

Customer		
Description	DC FAN	
Part No.		Rev
Delta Model No.	AFB1248SHE-TC50	Rev. <u>00</u>
Sample Issue No.		
Sample Issue		
Date.	Jun 18, 09	

PLEASE SEND ONE COPY OF THIS SPECIFICATION BACK AFTER YOU SIGNED APPROVAL FOR PRODUCTION PRE-ARRANGEMENT.				
APPROVED BY	:			
DATE	:			

# DELTA ELECTRONICS (THAILAND) PUBLIC COMPANY LIMITED.

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## DELTA ELECTRONICS, INC. 252, SHANG YING ROAD, KUEI SAN TAOYUAN HSIEN 333, TAIWAN, R. O. C.

SPECIFICATION FOR APPROVAL

TEL: 886-(0)3-3591968 FAX: 886-(0)3-3591991

Customer:		
Description:	DC FAN	
Customer P/N:		REV:
Delta Model NO.:	AFB1248SHE-TC50	
Sample Rev:	00	Issue NO:
Sample Issue Date:	Jun 18, 09	Quantity:

#### 1. SCOPE:

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

### 2. CHARACTERS:

ITEM	DESCRIPTION	
RATED VOLTAGE	48 VDC	
OPERATION VOLTAGE	24.0 - 56.0 VDC	
INPUT CURRENT	0.31 (MAX.0.40) A	
INPUT POWER	14.88 (MAX.19.20) W	
SPEED	4100±10% R.P.M.	
MAX. AIR FLOW (AT ZERO STATIC PRESSURE)	5.394(MIN. 4.696 ) M <sup>3</sup> /MIN. 190.481 (MIN. 165.862) CFM	
MAX.AIR PRESSURE (AT ZERO AIRFLOW)	17.635(MIN. 13.702) mmH20 0.694 (MIN. 0.539) inchH <sub>2</sub> 0	
ACOUSTICAL NOISE (AVG.)	55.5 (MAX. 59.5) dB-A	
INSULATION TYPE	UL: CLASS A	

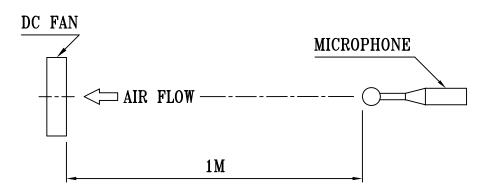
(continued)

PART NO:
DELTA MODEL: AFB1248SHE-TC50

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	70,000 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(+)	

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:	
DELTA MODEL: AFR1248SHE-TC50	
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	330 GRAMS
3-6. INGRESS PROTECTION	IP55
4. ENVIRONMENTAL:	
4-1. OPERATING TEMPERATURE	<b>-10 TO +70 DEGREE</b> C
4-2. STORAGE TEMPERATURE	<b>-40 TO +75 DEGREE</b> 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 HOURS OF LOCKED ROTOR CONDITION AT	
5-2. POLARITY PROTECTION	
BE CAPABLE OF WITHSTANDING IF REVERS	SE CONNECTION FOR POSITIVE

# 6. RE OZONE DEPLETING SUBSTANCES:

AND NEGATIVE LEADS.

6-1. NO CONTAINING PBBs, PBB0s, CFCs, PBBEs, PBDPEs AND HCFCs.

## 7. PRODUCTION LOCATION

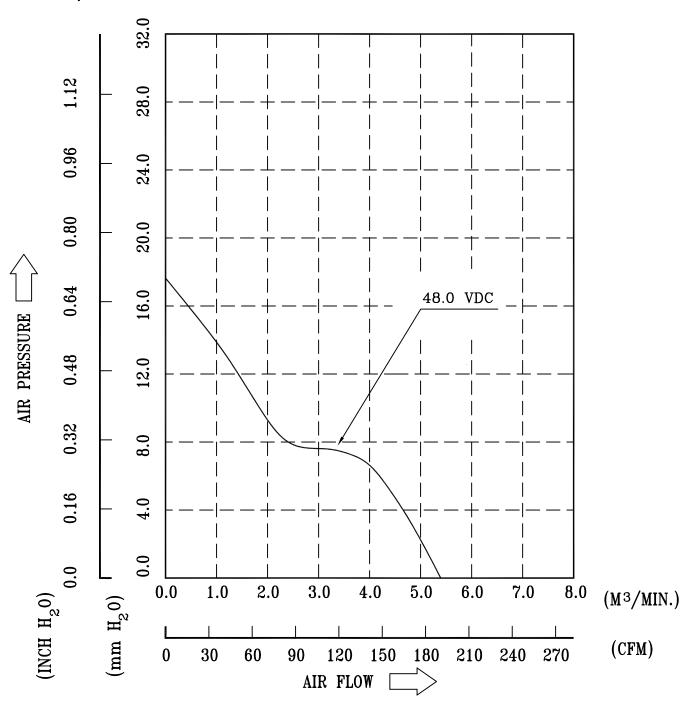
7-1. PRODUCTS WILL BE PRODUCED IN CHINA OR THAILAND OR TAIWAN.

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PART NO:

DELTA MODEL: AFB1248SHE-TC50

8. P & Q CURVE:



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

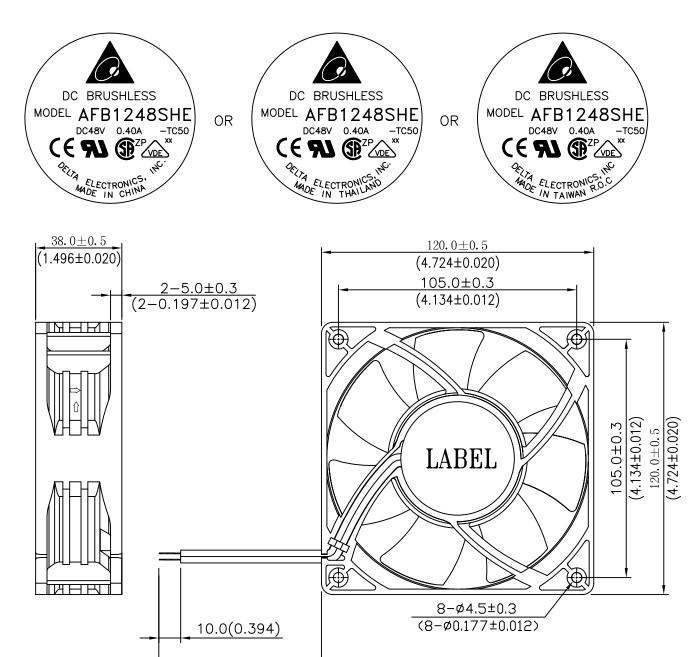
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PART NO:

## DELTA MODEL: AFB1248SHE-TC50

#### 9. DIMENSION DRAWING:

LABEL:



NOTES:

1. WIRE: UL1007 AWG#24

RED WIRE ---- (+)

BLACK WIRE ---- (-)

UNIT: mm(INCH)

- 2. FOR IP55 PROTECTION, THE MOTOR(PWB+WINDING ASSY) MUST COATED BY PARYLENE WITH THICKNESS 0.005MM (REF.) DELTA P/N 4020158300
- 3. THIS PRODUCT IS RoHS COMPLIANT

330.0±10.0 (12.992±0.394)

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# **Descriptions:**

- Delta will not guarantee the performance of the products if the application condition falls outside the parameters set forth in the specification.
- 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 fans are 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, as there is no foolproof method to protect against such error.
- 7. Delta fans 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.
- 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 relative (ambient) temperature and humidity conditions of 25°C, 65%. The test value is only for fan performance itself.
- 13. Be certain to connect an "over 4.7μF" capacitor to the fan externally when the application calls for using multiple fans in parallel, to avoid any unstable power.

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