



SPECIFICATION FOR APPROVAL

Customer STD

Description DC FAN

Part No. _____ REV. _____

Delta Model No. PFC0812DE-SP07 REV. 00

Sample Issue No. _____

Sample Issue Date APR.25.2008

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

APPROVED BY: _____

DATE : _____

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Customer: STD

 Description: DC FAN

 Customer P/N: REV:

 Delta Model NO.: PFC0812DE-SP07

 Sample Rev: 00 Issue NO:

 Sample Issue Date: APR.25.2008 Quantity:

1. SCOPE:

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

2. CHARACTERS:

ITEM	DESCRIPTION
RATED VOLTAGE	12 VDC
OPERATION VOLTAGE	7.0 - 13.2 VDC
INPUT CURRENT	0.80 (0.96 MAX.) A
INPUT POWER	9.60 (11.52 MAX.) W
SPEED	6000±10% R.P.M.
MAX. AIR FLOW (AT ZERO STATIC PRESSURE)	2.454 (MIN. 2.208) M ³ /MIN 86.65 (MIN. 77.99) CFM
MAX.AIR PRESSURE (AT ZERO AIR FLOW)	22.733 (MIN. 18.414)mmH ₂ O 0.895 (MIN. 0.725) inchH ₂ O
ACOUSTICAL NOISE (AVG.)	54.4 (MAX 58.4) dB-A
INSULATION TYPE	UL: CLASS A

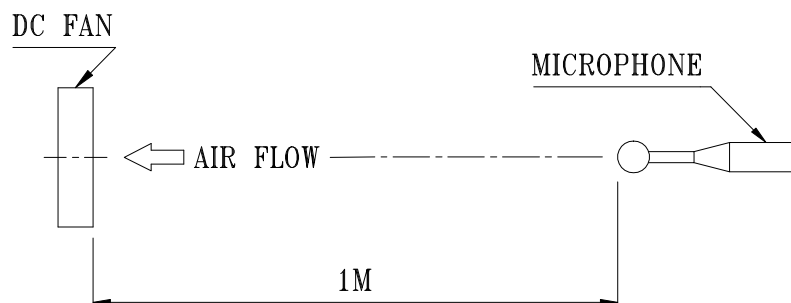
(continued)

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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	50,000 HOURS CONTINOUS 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 1061 -F- AWG #24 BLACK WIRE NEGATIVE(-) RED WIRE POSITIVE(+) YELLOW WIRE FREQUENCY(-F00) BLUE WIRE SPEED CONTROL(PWM)

- 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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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 ----- 205 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. 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.

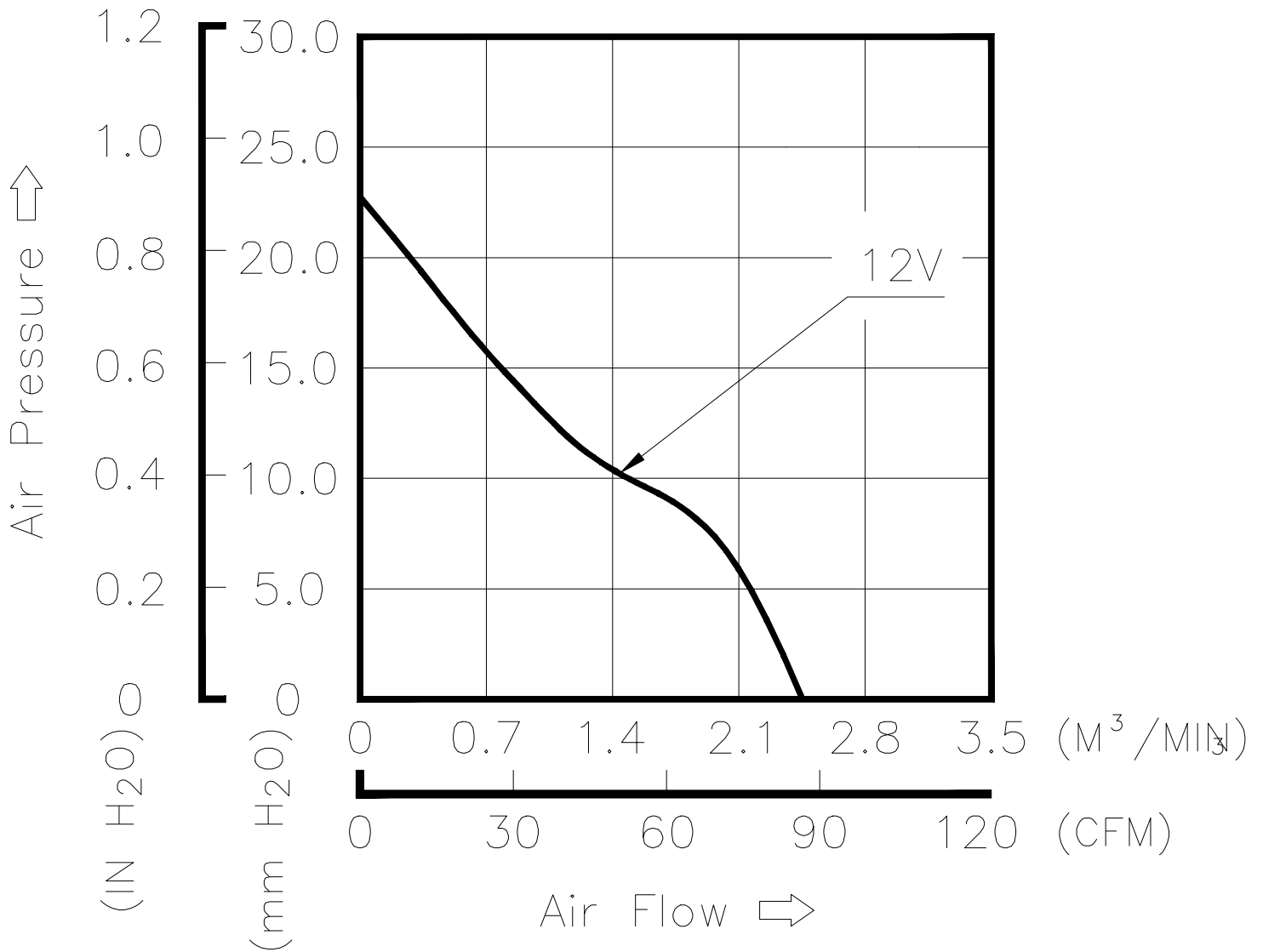
7. PRODUCTION LOCATION

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

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8.P & Q CURVE:



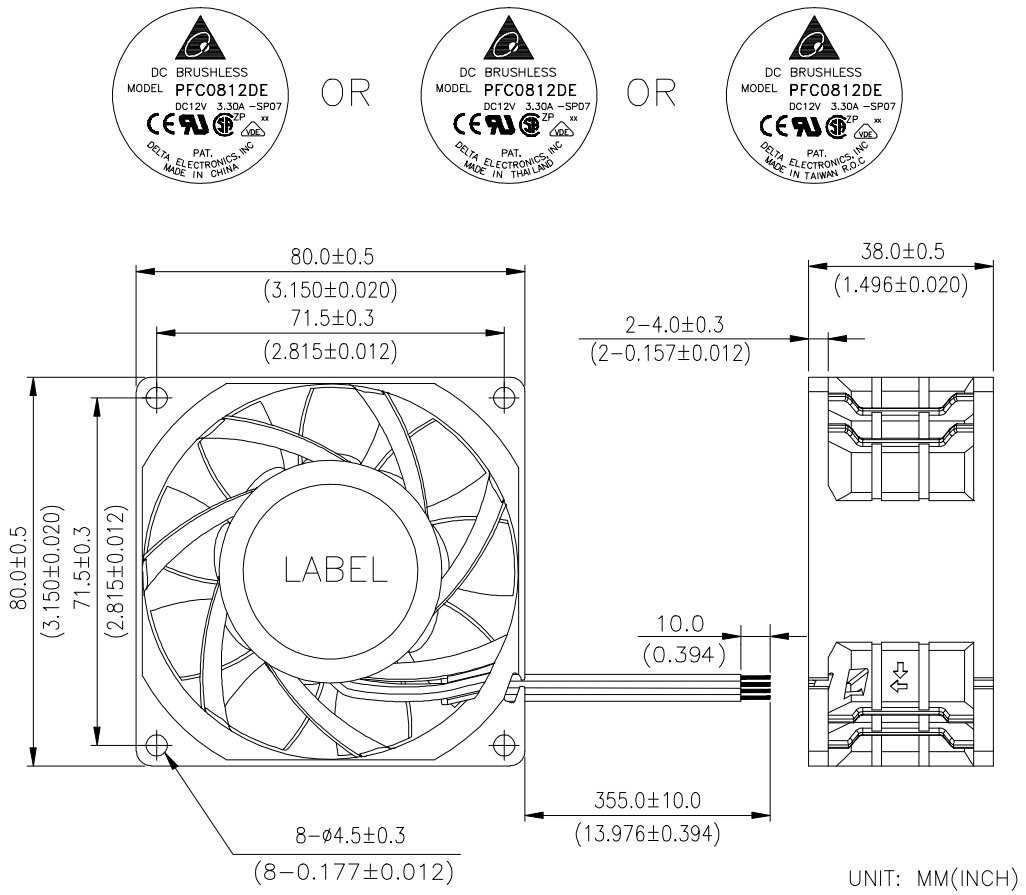
* TEST CONDITION: INPUT VOLTAGE ----- OPERATION VOLTAGE
TEMPERATURE ----- ROOM TEMPERATURE
HUMIDITY ----- 65%RH

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9.ttach: DIMENSIONS DRAWING

LABEL:



NOTE:

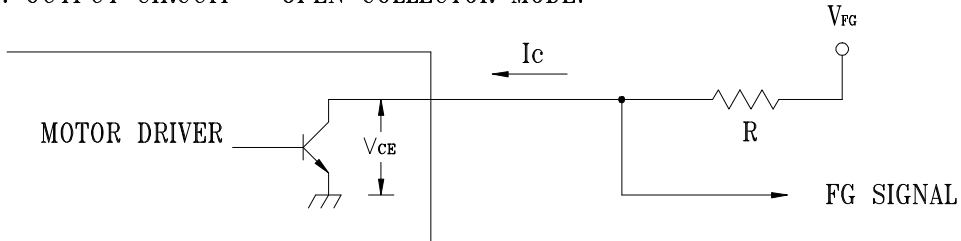
1. LEAD WIRE UL:1061 AWG#24 (MUST BE APPROVED BY DELTA)
BLACK WIRE -----(-)
RED WIRE -----(+)
YELLOW WIRE -----(FO0)
BLUE WIRE -----(PWM)
2. THIS PRODUCT IS RoHS COMPLIANT

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10. 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:

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

$$V_{FG} = 13.2V \text{ MAX}$$

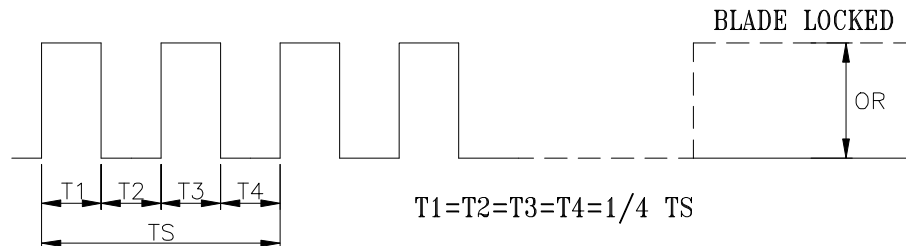
$$I_c = 5mA \text{ MAX.}$$

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

3. FREQUENCY GENERATOR WAVEFORM:



FAN RUNNING FOR 4 POLES



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

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

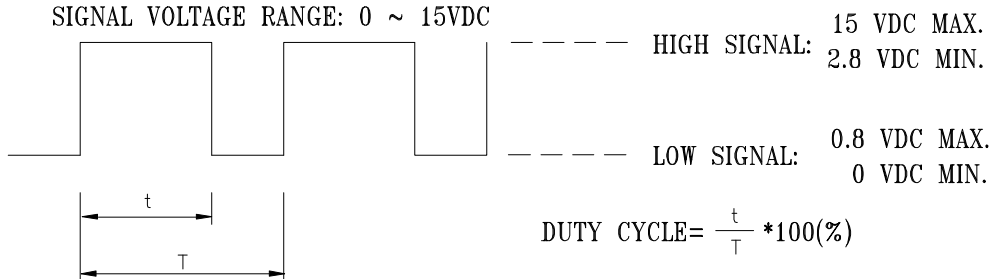
*VOLTAGE LEVEL AFTER BLADE LOCKED

*4 POLES

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11. PWM CONTROL SIGNAL:

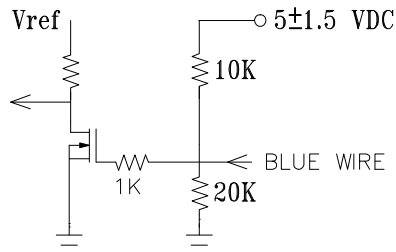


- THE FREQUENCY FOR CONTROL SIGNAL OF THE FAN SHALL BE ABLE TO ACCEPT A 30HZ~300KHZ.
- THE PREFERRED OPERATING POINT FOR THE FAN IS 25K HZ.
- AT 100% DUTY CYCLE,THE ROTOR WILL SPIN AT MAXIMUM SPEED.
- AT 0% DUTY CYCLE,THE ROTOR WILL SPIN AT MINIMUM SPEED.
- WITH CONTROL SIGNAL LEAD DISCONNECTED,THE FAN WILL SPIN AT MAXIMUM SPEED.
- AT RATED VOLTAGE 25KHZ 20% DUTY CYCLE ,THE FAN WILL BE ABLE TO START FROM A DEAD STOP .

12. SPEED VS PWM CONTROL SIGNAL: (AT RATED VOLTAGE & PWM FREQUENCY=25KHZ)

DUTY CYCLE (%)	SPEED R.P.M. (REF.)	CURRENT (A) TYP.
100	6000±10%	0.80
50	3300±10%	0.18
0	1000±200	0.04

13. PWM CONTROL LEAD WIRE INPUT IMPEDANCE:



- 13-1. THE FAN SPEED WILL DEFAULT TO MAXIMUM WHEN THE SPEED CONTROL INPUT IS LEFT UNCONNECTED.