

DELTA ELECTRONICS, INC.

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SPECIFICATION FOR REFERENCE  
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Customer:

Description: DC FAN

Customer P/N:

REV:

Delta Model NO.: ASB0305MA-CA8Z

Sample Rev: X00

Issue NO:

Sample Issue Date:

Quantity:

1. SCOPE:

THIS SPECIFICATION DEFINES THE ELECTRICAL AND MECHANICAL CHARACTERISTICS OF THE DC BRUSHLESS BLOWER. THE BLOWER MOTOR IS WITH SINGLE PHASE AND FOUR POLES.

2. CHARACTERS:

| ITEM                                       | DESCRIPTION                                                                       |
|--------------------------------------------|-----------------------------------------------------------------------------------|
| RATED VOLTAGE                              | 5.0 VDC                                                                           |
| OPERATION VOLTAGE                          | 4.5 - 5.5 VDC                                                                     |
| START-UP VOLTAGE                           | 4.0 VDC                                                                           |
| INPUT CURRENT                              | 0.11 (MAX. 0.15) A                                                                |
| INPUT POWER                                | 0.55 (MAX. 0.75) W                                                                |
| SPEED                                      | 9000±15% R.P.M.                                                                   |
| MAX. AIR FLOW<br>(AT ZERO STATIC PRESSURE) | 0.097 (MIN. 0.080) M <sup>3</sup> / MIN.<br>3.443 (MIN. 2.823 ) CFM               |
| MAX. AIR PRESSURE<br>(AT ZERO AIRFLOW)     | 4.306 (MIN. 2.895) mmH <sub>2</sub> O<br>0.170 (MIN. 0.114 ) inchH <sub>2</sub> O |
| ACOUSTICAL NOISE (AVG.)                    | 23.0 (MAX. 27.0) dB-A                                                             |
| INSULATION TYPE                            | UL: CLASS A                                                                       |

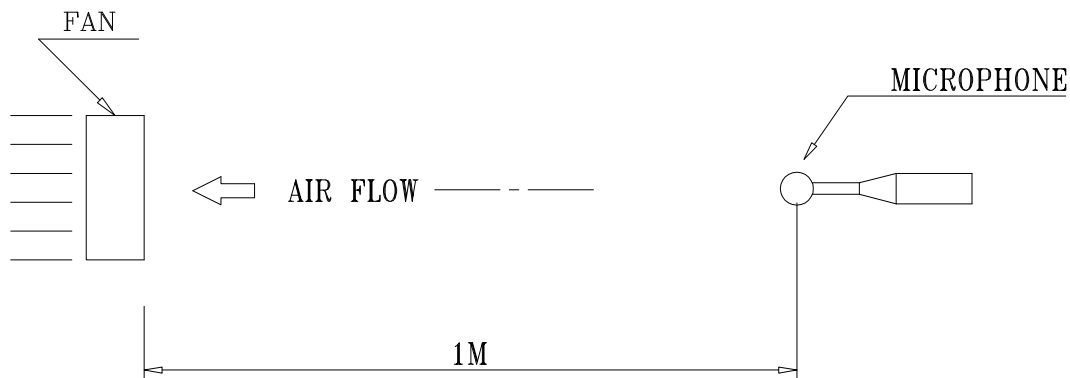
(continued)

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|                     |                                                                                                |
|---------------------|------------------------------------------------------------------------------------------------|
| INSULATION STRENGTH | 10 MEG OHM MIN. AT 500 VDC<br>(BETWEEN FRAME AND (+) TERMINAL)                                 |
| DIELECTRIC STRENGTH | 5 mA MAX. AT 500 VAC 50/60 Hz<br>ONE MINUTE, (BETWEEN FRAME AND<br>(+) TERMINAL)               |
| EXTERNAL COVER      | OPEN TYPE                                                                                      |
| LIFE EXPECTANCE     | 20,000 HOURS CONTINUOUS OPERATION<br>AT 40°C WITH 65 %RH.                                      |
| ROTATION            | COUNTERCLOCKWISE DIRECTION<br>FROM FRONT VIEW OF AIR FLOW INLET                                |
| INSULATION TYPE     | UL: CLASS A                                                                                    |
| LEAD WIRE           | UL 1061 AWG #26<br>BLACK WIRE NEGATIVE(-)<br>RED WIRE POSITIVE(+)<br>BLUE WIRE FREQUENCY(-F00) |

- 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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PART NO:  
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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 ----- SLEEVE BEARING
- 3-5. WEIGHT ----- 7.4(REF.) 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.

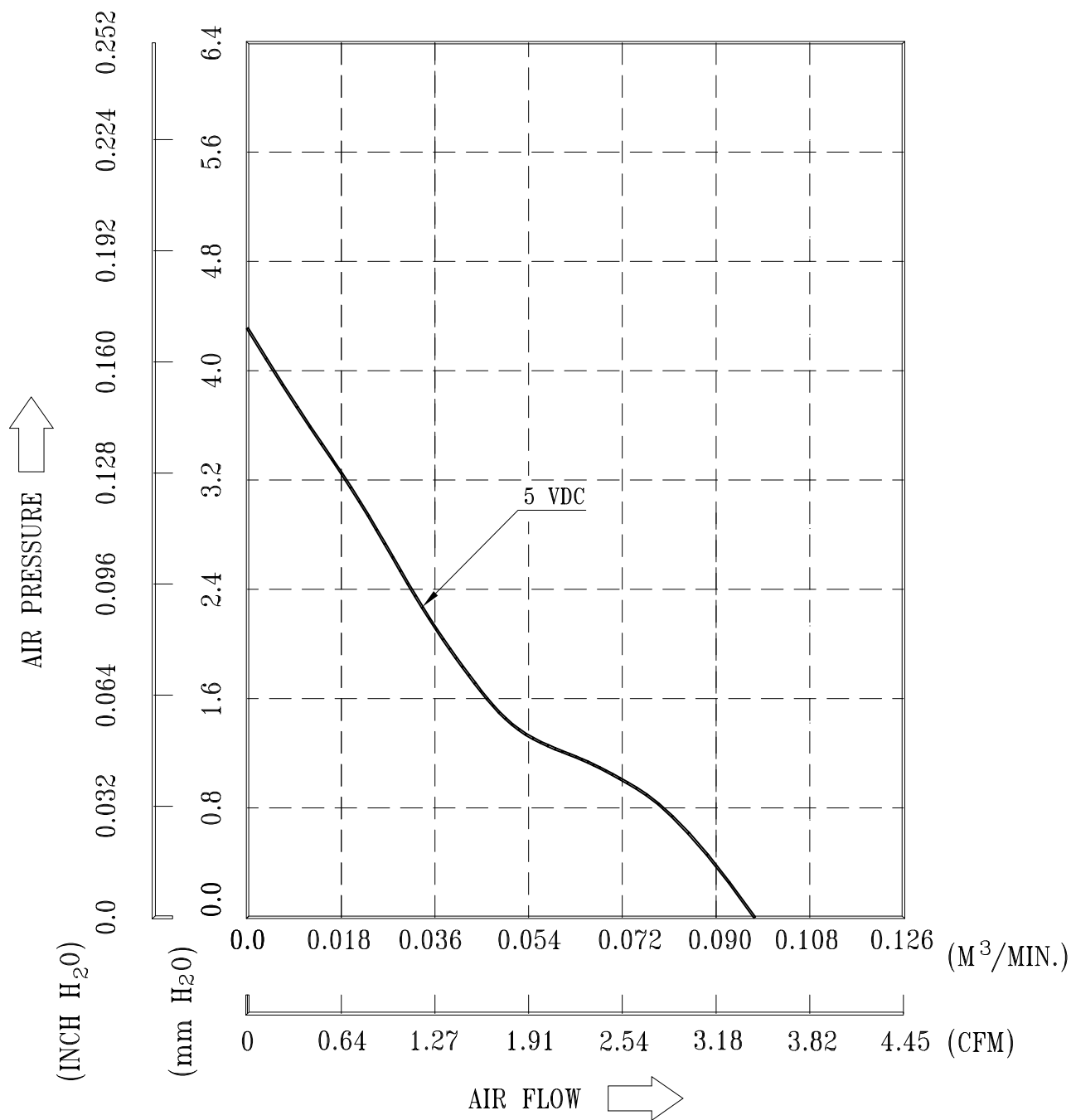
7. PRODUCTION LOCATION

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

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8. P & Q CURVE:

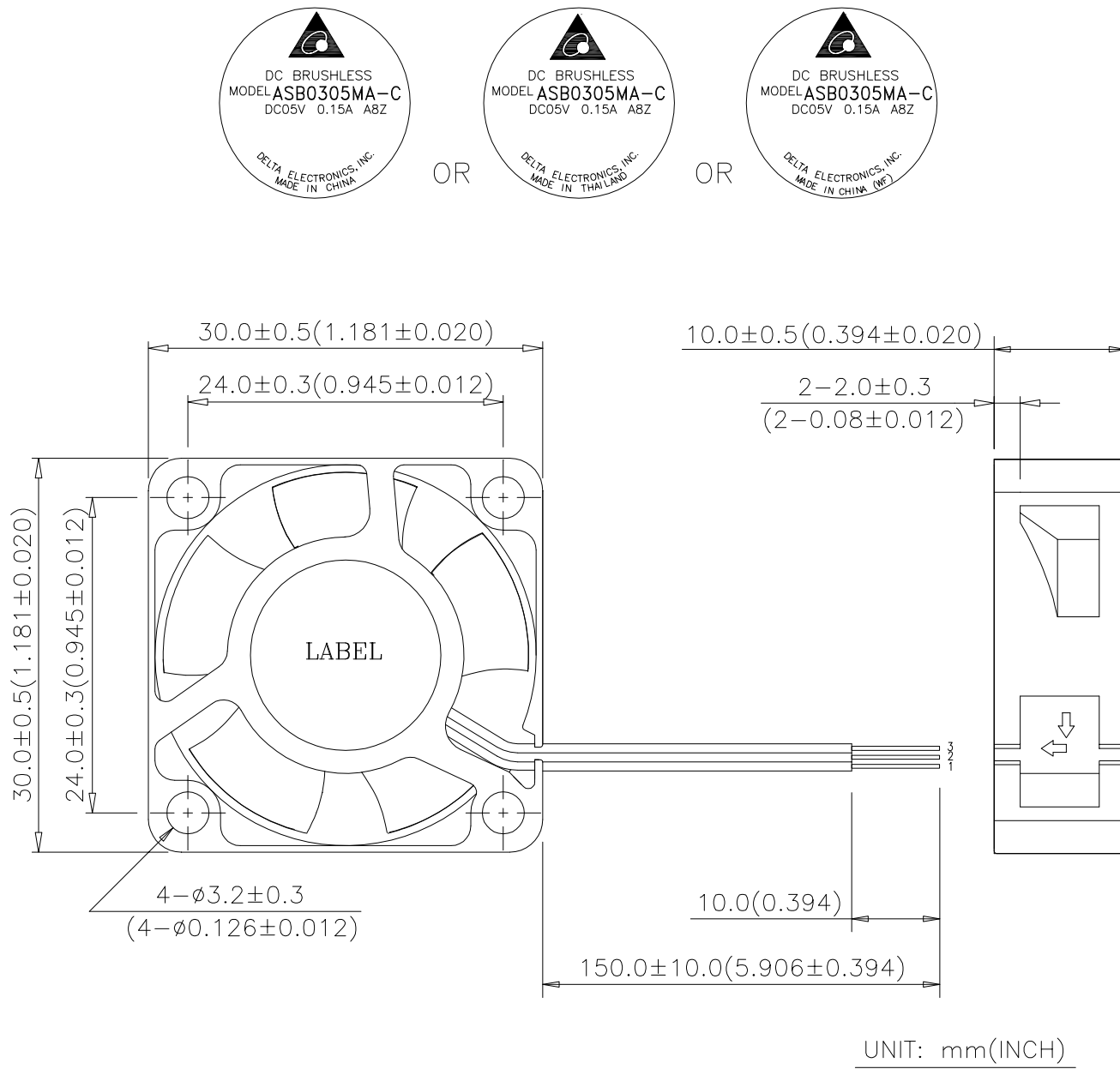


\* TEST CONDITION: INPUT VOLTAGE ----- OPERATION VOLTAGE  
TEMPERATURE ----- ROOM TEMPERATURE  
HUMIDITY ----- 65%RH

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## 9. DIMENSION DRAWING:



1. THIS PRODUCT IS RoHS COMPLIANT
2. UL 1061 -F- AWG #26  
PIN 1 : BLACK WIRE NEGATIVE(-)  
PIN 2 : RED WIRE POSITIVE(+)  
PIN 3 : BLUE WIRE FREQUENCY(-F00)

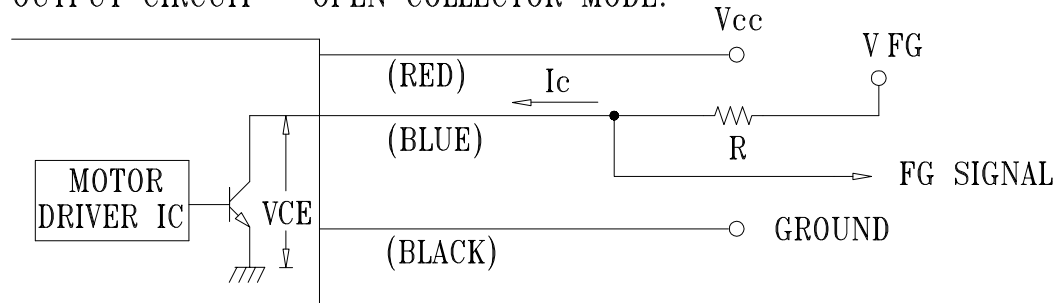
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## 10. FREQUENCY GENERATOR (FG) SIGNAL:

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



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

### 2. SPECIFICATION:

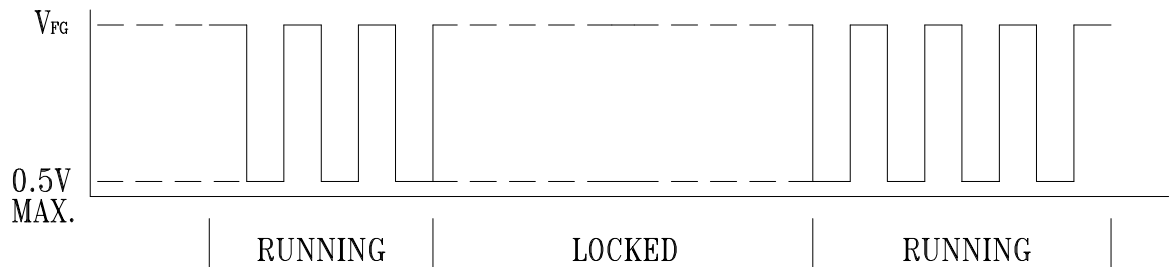
$V_{CE}(\text{sat}) = 0.5\text{V MAX.}$

$V_{FG} = 5.5\text{VDC MAX.}$

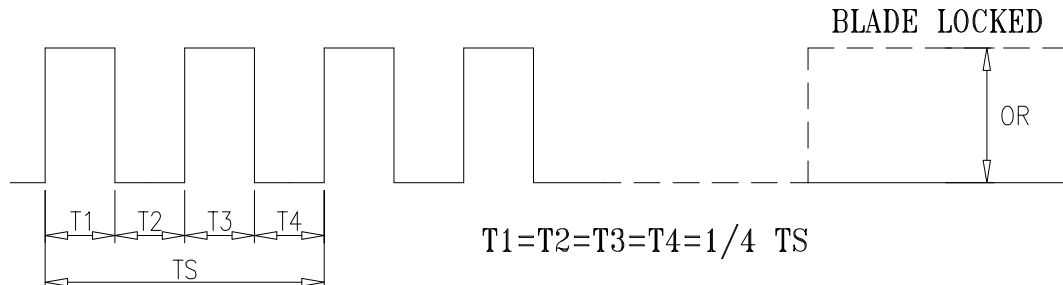
$I_c = 5\text{mA MAX.}$

$R \geq V_{FG}/I_c$

### 3. FREQUENCY GENERATOR WAVEFORM:



FAN RUNNING FOR 4 POLES



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

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

\*VOLTAGE LEVEL AFTER BLADE LOCKED

\*4 POLES