



SPECIFICATION FOR APPROVAL

Customer : _____
Description : DC FAN _____
Customer Part No. _____ REV. : _____
Delta Model No. : BUB0812HN-00 _____ REV. : 01 _____
Sample Issue No. : _____
Sample Issue Date : JUN.14 2021 _____

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

APPROVED BY:

DATE :

DELTA ELECTRONICS, INC.
TAOYUAN PLANT
252, SHANGYING ROAD, GUISHAN INDUSTRIAL ZONE,
TAOYUAN CITY 33341, TAIWAN
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STATEMENT OF DEVIATION

NONE

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Specification For Approval

Customer :

Description : DC FAN

Customer P/N :

rev. :

Delta model no. : BUB0812HN-00

Delta Safety Model No.: BUB0812HN-00

Sample revision. : 01

Issue no.:







Sample issue date : JUN.14 2021

Quantity :

1. SCOPE:

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

2. CHARACTERS:

ITEM	DESCRIPTION
RATED VOLTAGE	12 VDC
OPERATION VOLTAGE	 10.8 - 13.2 VDC
PWM MINIMUM START DUTY	30% (MAX.) @ 25KHz
OPERATION DUTY RANGE	 20% - 100% @ 25KHz
RATED CURRENT (AVG.)	 0.50 (MAX. 0.80) A SAFETY CURRENT ON LABEL: 0.80A
RATED POWER (AVG.)	 6.00 (MAX. 9.60) W
RATED SPEED	4300 ± 10% R.P.M.
MAX. AIR FLOW (AT ZERO STATIC PRESSURE)	 0.534 (MIN. 0.465) M ³ /MIN. 18.84 (MIN. 16.39) CFM
MAX. AIR PRESSURE (AT ZERO AIR FLOW)	 34.30 (MIN. 24.94) mmH ₂ O 1.350 (MIN. 0.981) inchH ₂ O
ACOUSTICAL NOISE (AVG.)	44.5 (MAX. 48.5) dB-A
INSULATION TYPE	UL: CLASS A

(continued)

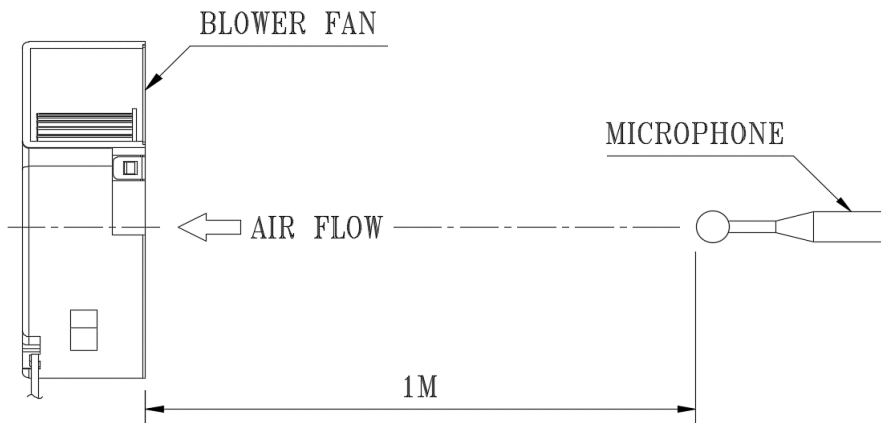
PART NO:

DELTA MODEL: BUB0812HN-00

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 (L10) (AT RATED VOLTAGE)	50,000 HOURS CONTINUOUS OPERATION AT 40°C WITH 15 ~ 65 %RH. \triangle_1
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:

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3. MECHANICAL:

- 3-1. DIMENSIONS----- SEE DIMENSIONS DRAWING
- 3-2. PILLOW-----PLASTIC UL: 94V-0
- 3-3. IMPELLER----- PLASTIC UL: 94V-0
- 3-4. COVER----- SECC
- 3-5. BEARING SYSTEM----- SLEEVE BEARING
- 3-6. WEIGHT----- 76.0 (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.

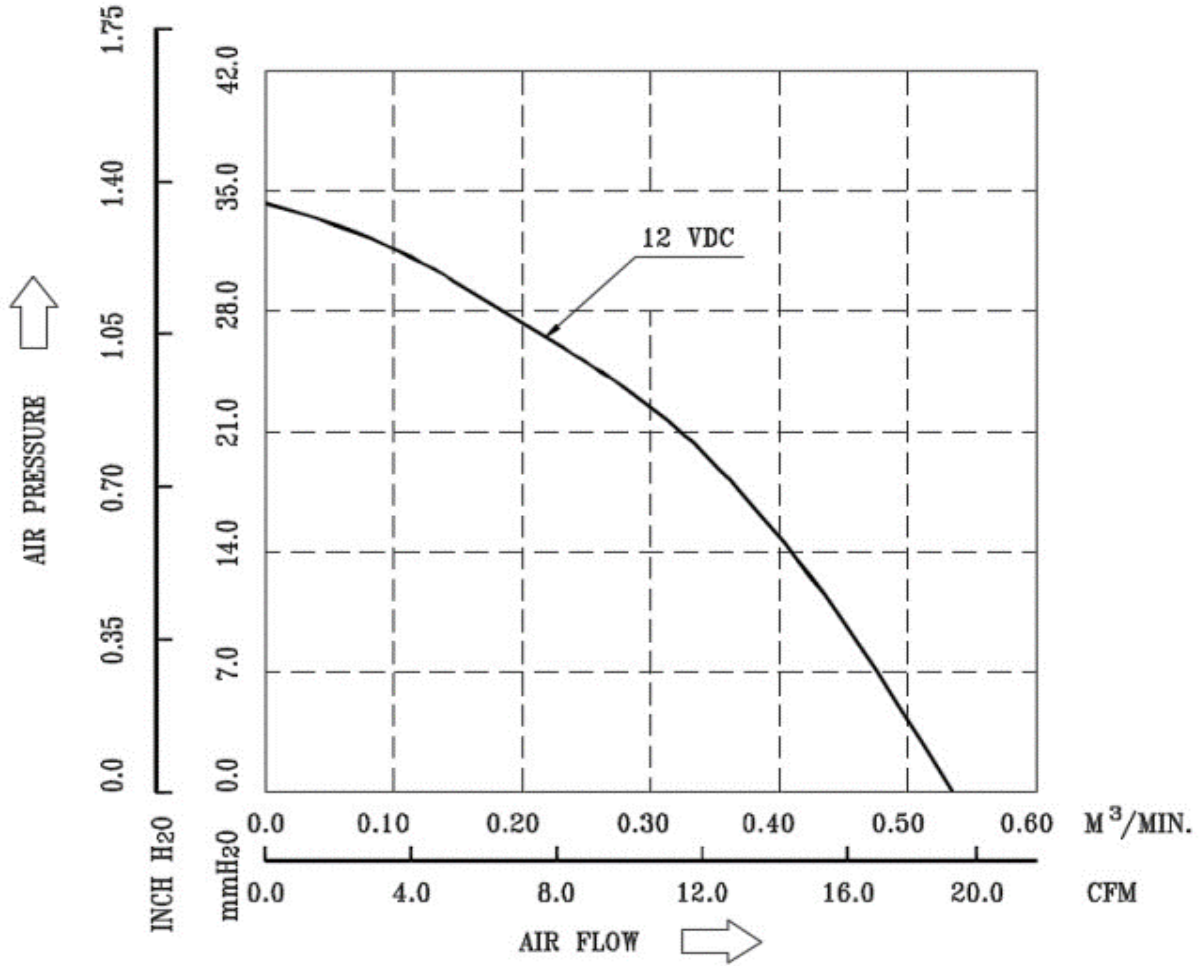
7. PRODUCTION LOCATION

- 7-1. PRODUCTS WILL BE PRODUCED IN CHINA

PART NO:

DELTA MODEL: BUB0812HN-00

8. P & Q CURVE:

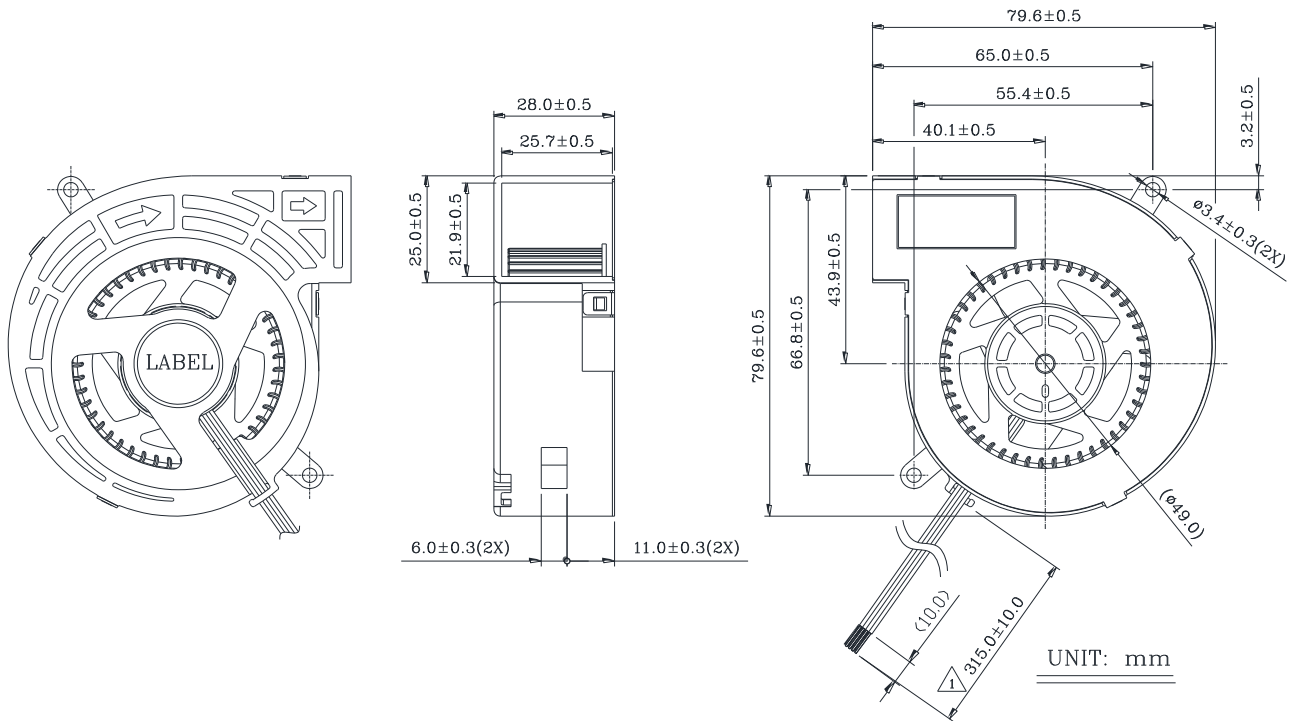


*TEST CONDITION: INPUT VOLTAGE-----OPERATION VOLTAGE
TEMPERATURE-----ROOM TEMPERATURE
HUMIDITY-----65%RH

PART NO:

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9. DIMENSION DRAWING:



NOTES:

1. LEAD WIRE: UL1061 AWG #28
RED WIRE-----(+)
BLACK WIRE-----(-)
BLUE WIRE----- (F00)
YELLOW WIRE----- (PWM)
2. THIS PRODUCT IS ROHS COMPLIANT.

PART NO:

DELTA MODEL: BUB0812HN-00

10. LABEL: 



THE CONTENT OF 2D BARCODE IS SHOWN AS BELOW:

2D BARCODE

BARCODE



SCAN →

BUB0812HN-00A0YYMSSSSS

① ② ③ ④

(DATA MATRIX)

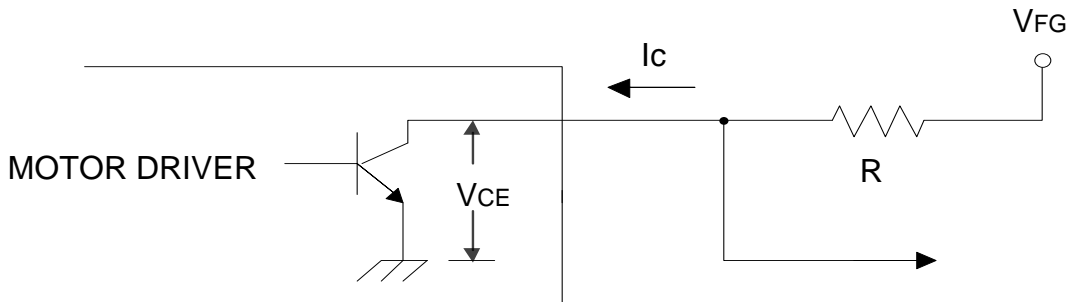
①	BUB0812HN-00	P/N	DELTA MODEL NAME.
②	A0	VENDOR	"A0" MEANS DELTA.
③	YY	YEAR	"10" FOR 2010, "11" FOR 2011, ET AL.
	M	MONTH	1-9 IS JAN-SEP, A IS OCT, B IS NOV, C IS DEC.
	D	DATE	1-9 IS 1st-9th, A IS 10th, B IS 11th, ET AL. (NOT INCLUDED I, J, O and Q.)
④	SSSSS	SERIAL NUMBER	FROM 00001 TO 99999.

PART NO:

DELTA MODEL: BUB0812HN-00

11. FREQUENCY GENERATOR (FG) SIGNAL:

11-1. OUTPUT CIRCUIT - OPEN COLLECTOR MODE:



CAUTION:

THE LEAD WIRE OF FG SIGNAL CAN NOT TOUCH THE LEAD WIRE OF POSITIVE OR NEGATIVE.

11-2. SPECIFICATION:

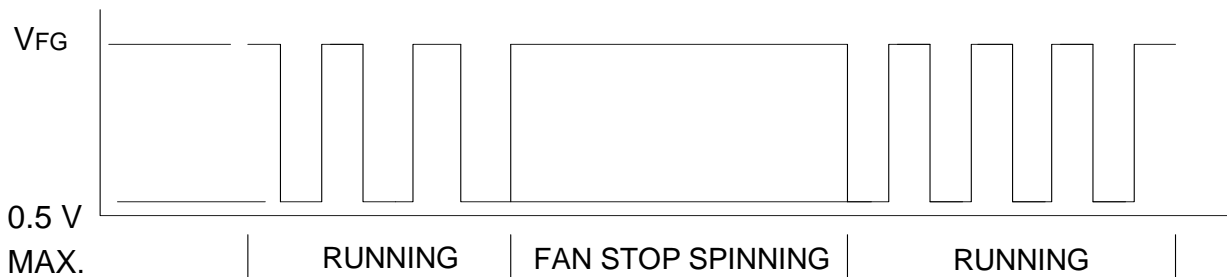
$$V_{CE}(\text{sat})=0.5\text{V MAX.}$$

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

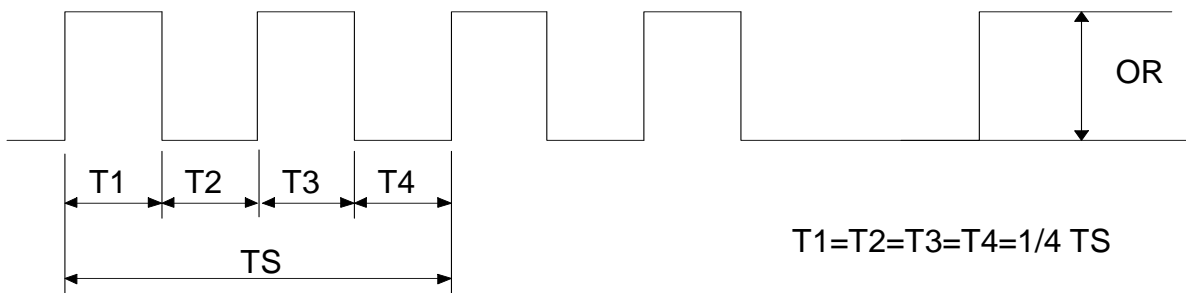
$$I_C=5\text{mA MAX.}$$

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

11-3. FREQUENCY GENERATOR WAVEFORM:



FAN RUNNING FOR 4 POLES



N=R.P.M.

TS=60/N(SEC)

*VOLTAGE LEVEL AFTER BLADE LOCKED

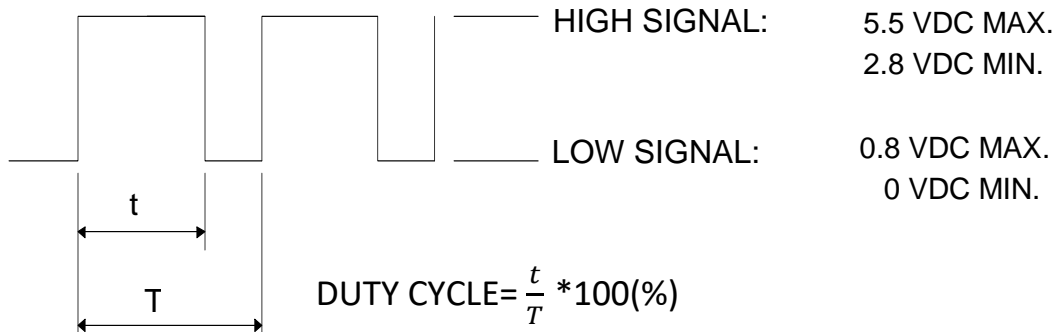
*4 POLES

PART NO:

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12. PWM CONTROL SIGNAL:

SIGNAL VOLTAGE RANGE: 0~5.5 VDC



*THE PREFERRED OPERATING POINT FOR THE FAN IS 25KHz.

*AT 100% DUTY CYCLE, THE ROTOR WILL SPIN AT MAXIMUM SPEED.

*AT 0% DUTY CYCLE, THE ROTOR WILL STOP.

*WITH CONTROL SIGNAL LEAD WIRE DISCONNECTED, THE FAN WILL SPIN AT MAXIMUM SPEED.

*AT RATED VOLTAGE, 25KHz, 30% DUTY CYCLE, THE FAN WILL BE ABLE TO START FROM A DEAD STOP.

12-1. SPEED VS PWM CONTROL SIGNAL:

(AT 25°C, RATED VOLTAGE & PWM FREQUENCY=25KHz)

DUTY CYCLE (%)	SPEED (R.P.M.)	CURRENT (A)
100	4300±10%	0.50 (Max. 0.80)
0	0	0.01 (Max. 0.03)

