

## SPECIFICATION FOR APPROVAL

**DCFAN** 

Part No.		REV.	
Delta Model No.	AUB0912H-C	REV. 01	
Sample Issue No.			
Sample Issue Date.	JAN-13-2011		
	NE COPY OF THIS SPEC DU SIGNED APPROVAL		
APPROVED BY			
DATE			

Delta Electronics Component Co., Ltd. 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

Customer.

Description.

Delta Electronics Component Co., Ltd. Xi Nan District Shi Jie Town. Dong Guan City. Guangdong Province, China. P. R. C.

TEL: 86-769-86329008 gdong Province, FAX: 86-769-86631589

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Customer:		
Description:	DC FAN	
Customer P/N:		REV:
Delta Model NO.:	AUB0912H-C	Delta_Safety_Model_NO.:AUB0912H
Sample Rev:	01	Issue NO:
Sample Issue Date	: JAN-13-2011	Quantity:

#### 1. SCOPE:

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

#### 2. CHARACTERS:

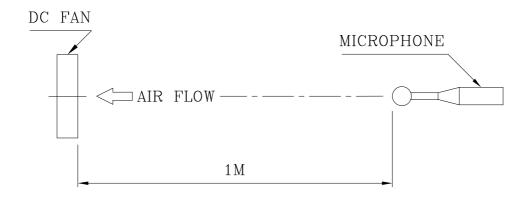
ITEM	DESCRIPTION				
RATED VOLTAGE	12 VDC				
OPERATION VOLTAGE	7.0 ~ 13.8 VDC				
START VOLTAGE (ENVIRONMENT TEMPERATURE AT 25°C)	4.0VDC				
INPUT CURRENT	0.25 (MAX. 0.30) A (SAFETY CURRENT 0.25A)				
INPUT POWER	3.00 (MAX. 3.60) W				
   SPEED 	   2800 R.P.M. (REF.) 				
MAX. AIR FLOW (AT ZERO STATIC PRESSURE)	1.605 (MIN. 1.444) M <sup>3</sup> /MIN. 56.66 (MIN. 50.99) CFM				
MAX. AIR PRESSURE (AT ZERO AIR FLOW)	4.503 (MIN. 3.647) mmH20 0.177 (MIN. 0.144) inchH20				
ACOUSTICAL NOISE (AVG.)	37.0 (MAX. 41.0) dB A				
INSULATION CLASS	UL: CLASS A				

(continued)

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	!
INSULATION RESISTANCE	10MEG OHM MIN. AT 500 VDC (BETWEEN FRAME AND (+) TERMINAL)
DIELECTRIC STRENGTH	5mA MAX. AT 500 VAC 60Hz ONE MINITE, (BETWEEN FRAME AND (+) TERMINAL)
EXTERNAL COVER	OPEN TYPE
LIFE EXPECTANCE	50,000 HOURS CONTINUOUS OPERATION AT 40°C , 15~65% RH.
OVER CURRENT SHUT DOWN	THE CURRENT WILL SHUT DOWN WHEN LOCKING ROTOR.
ROTATION	CLOCKWISE VIEW FROM NAME PLATE SIDE
AIR FLOW DIRECTION	AIR INTAKE OVER STRUTS
LEAD WIRE	UL 1007 AWG #24  BLACK WIRE NEGATIVE(-)  RED WIRE POSITIVE(+)

- NOTES: 1. ALL READINGS ARE MEASURED AFTER STABLY WARMING UP THROUGH 10 MINUTES AT ROOM TEMPERATURE.
  - 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 —	——— SUPERFLO BEARING

3-5. WEIGHT \_\_\_\_\_\_\_ 104.0 GRAMS

#### 4. ENVIRONMENTAL:

4-1. OPERATING TEMPERATURE —	-10	ТО	+6	60	DEG	RE.	ЕС	
4-2. STORAGE TEMPERATURE	-40	ТО	+'	75	DEG	RE	ЕС	
4-3. OPERATING HUMIDITY			5	ТО	90	%	RH	
4-4. STORAGE HUMIDITY			5	ТО	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, PBB0s, 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:  $-40^{\circ}$ C

CYCLING HIGH TEMPERATURE: +80°C

SOAK TIME: 30 MINUTES

TRANSITION TIME < 5 MINUTES

DUTY CYCLES: 5

8-2. HUMIDITY TEMPERATURE:  $+25^{\circ}\text{C} \sim +65^{\circ}\text{C}$ 

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 gRMS=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. OPERATION TEMPERATURE

POWER: RATE VOLTAGE OPERATING

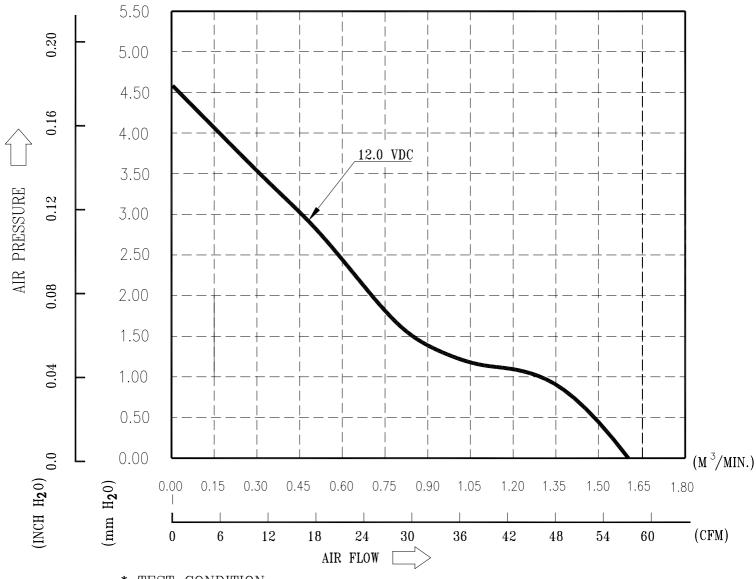
DURATION: 1000 HOURS MIN.

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## 9. P & Q CURVE



\* TEST CONDITION:

INPUT VOLTAGE --- OPERATION VOLTAGE TEMPERATURE --- ROOM TEMPERATURE HUMIDITY ---- 65%RH

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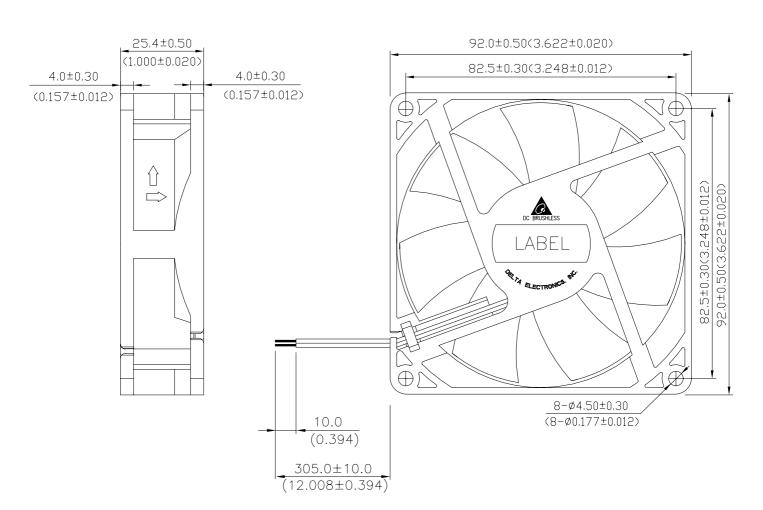
#### 10. DIMENSION DRAWING:

LABEL:



OR





NOTES:

1. LEAD WIRE UL1007 AWG#24 RED WIRE----(+) BLACK WIRE----(-)

2. THIS PRODUCT IS ROHS COMPLIANT.

UNIT: MM(INCH)



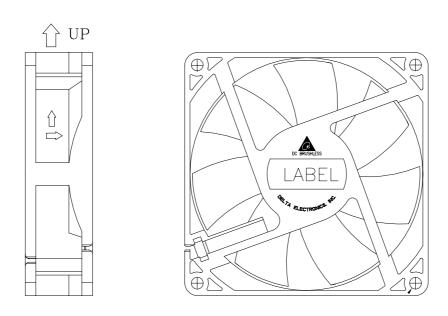
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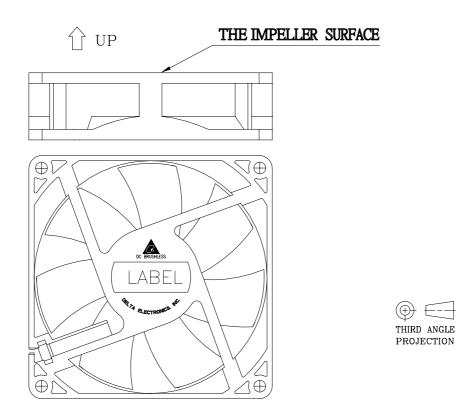
DELTA MODEL: AUB0912H-C

#### 11. SLEEVE BEARING FAN MOUNTING TYPE:

WE SUGGEST THAT THE FAN IS MOUNTED AS THE TYPE A OR B.IF YOU WOULD LIKE TO HAVE OTHER MOUNTING TYPE, PLEASE CONTACT US.



TYPE: A



TYPE: **B** 



# **Application Notice**

- 1. Delta will not guarantee the performance of the products if the application condition falls outside the parameters set forth in the specification.
- 2. A written request should be submitted to Delta prior to approval if deviation from this specification is required.
- 3. Please exercise caution when handling fans. Damage may be caused when pressure is applied to the impeller, if the fans are handled by the lead wires, or if the fan was hard-dropped to the production floor.
- 4. Except as pertains to some special designs, there is no guarantee that the products will be free from any such safety problems or failures as caused by the introduction of powder, droplets of water or encroachment of insect into the hub.
- 5. The above-mentioned conditions are representative of some unique examples and viewed as the first point of reference prior to all other information.
- 6. It is very important to establish the correct polarity before connecting the fan to the power source. Positive (+) and Negative (-). Damage may be caused to the fans if connection is with reverse polarity, if there is no foolproof method to protect against such error specifically mentioned in this spec.
- 7. Delta fans without special protection are not suitable where any corrosive fluids are introduced to their environment.
- 8. Please ensure all fans are stored according to the storage temperature limits specified. Do not store fans in a high humidity environment. We highly recommend performance testing is conducted before shipping, if the fans have been stored over 6 months.
- 9. Not all fans are provided with the Lock Rotor Protection feature. If you impair the rotation of the impeller for the fans that do not have this function, the performance of those fans will lead to failure.
- 10. Please be cautious when mounting the fan. Incorrect mounting of fans may cause excess resonance, vibration and subsequent noise.
- 11. It is important to consider safety when testing the fans. A suitable fan guard should be fitted to the fan to guard against any potential for personal injury.
- 12. Except where specifically stated, all tests are carried out at room (ambient) temperature and relative humidity conditions of 25°C, 65% RH. The test value is only for fan performance itself.
- 13. Be certain to connect an " $4.7\mu F$  or greater" capacitor to the fan externally when the application calls for using multiple fans in parallel, to avoid any unstable power.

Doc. No: FMBG-ES Form 001 Rev. 01 Date: June 24, 2009