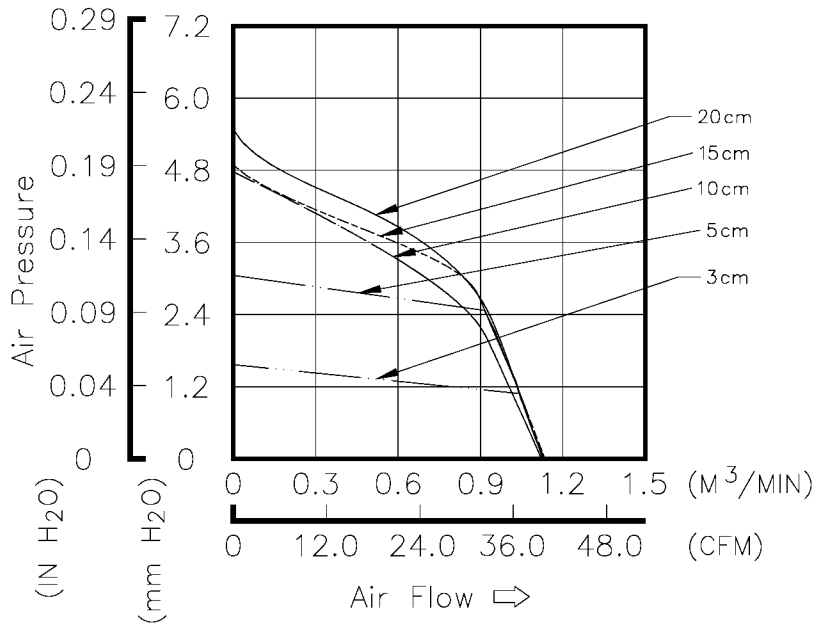
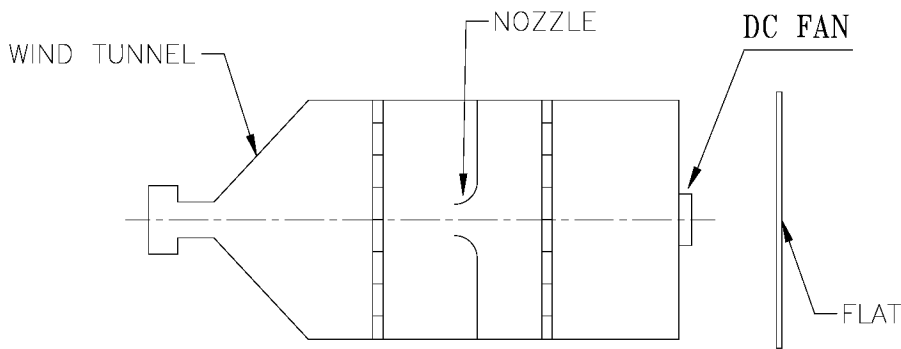
PART NO:

DELTA MODEL: AFB0712VHB-AFBS

9. ASSEMBLY NOTICE:

9-1. BELOW IS AN EXAMPLE FOR THIS FAN:

PLATE IN FRONT OF FAN INLET SIDE WITH DIFFERENT DISTANCE WILL AFFECT THE AIR FLOW. DELTA SUGGEST PLATE 5CM HIGHER THAN THE FAN INLET SIDE WILL BE BETTER.



9-2. THERE SHOULD BE NOTHING BETWEEN 0.5CM HEIGHT OF FAN INLET SIDE.

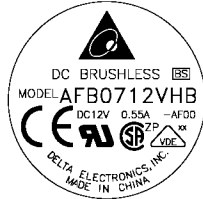
FOR IT WILL AFFECT THE AIR FLOW.

PART NO:

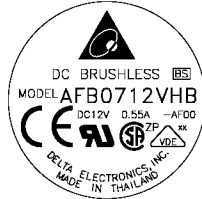
DELTA MODEL: AFB0712VHB-AFBS

10. DIMENSION DRAWING:

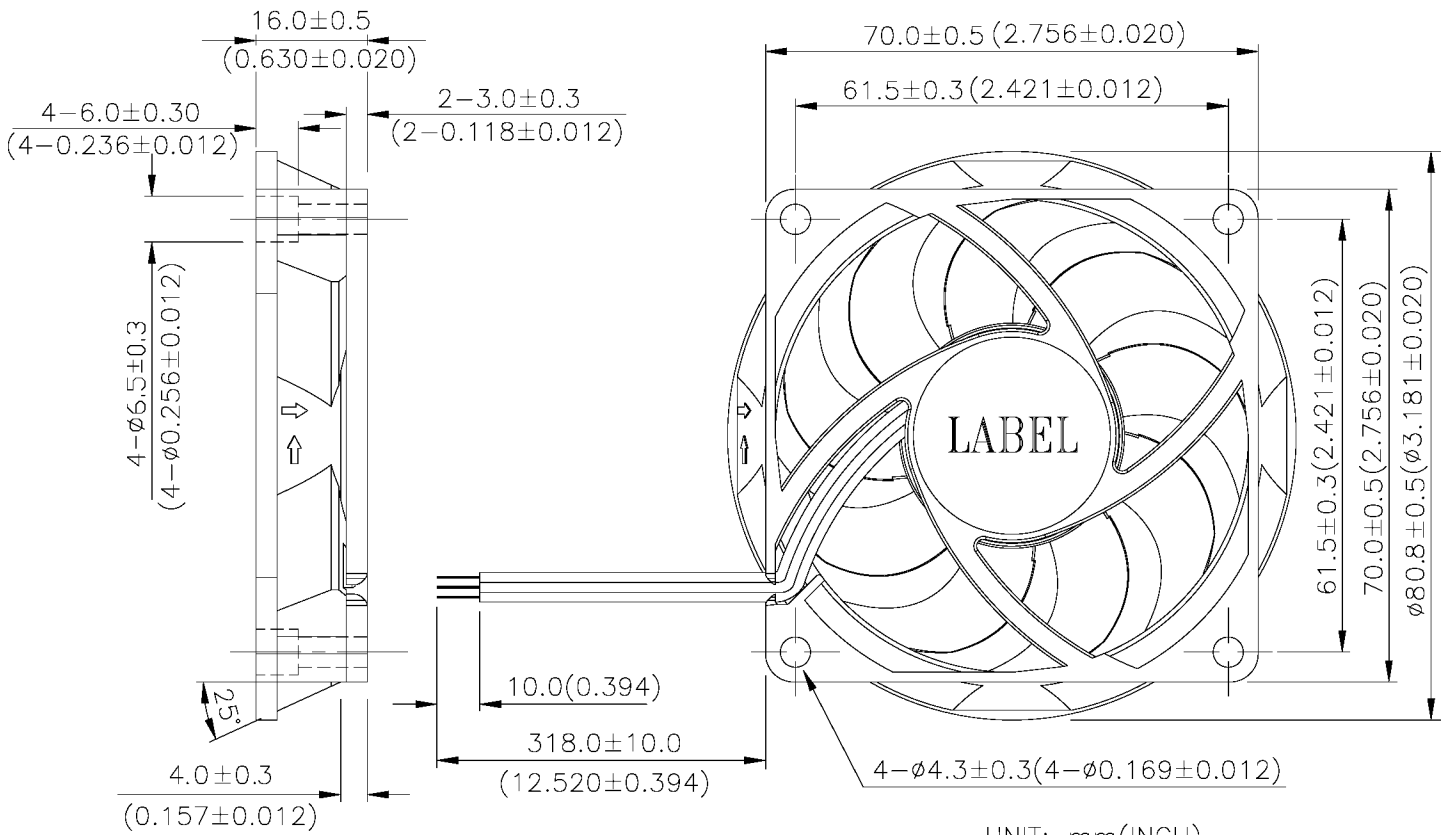
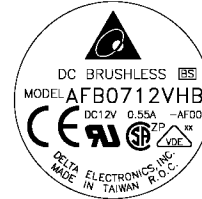
LABEL:



OR



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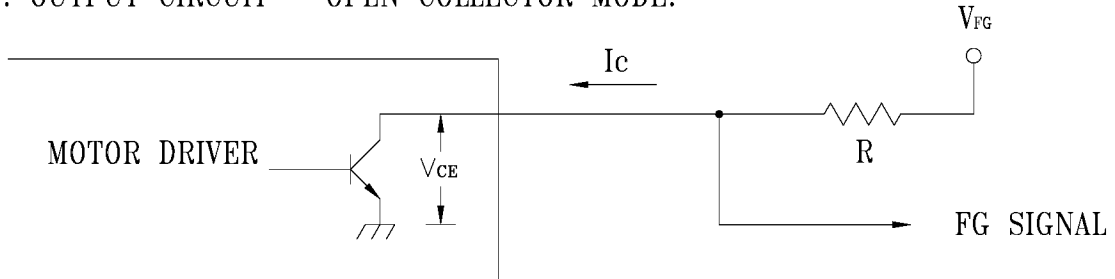


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11. FREQUENCY GENERATOR (FG) SIGNAL:

1. OUTPUT CIRCUIT - OPEN COLLECTOR MODE:



CAUTION:

THE LEAD WIRE OF FG SIGNAL CAN NOT TOUCH THE LEAD WIRE OF POSITIVE OR NEGATIVE.

2. SPECIFICATION:

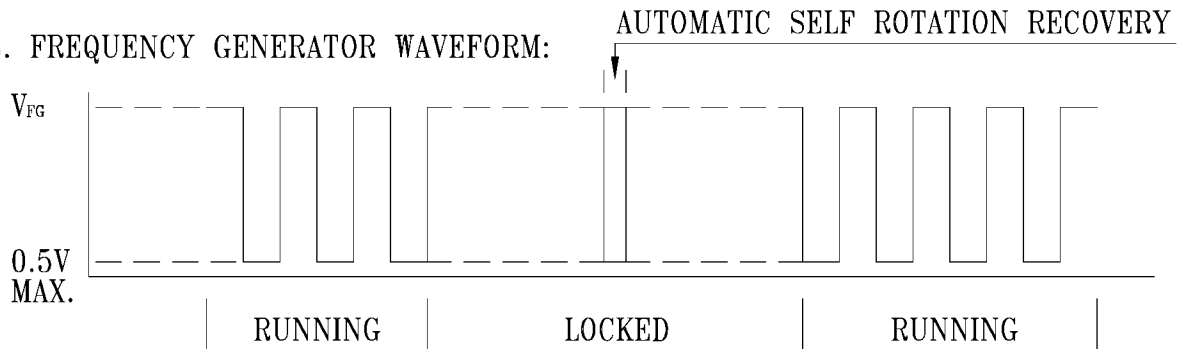
$V_{CE}(\text{sat}) = 0.5V \text{ MAX.}$

$V_{FG} = 12.5VDC \text{ MAX.}$

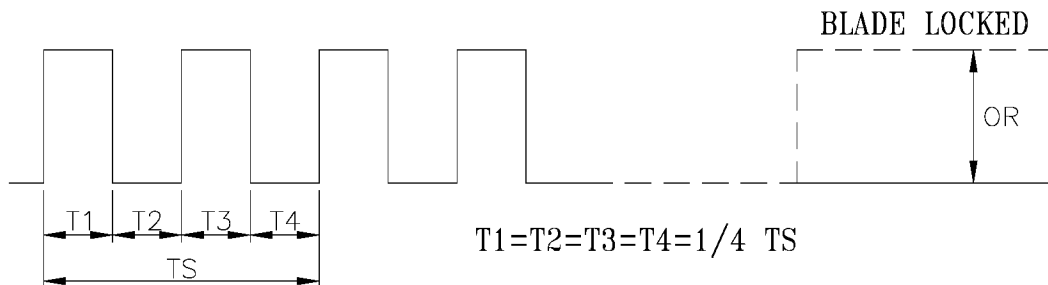
$I_c = 5mA \text{ MAX.}$

$R \geq V_{FG} / I_c$

3. FREQUENCY GENERATOR WAVEFORM:



FAN RUNNING FOR 4 POLES



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

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

\*VOLTAGE LEVEL AFTER BLADE LOCKED

\*4 POLES