



SPECIFICATION FOR APPROVAL

Customer. STD

Description. DC FAN

Customer Part No. _____ REV. _____

Delta Model No. AFB02512HA-CF00 REV. 00

Sample Issue No. _____

Sample Issue Date. JUL-10-2020

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

APPROVED BY : _____

DATE: _____

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

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

NONE

DESCRIPTION :

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

SPECIFICATION FOR APPROVAL

Customer:	STD		
Description:	DC FAN		
Customer P/N:		REV:	
Delta Model NO.:	AFB02512HA-CF00	Delta safety model NO.:	AFB02512HA-C
Sample Rev:	00	Issue NO:	
Sample Issue Date:	JUL-10-2020	Quantity:	

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.)	0.06 (MAX. 0.10) A SAFETY CURRENT ON LABEL :0.10
INPUT POWER(AVG.)	0.72 (MAX. 1.20) W
SPEED	10000±20% R.P.M.
MAX. AIR FLOW (AT ZERO STATIC PRESSURE)	0.052 (MIN. 0.041) M ³ /MIN. 1.84 (MIN. 1.44) CFM
MAX. AIR PRESSURE (AT ZERO AIRFLOW)	4.48 (MIN. 2.95) mmH ₂ O 0.176 (MIN. 0.116) inchH ₂ O
ACOUSTICAL NOISE (AVG.)	23.5 (MAX. 26.0) dB-A
INSULATION TYPE	UL: CLASS A

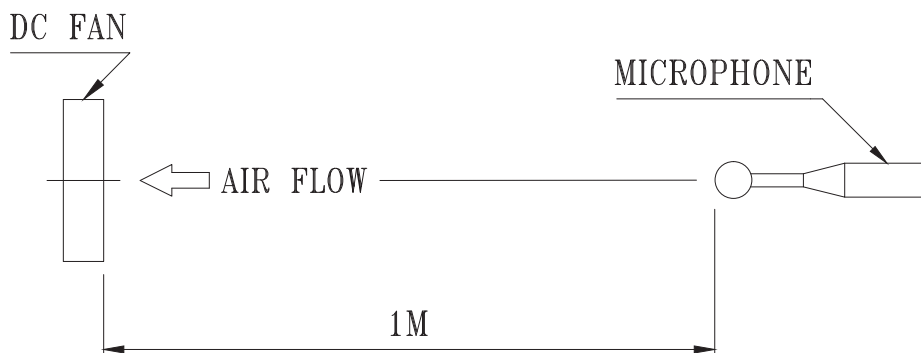
(continued)

PART NO:

DELTA MODEL: AFB02512HA-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.

PART NO:

DELTA MODEL: AFB02512HA-CF00

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.

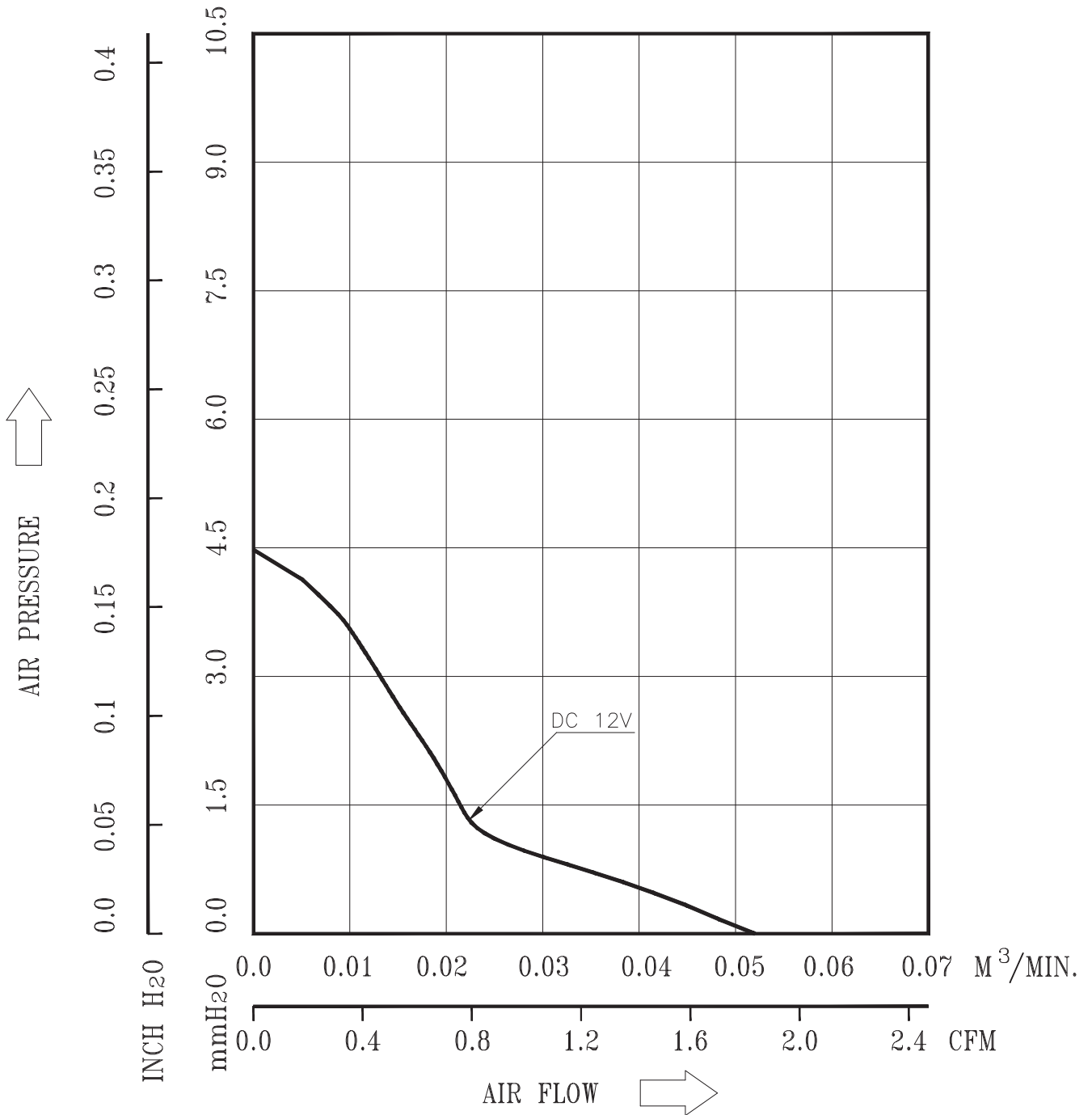
7. PRODUCTION LOCATION

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

PART NO:

DELTA MODEL: AFB02512HA-CF00

8. P & Q CURVE:



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

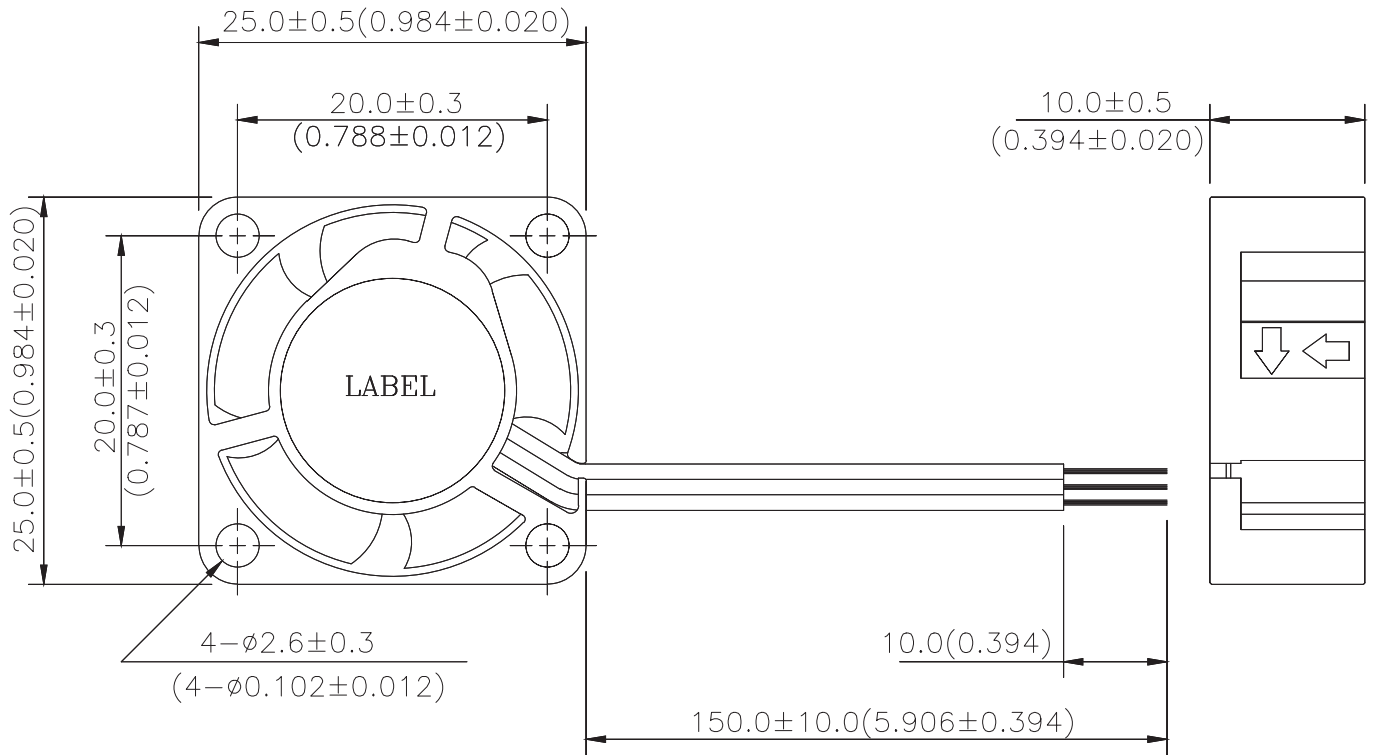
A00

PART NO:

DELTA MODEL: AFB02512HA-CF00

9. DIMENSION DRAWING:

LABEL:



UNIE: mm(INCH)

NOTES:

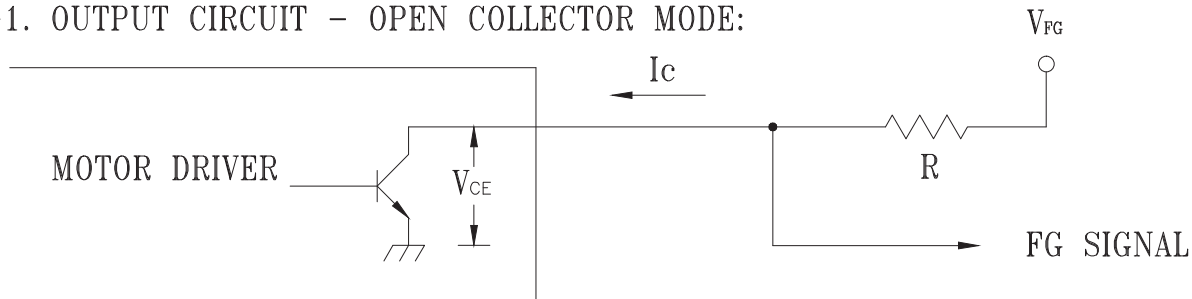
1. LEAD WIRE: UL 1061 -F- AWG #28
BLACK WIRE NEGATIVE(-)
RED WIRE POSITIVE(+)
BLUE WIRE FREQUENCY(FG)
2. THIS PRODUCT IS RoHS COMPLIANT.

PART NO:

DELTA MODEL: AFB02512HA-CF00

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:

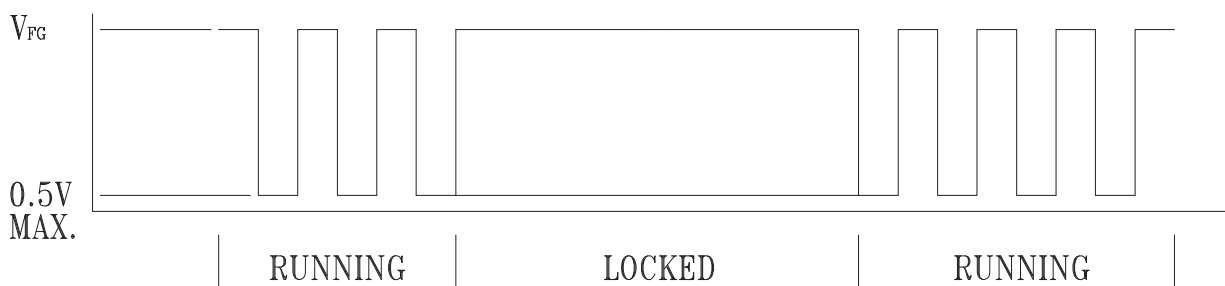
$V_{CE} (sat) = 0.5V \text{ MAX.}$

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

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

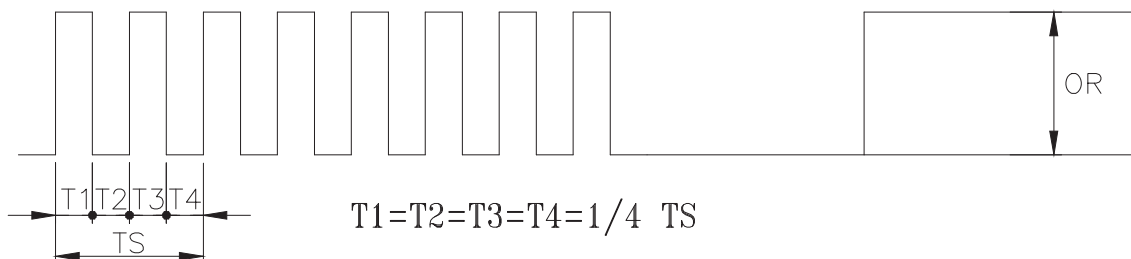
$R \geq V_{FG} / I_c$

10-3. FREQUENCY GENERATOR WAVEFORM:



FAN RUNNING FOR 4 POLES

BLADE LOCKED



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

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

*VOLTAGE LEVEL AFTER BLADE LOCKED

*4 POLES