



Delta Electronics, Inc.  
HeTianXia High-Tech Industrial Park.  
Shi Jie Town, Dong Guan City.  
Guangdong Province, China. P. R. C.

TEL : 86-769-86329008  
FAX : 86-769-86631589

STATEMENT OF DEVIATION  
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NONE

DESCRIPTION :

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SPECIFICATION FOR APPROVAL  
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Customer: STD  
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 Description: DC FAN  
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 Customer P/N: REV:  
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 Delta Model NO.: AFB02512HHA-CF00 Delta safety model NO.: AFB02512HHA-C  
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 Sample Rev: 00 Issue NO:  
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 Sample Issue Date: JUL-10-2020 Quantity:  
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1. SCOPE:

THIS SPECIFICATION DEFINES THE ELECTRICAL AND MECHANICAL  
 CHARACTERISTICS OF THE DC BRUSHLESS AXIAL FLOW FAN.

2. CHARACTERS:

ITEM	DESCRIPTION
RATED VOLTAGE	12 VDC
OPERATION VOLTAGE	10.8 - 13.2 VDC
INPUT CURRENT(AVG.)	0.08 (MAX. 0.12) A SAFETY CURRENT ON LABEL :0.12 A
INPUT POWER(AVG.)	0.96 (MAX. 1.44) W
SPEED	13000±20% R.P.M.
MAX. AIR FLOW (AT ZERO STATIC PRESSURE)	0.068 (MIN. 0.055 ) M <sup>3</sup> /MIN. 2.40 (MIN. 1.94 ) CFM
MAX. AIR PRESSURE (AT ZERO AIRFLOW)	7.65 (MIN. 5.00 ) mmH <sub>2</sub> O 0.300 (MIN. 0.196 ) inchH <sub>2</sub> O
ACOUSTICAL NOISE (AVG.)	28.0 (MAX. 34.0) dB-A
INSULATION TYPE	UL: CLASS A

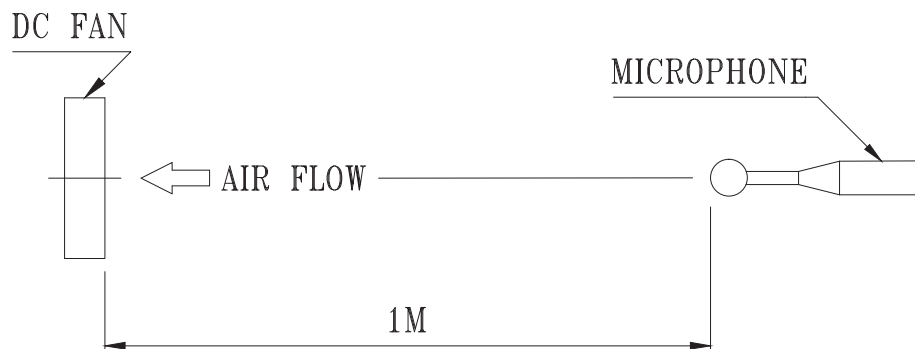
(continued)

PART NO:

DELTA MODEL: AFB02512HHA-CF00

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)
LIFE EXPECTANCE (AT LABEL VOLTAGE)	30,000 HOURS CONTINUOUS OPERATION AT 40 °C WITH 15 ~ 65 %RH.
ROTATION	CLOCKWISE VIEW FROM NAME PLATE 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 SEMI-ANECHOIC CHAMBER WITH MICROPHONE AT A DISTANCE OF ONE METER FROM THE FAN INTAKE.

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PART NO:

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DELTA MODEL: AFB02512HHA-CF00

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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 \_\_\_\_\_ 8.0 GRAMS(REF)

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.

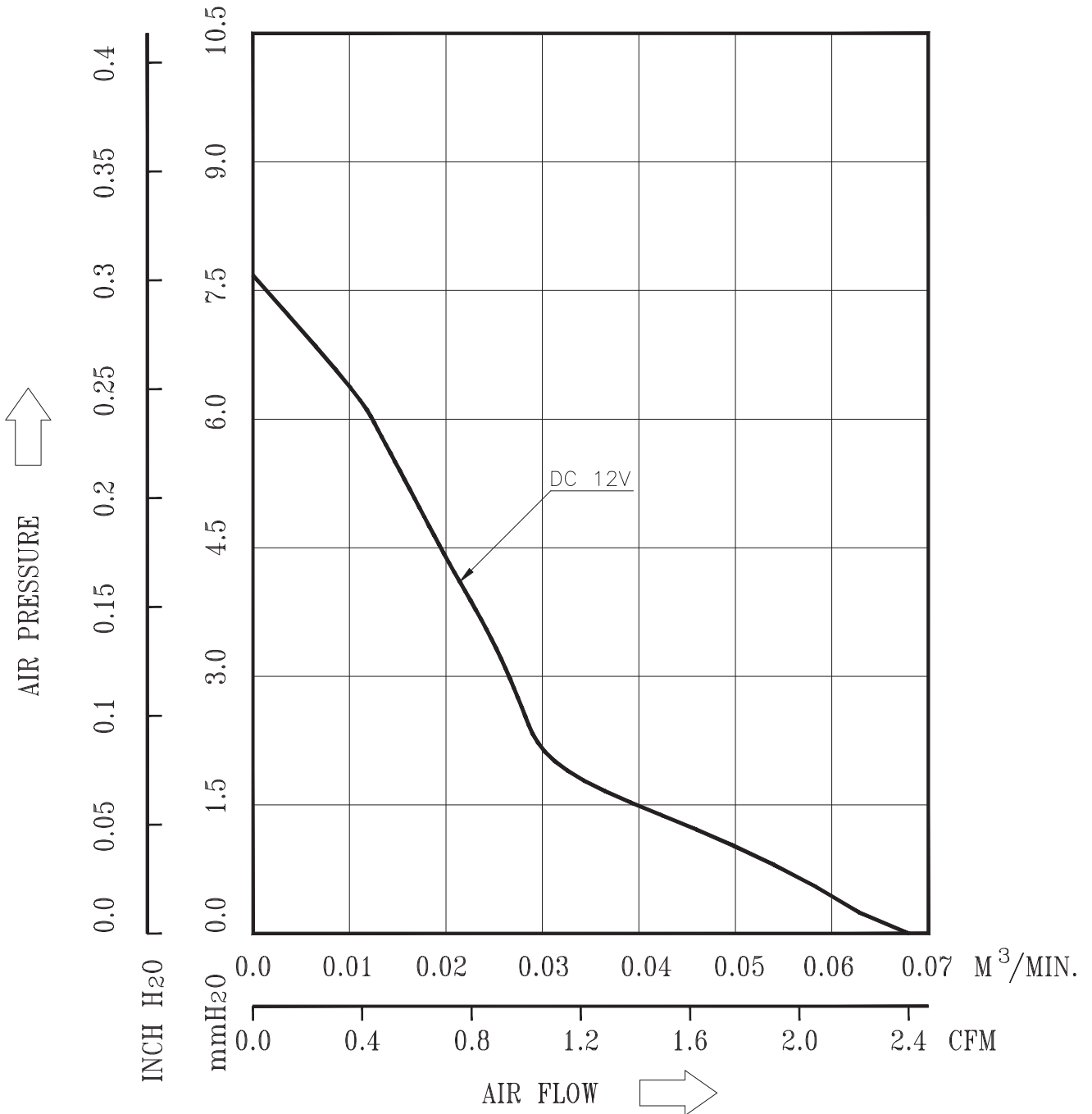
7. PRODUCTION LOCATION

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

PART NO:

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8. P & Q CURVE:



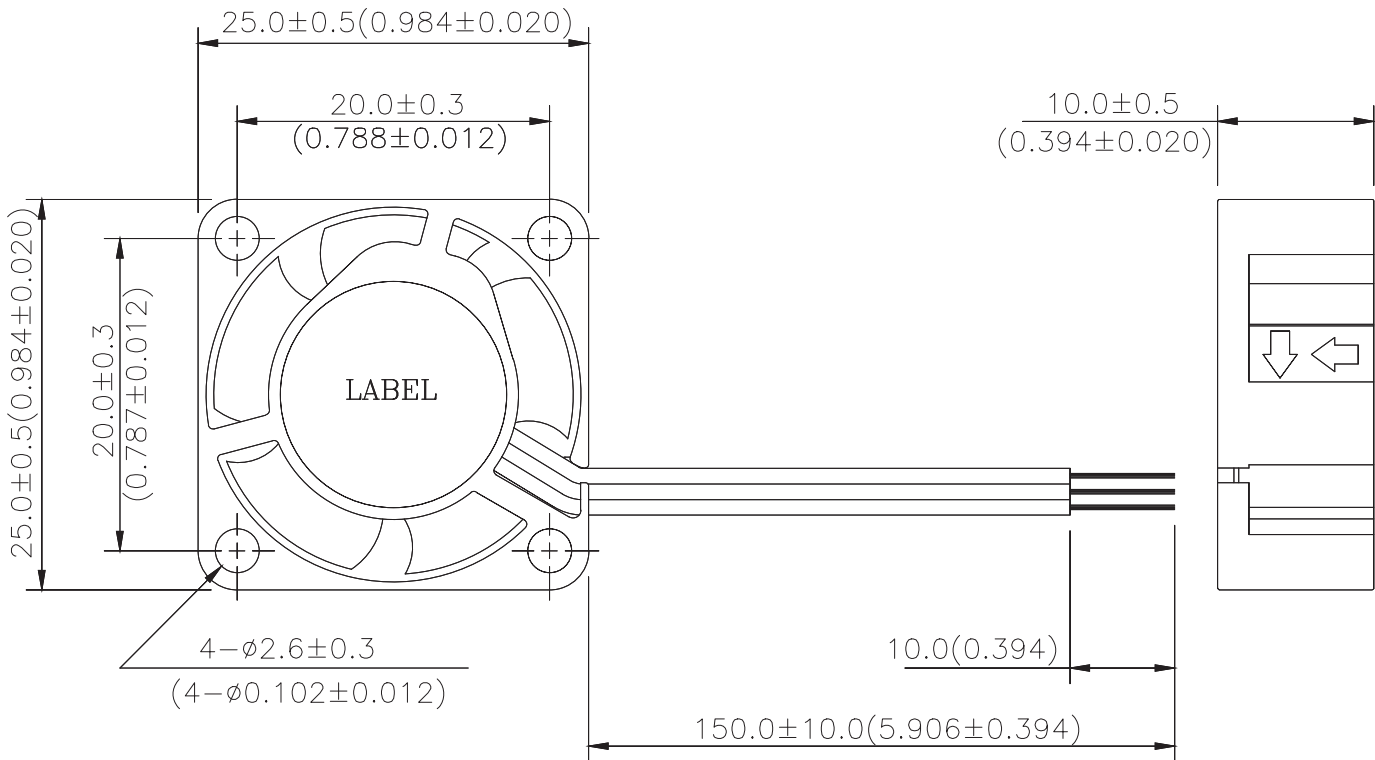
\* TEST CONDITION: INPUT VOLTAGE ——— OPERATION VOLTAGE  
TEMPERATURE ——— ROOM TEMPERATURE  
HUMIDITY ——— 65%RH

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9. DIMENSION DRAWING:

LABEL:



UNIE: mm(INCH)

NOTES:

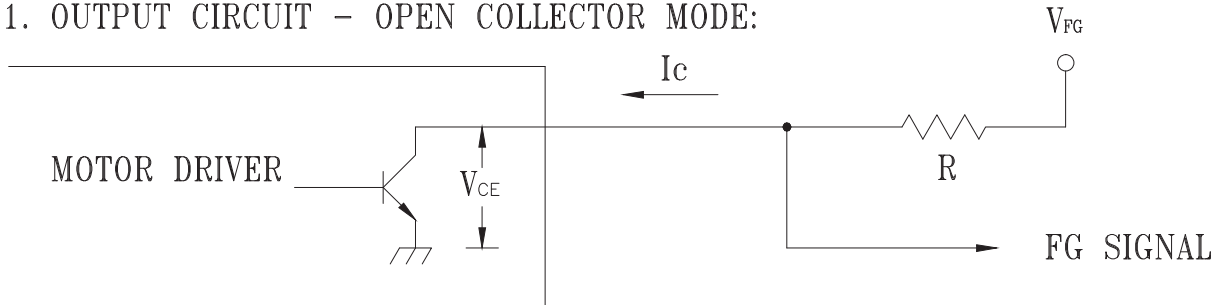
1. LEAD WIRE: UL 1061 -F- AWG #28  
BLACK WIRE NEGATIVE(-)  
RED WIRE POSITIVE(+)  
BLUE WIRE FREQUENCY(FG)
2. THIS PRODUCT IS RoHS COMPLIANT.

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### 10. FREQUENCY GENERATOR (FG) SIGNAL:

#### 10-1. OUTPUT CIRCUIT - OPEN COLLECTOR MODE:



CAUTION: THE FG SIGNAL LEAD WIRE MUST BE KEPT AWAY FROM  
" + " LEAD WIRE & " - " LEAD WIRE.

#### 10-2. SPECIFICATION:

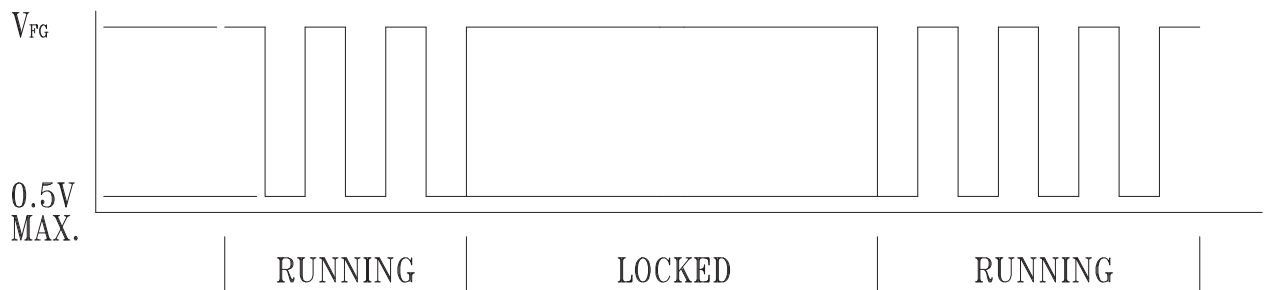
$$V_{CE}(\text{sat}) = 0.5V \text{ MAX.}$$

$$V_{FG} = 5.0V \text{ TYP.}(V_{CC} \text{ MAX.})$$

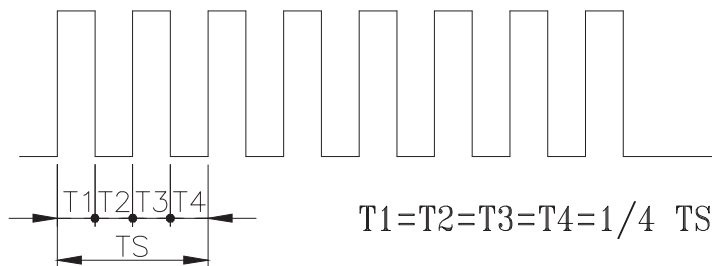
$$I_c = 5mA \text{ MAX.}$$

$$R \geq V_{FG} / I_c$$

#### 10-3. FREQUENCY GENERATOR WAVEFORM:



FAN RUNNING FOR 4 POLES



BLADE LOCKED

OR

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

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

\*VOLTAGE LEVEL AFTER BLADE LOCKED

\*4 POLES

A00