

# SPECIFICATION FOR APPROVAL

## 1. SCOPE

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

## 2. CHARACTERS

| No.    | ITEM                                  | SPECIFICATION                                                                                                                                                  |
|--------|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 - 1  | Rated Voltage                         | 12.0 V DC                                                                                                                                                      |
| 2 - 2  | Starting Voltage                      | N/A                                                                                                                                                            |
| 2 - 3  | Operating Voltage Range               | 10.8 ~ 13.2 V DC                                                                                                                                               |
| 2 - 4  | Rated Current                         | Max. 2.40 A                      Duty cycle =100%                                                                                                              |
| 2 - 5  | Rated Power                           | Max. 28.80 W                      Duty cycle =100%                                                                                                             |
| 2 - 6  | Start Peak Current                    | N/A                      In Free Air & At 12 V DC                                                                                                              |
| 2 - 7  | UL Current On Label                   | 3.50 A                                                                                                                                                         |
| 2 - 8  | Rated Speed                           | 30000±10% RPM                      Duty cycle =100%                                                                                                            |
|        |                                       | (Testing Speed after Continuous 3 Minutes Operation at Ambient Temperature of 25°C)                                                                            |
| 2 - 9  | Air Flow<br>(At Zero Static Pressure) | 35.66CFM                      (Min. 32.09 CFM)                                                                                                                 |
|        |                                       | 1.01 m <sup>3</sup> /min                      (Min. 0.91 m <sup>3</sup> /min)                      Duty cycle =100%                                            |
| 2 - 10 | Static Pressure<br>(At Zero Air Flow) | 160.65 mm-H <sub>2</sub> O                      (Min.130.13 mm-H <sub>2</sub> O)                                                                               |
|        |                                       | 6.32 inch-H <sub>2</sub> O                      (Min. 5.12 inch-H <sub>2</sub> O)                      Duty cycle =100%                                        |
| 2 - 11 | Sound Pressure Level                  | 67.5 dB(A)                      [Max. 70.5 dB(A)]                                                                                                              |
| 2 - 12 | Product Type                          | <input checked="" type="checkbox"/> RoHS <input type="checkbox"/> HF                                                                                           |
| 2 - 13 | Life Expectancy                       | 70000 HRS at 40°C, 65% humidity and 90% CL.                                                                                                                    |
| 2 - 14 | Bearing Type                          | <input checked="" type="checkbox"/> Two Ball <input type="checkbox"/> EBR <input type="checkbox"/> Ball And Sleeve                                             |
| 2 - 15 | Protection & Function                 | <input checked="" type="checkbox"/> Locked Protection <input type="checkbox"/> Impedance Protection                                                            |
|        |                                       | <input type="checkbox"/> Hot Swap Protection <input type="checkbox"/> Current-Limit                                                                            |
|        |                                       | <input checked="" type="checkbox"/> Polarity Protection <input type="checkbox"/> E-Brake                                                                       |
|        |                                       | <input checked="" type="checkbox"/> Auto-Restart                                                                                                               |
| 2 - 16 | Pole                                  | <input type="checkbox"/> 4 Pole <input type="checkbox"/> 8 Pole <input checked="" type="checkbox"/> Three Phase                                                |
| 2 - 17 | Signal Output                         | Frequency Generator (FG)                                                                                                                                       |
| 2 - 18 | Safety Approval                       | <input checked="" type="checkbox"/> CE <input checked="" type="checkbox"/> TUV <input checked="" type="checkbox"/> UL <input checked="" type="checkbox"/> UKCA |

# SPECIFICATION FOR APPROVAL

## 3. MECHANICAL

| No.   | ITEM       | SPECIFICATION                                                                                                        |
|-------|------------|----------------------------------------------------------------------------------------------------------------------|
| 3 - 1 | DIMENSIONS | SEE DIMENSIONS DRAWING                                                                                               |
| 3 - 2 | FRAME      | <input checked="" type="checkbox"/> PBT (BLACK) PLASTIC (UL 94V-0)<br><input type="checkbox"/> PC PLASTIC (UL 94V-2) |
| 3 - 3 | IMPELLER   | <input checked="" type="checkbox"/> PBT (BLACK) PLASTIC (UL 94V-0)<br><input type="checkbox"/> PC PLASTIC (UL 94V-2) |
| 3 - 4 | WEIGHT     | 65 GRAMS (REF)                                                                                                       |

## 4. ENVIRONMENTAL

4 - 1 OPERATING TEMPERATURE \_\_\_\_\_ - 10°C ~ 70°C

4 - 2 STORAGE TEMPERATURE \_\_\_\_\_ - 40°C ~ 75°C

4 - 3 OPERATING HUMIDITY \_\_\_\_\_ 5 TO 90% RH

4 - 4 STORAGE HUMIDITY \_\_\_\_\_ 5 TO 95% RH

4 - 5 DIRECTION OF ROTATION \_\_\_\_\_ ☐ CLOCKWISE

☒ COUNTER-CLOCKWISE

VIEWED FROM FRONT OF FAN  
BLADE.

# SPECIFICATION FOR APPROVAL

4 - 6 DIELECTRIC STRENGTH ————— 5 mA MAX. AT 500 V AC 60Hz  
ONE MINUTE [BETWEEN FRAME  
AND (+)TERMINAL]

4 - 7 INSULATION STRENGTH ————— 10MEG OHM MIN.AT 500 VDC  
[BETWEEN FRAME AND  
(+)TERMINAL]

4 - 8 DROP TEST ————— IN MINIMUM PACKAGING  
CONDITION, FAN WITHSTAND  
EACH ONEDROP OF THREE  
FACES FROM 30cm DISTANCE  
HEIGHT ONTO 10mm THICKNESS  
OF WOODEN BOARD.

4 - 9 VIBRATION TEST ————— TEMPERATURE: 25°C  
ORIENTATION: X, Y, Z  
POWER: NON-OPERATING  
VIBRATION LEVEL: OVERALL  
gRMS = 3.2

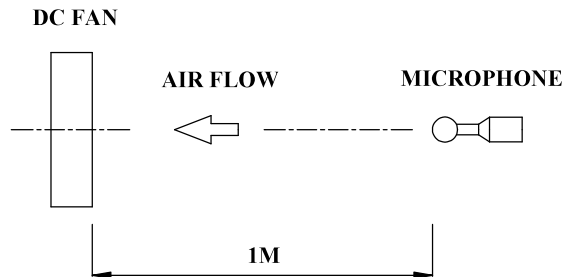
| FREQUENCY(Hz) | PSD (G <sup>2</sup> /Hz) |
|---------------|--------------------------|
| 10            | 0.040                    |
| 20            | 0.100                    |
| 40            | 0.100                    |
| 800           | 0.002                    |
| 1000          | 0.002                    |

TEST TIME: 2 HRS FOR EACH  
DIRECTION

# SPECIFICATION FOR APPROVAL

4 - 10 SHOCK TEST ————— TEMPERATURE: 25 °C  
ORIENTATION: X, Y, Z  
POWER: NON-OPERATING  
ACCELERATION: 50G MAX.  
PULSE: 11 ms HALF-SINE WAVE  
NUMBER OF SHOCKS: 5 SHOCKS  
FOR EACH DIRECTION

4 - 11 NOISE TEST ————— MEASURED IN A  
SEMI-ANECHOIC CHAMBER  
WITH BACKGROUND NOISE  
LEVEL BELOW 15 dB(A). THE  
FAN IS RUNNING IN FREE AIR  
WITH THE MICROPHONE AT A  
DISTANCE OF ONE METER FROM  
THE FAN INTAKE.  
NOISE TESTER MODEL:  
AWA14411





# SPECIFICATION FOR APPROVAL

## 5. NOTES

- 5 - 1 EVERFLOW SHALL NOT GUARANTEE THE PERFORMANCE OF THE PRODUCTS IF THE APPLICATION CONDITION FALLS OUTSIDE THE PARAMETERS SET FOR THE SPECIFICATION . A WRITTEN REQUEST SHOULD BE SUBMITTED TO EVERFLOW PRIOR TO APPROVAL IF DEVIATION FROM THIS SPECIFICATION IS REQUIRED.
- 5 - 2 THE ABOVE STANDARD SHALL BE THE SPECIFIED VALUE AT NORMAL TEMPERATURE(25 °C) AND NORMAL HUMIDITY(60~65%) UNLESS OTHERWISE NOTED.
- 5 - 3 IT IS VERY IMPORTANT TO ESTABLISH THE CORRECT POLARITY, POSTIVE(+) AND NEGATIVE(-), BEFORE CONNECTING THE FAN TO THE POWER SOURCE. DAMAGE MAY BE CAUSED TO THE FANS IF CONNECTION IS WITH REVERSE POLARITY. THERE IS NO FOOLPROOF METHOD TO PROTECT AGAINST SUCH ERROR SPECIFICALLY MENTIONED IN THIS SPEC.
- 5 - 4 PLEASE EXERCISE CAUTION WHEN MOUNTING THE FAN, AS INCORRECT INSTALLATION MAY RESULT IN EXCESSIVE RESONANCE, VIBRATION, SUBSEQUENT NOISE, AND EVEN DAMAGED SCREW HOLES.
- 5 - 5 PLEASE EXERCISE CAUTION WHEN HANDLING FANS. DAMAGE MAY BE CAUSED IF PRESSURE IS APPLIED TO THE IMPELLER, OR THE FANS ARE HANDLED BY THE LEAD WIRES OR THE FAN WAS HARD-DROPPED TO THE PRODUCTION FLOOR.
- 5 - 6 ANY REVISIONS ON THE SPECIFICATION SHALL BE DONE BASED ON MUTUAL DISCUSSION AND AGREEMENT.

# SPECIFICATION FOR APPROVAL

- 5 - 7 PLEASE ENSURE THAT ALL THE FANS ARE STORED ACCORDING TO THE SPECIFIED STORAGE TEMPERATURE LIMITS. DO NOT STORE FANS IN A HIGH HUMIDITY ENVIRONMENT. WE HIGHLY RECOMMEND CONDUCTING PERFORMANCE TESTING BEFORE SHIPPING IF THE FANS HAVE BEEN STORED OVER SIX MONTHS.
- 5 - 8 NOT ALL FANS ARE PROVIDED WITH THE LOCK ROTOR PROTECTION FEATURE. IF YOU IMPAIR THE ROTATION OF THE FANS THAT DO NOT HAVE THIS FUNCTION, THE PERFORMANCE OF THOSE FANS SHALL LEAD TO FAILURE.
- 5 - 9 EVERFLOW FANS WITHOUT SPECIAL PROTECTION ARE NOT SUITABLE WHERE ANY CORROSIVE FLUIDS ARE INTRODUCED TO THEIR ENVIRONMENT.
- 5 - 10 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 PERSONAL INJURY.
- 5 - 11 ALL THE FANS SHALL MEET THE QUALITY INSPECTION UNDER SAMPLING PLAN MIL-STD-105E AS FOLLOWS WITH EXCEPTIONS PERTAINING TO CERTAIN SPECIAL DESIGNS. THERE IS NO GUARANTEE THAT THE PRODUCTS SHALL BE FREE FROM SAFETY PROBLEMS OR FAILURES CAUSED BY DISRUPTION DUE TO DUST, SUBMERSION INTO WATER OR ENCROACHMENT BY INSECTS INTO THE HUB.
- 5 - 12 ANY ITEM WHICH MAYBE NEEDED TO ADD INTO SPECIFICATION SHALL BE DETERMIND BY CUSTOMER'S PRIOR WRITTEN REQUEST. IF NO SUCH REQUEST IS MADE, FAN SHALL BE BASED ON OUR STANDARD SPECIFICATION.

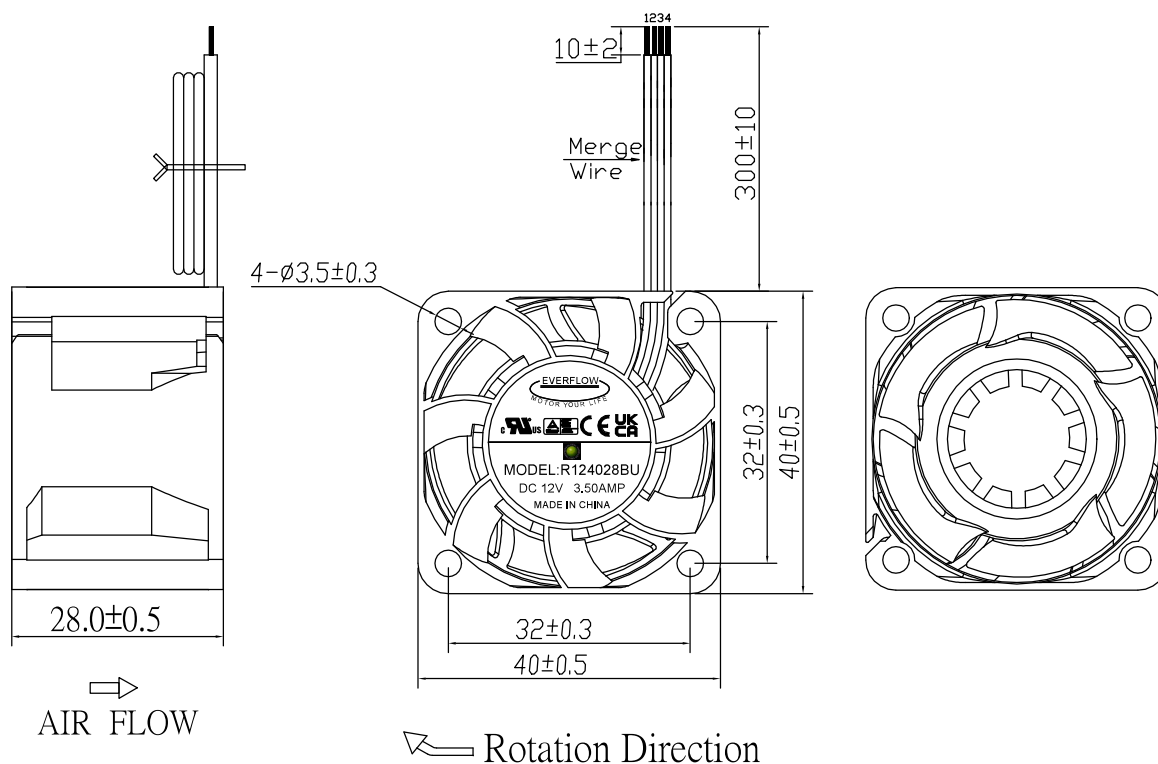
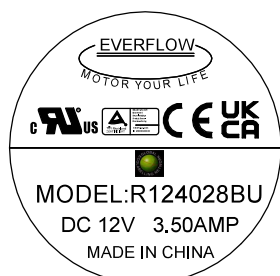
# SPECIFICATION FOR APPROVAL

- 5 - 13 CUSTOMER SHALL CONFIRM THE COMPATIBILITY AND RELIABILITY OF THE FAN IN THE ACTUAL SETUP OR UNIT APPLICATION. THIS INCLUDES CONFIRMATION ON SET OR UNIT LIFE, ELECTRICAL NOISE, MECHANICAL NOISE, VIBRATION, STATIC ELECTRICITY, ELECTRIC POWER NOISE, DRIFT, ELECTRIC RESONANCE BETWEEN MOTOR AND CONTROL CIRCUIT, MECHANICAL RESONANCE BETWEEN MOTOR AND CHASSIS, IRREGULAR MOVEMENT OF SET DUE TO MOTOR NOISE, IRREGULAR MOVEMENT OF SET IN STRONG ELECTROMAGNETIC FIELD, POTENTIAL DAMAGE CAUSED BY LIGHTNING SURGE AND EARTHING METHOD ETC.
- 5 - 14 IF ANY ISSUE RELATING TO FAN OCCURS, BOTH PARTIES SHALL DISCUSS ON THIS SPECIFICATION, PROVIDED HOWEVER, THAT OUR GUARANTEE IS ONLY LIMITED TO FANS.
- 5 - 15 PLEASE 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.

# SPECIFICATION FOR APPROVAL

## 6. DIMENSIONS DRAWING (Unit: mm)

EF Part No. : R124028BU



### NOTES:

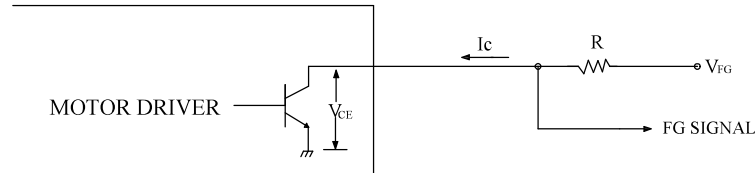
1. LEAD WIRE UL 1061 AWG#28  
PIN 1: BLACK WIRE--- (-)  
PIN 2: YELLOW WIRE---(+)  
PIN 3: GREEN WIRE---(SIGNAL)  
PIN 4: BLUE WIRE---(PWM INPUT)

# SPECIFICATION FOR APPROVAL

## 7. FG CHARACTERISTICS & DEFINITION

### ● FREQUENCY GENERATOR(FG) SIGNAL

SCHEMATIC:



CAUTION:

PLEASE BE CAREFUL THAT REVOLUTION SIGNAL LEAD WIRE SHOULD NOT DIRECTLY HAVE ANY VOLTAGE APPLIED.(IT WOULD DAMAGE INNER CIRCUIT)

### ● SIGNAL SPECIFICATION

OUTPUT TYPE: OPEN COLLECTOR

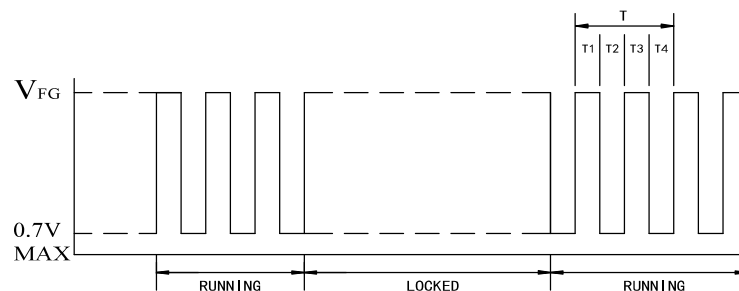
$V_{FG}$  MAXIMUM VOLTAGE = 5.5 V

$I_C$  MAXIMUM CURRENT = 5 mA

LOW LEVEL VOLTAGE = 0.7 V MAX

$R \geq V_{FG} / I_C$ , WHEN  $V_{FG} = 3.3$  V, WE RECOMMEND  $R = 10$  k $\Omega$

### ● FREQUENCY GENERATOR WAVEFORM

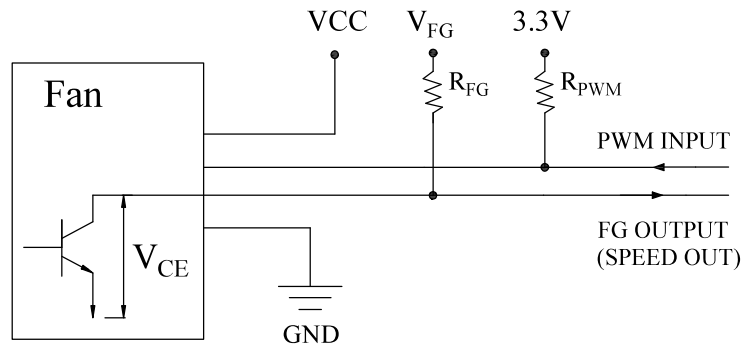


$$T = T1 + T2 + T3 + T4 = 60/N \text{ Sec, WHERE } N \text{ REPRESENTS RPM}$$

# SPECIFICATION FOR APPROVAL

## 8. PWM CHARACTERISTICS & DEFINITION

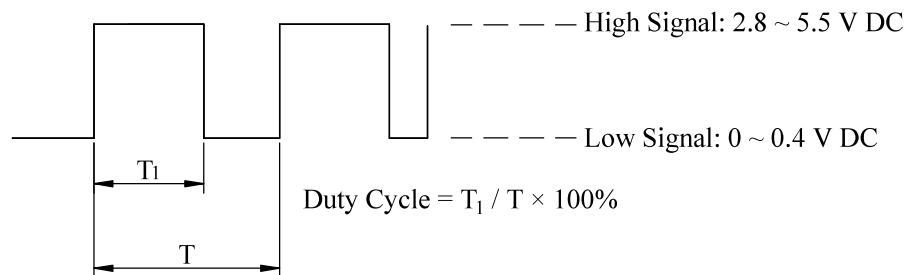
### ● PWM CIRUIT (FOR REFERENCE)



WHEN  $V_{PWM} = 3.3 \text{ V}$ , WE RECOMMEND  $R_{PWM} = 1 \sim 10 \text{ k}\Omega$

### ● PWM CONTROL SIGNAL INPUT

SIGNAL VOTAGE RANGE: DC 0V ~ 5.5V



1. THE FREQUENCY OF PWM SIGNAL SHALL BE ABLE TO ACCEPT 21KHZ-28KHZ.
2. AT 100% DUTY CYCLE, THE FAN WILL OPERATE AT MAXIMUM SPEED.
3. THE FAN WILL DEFAULT TO OPERATE AT MAXIMUM SPEED WHEN THE SPEED CONTROL INPUT (PWM) IS LEFT UNCONNECTED.

# SPECIFICATION FOR APPROVAL

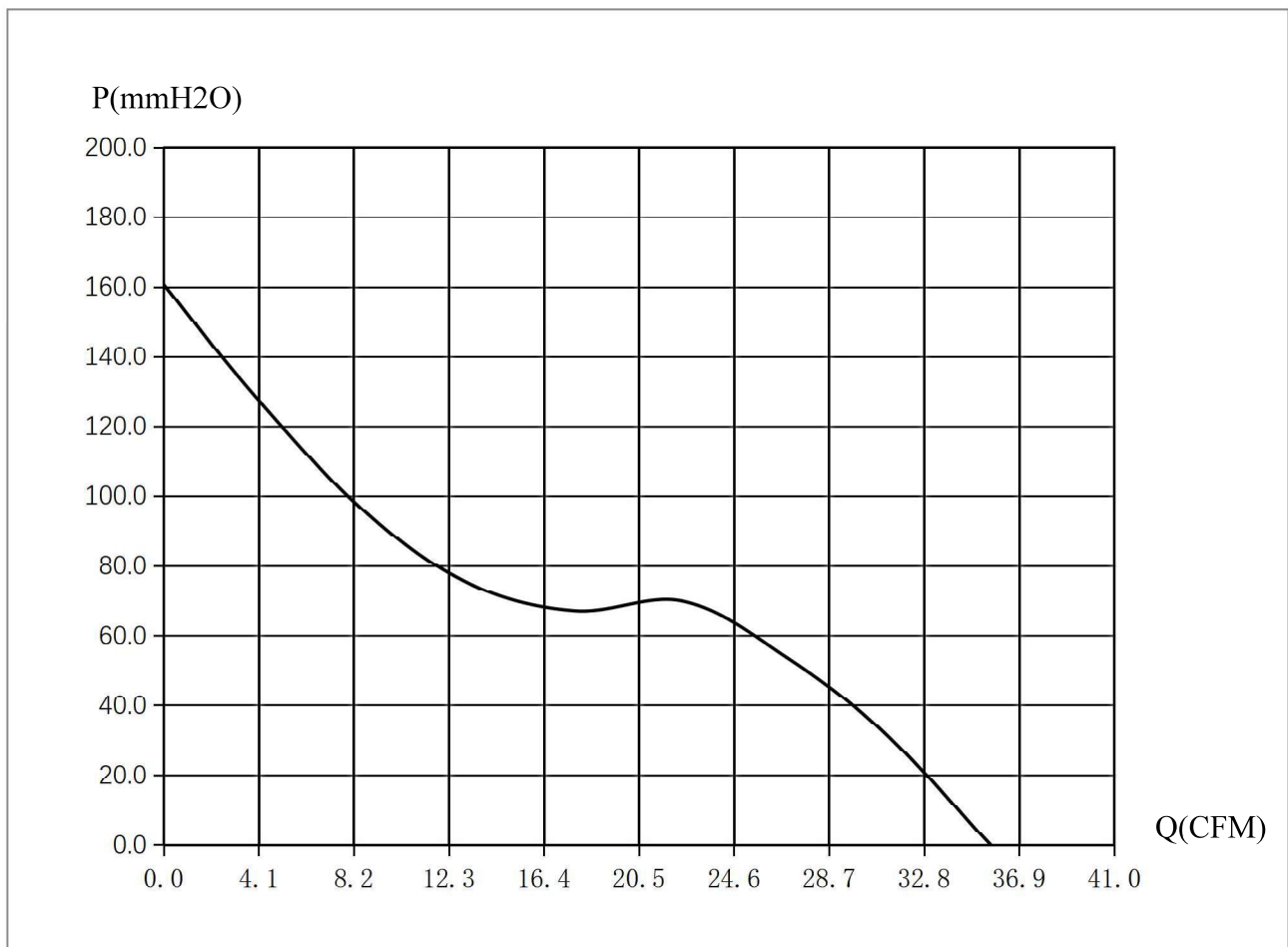
## 9. P - Q CURVE

### TEST CONDITION

INPUT VOLTAGE ————— OPERATION VOLTAGE (12 V DC)

TEMPERATURE ————— ROOM TEMPERATURE

HUMIDITY ————— 65% RH



# Zertifikat Certificate



Zertifikat Nr. Certificate No.  
R 50035343

Blatt Page  
0010

Ihr Zeichen Client Reference  
P00989074

Unser Zeichen Our Reference  
ZTW1-YML- 10008452 011

Ausstellungsdatum  
17.03.2023

Date of Issue  
(day/mo/yr)

## Genehmigungsinhaber License Holder

Everflow Precision Electronic  
(Dong Guan) Co., Ltd.  
GeKeng Industrial Zone  
Heng Li Town  
Dongguan City  
523460 Guangdong  
P.R. China

## Fertigungsstätte Manufacturing Plant

Everflow Precision Electronic  
(Dong Guan) Co., Ltd.  
GeKeng Industrial Zone  
Heng Li Town  
Dongguan City  
523460 Guangdong  
P.R. China

## Prüfzeichen Test Mark



## Geprüft nach Tested acc. to

EN IEC 62368-1:2020+A11

Zertifiziertes Produkt (Geräteidentifikation)  
Certified Product (Product Identification)

Lizenzentgelte - Einheit  
License Fee - Unit

Ventilator (DC Fan)

wie Blatt (as page) 01, Änderung (Change)

Bezeichnung (Type Designation):

RX1X2X3X4X5Z, FX1X2X3X4X5Z, TX1X2X3X4X5Z

SX1X2X3X4X5Z, BX1X2X3X4X5Z, KX1X2X3X4X5Z

XX1X2X3X4X5Z (EVERFLOW)

X1 steht für (stands for) : 05, 12, 24

X2 steht für (stands for) : 12, 35, 40, 50, 60, 70, 75, 80, 90

X3 steht für (stands for) : 10, 11, 15, 20, 25, 28, 30, 32

X4 steht für (stands for) : B, D, S

X5 steht für (stands for) : L, M, H, U

Z steht für : 20 Variablen, jede Variable kann A-Z, 0-9,  
(stands for) "(", ")", "-", oder freibleibend

(20 variables, each variable may be A-Z,  
0-9, "(", ")", "-", or blank)

Nennspannung (Rated Voltage): siehe Anlage (see appendix)

Nennstrom (Rated Current) : siehe Anlage (see appendix)

ANLAGE (Appendix): 1

Dem Zertifikat liegt unsere Prüf- und Zertifizierungsordnung zugrunde und es bestätigt die Konformität des Produktes mit den oben genannten Standards und Prüfgrundlagen. Zusätzliche Anforderungen in Ländern, in denen das Produkt in Verkehr gebracht werden soll, müssen zusätzlich betrachtet werden. Die Herstellung des zertifizierten Produktes wird überwacht.  
This certificate is based on our Testing and Certification Regulation and states the conformity of the product with the standards and testing requirements as indicated above. Any additional requirements in countries where the product is going to be marketed have to be considered additionally. The manufacturing of the certified product is subject to surveillance.



Zertifizierungsstelle

TÜV Rheinland LGA Products GmbH - Tillystraße 2 - 90431 Nürnberg

Tel.: (+49/221)8 06 - 13 71 e-mail: cert-validity@de.tuv.com  
Fax: (+49/221)8 06 - 39 35 http://www.tuv.com/safety

Jacky C. W. Chen



Everflow Precision Electronic (Dong  
Guan) Co., Ltd.  
Frau Li Juan Chen

Date : 17.03.2023  
Our ref. : YML ZTW1  
Your ref.: P00989074

GeKeng Industrial Zone  
Heng Li Town  
Dongguan City  
523460 Guangdong  
P.R. China

**Ref : R TÜV-Mark Approval**

Type of Equipment : DC Fan  
Model Designation : See Certificate  
Certificate No. : R 50035343 0010  
Report No. : 10008452 011

Dear Frau Li Juan Chen,

The above specified equipment has been tested and found to be in  
accordance with the relevant requirements.

Please find enclosed your certificate as specified above.

If cancellation of the certificate is submitted by 15 November in a  
given year, no fee will be charged for the following year.

The certificate is issued with the reservation that the license holder  
applies all information required in § 6 of the ProdSG related to name  
and address of the manufacturer or his authorized representative /  
importer, including their respective contact addresses on the product  
prior to marketing of the product in the European Economic Area.  
In case you have a change regarding your involved local representative  
for the certificate, please inform us in due time.

With kind regards,

Certification Body

  
Jacky C. W. Chen

Enclosure

**TÜV RHEINLAND TAIWAN LTD.**

11F., No. 758, Sec. 4, Bade Rd.,  
Songshan Dist., Taipei City 105,  
Taiwan, R. O. C.  
Tel. (02) 2172-7000  
Fax (02) 2172-1322  
<http://www.tuv.com>

NEW TAIPEI BRANCH:  
No. 458-18 & 458-19,  
Sec. 2, Fenliao Rd., Linkou Dist.,  
New Taipei City 244,  
Taiwan, R. O. C.  
Tel. (02) 2172-1000  
Fax (02) 2172-1322

TAICHUNG BRANCH:  
3F., No. 497, Zhongming South Rd.,  
West Dist., Taichung City 403,  
Taiwan, R. O. C.  
Tel. (02) 2172-7000  
Fax (02) 2172-1322

KAOHSIUNG BRANCH:  
27F.-3, No.80, Minzu 1st Rd.,  
Sanmin Dist., Kaohsiung City 807,  
Taiwan, R. O. C.  
Tel. (07) 262-6000  
Fax (07) 380-0577

**Appendix to TÜV approved Certificate No.: R 50091668****Certified Product : DC Fan****Report Number : 10009602 022**

**Type Designation : BX1X2X3X4X5Z, FX1X2X3XX54Z, KX1X2X3X4X5Z,  
DX1X2X3X4X5Z, XX1X2X3X4X5Z, RX1X2X3X4X5Z,  
SX1X2X3X4X5Z, TX1X2X3X4X5Z (EVERFLOW)  
(X1=A,B,C,D,05,12,24,48,54; X2=10,12,30,40,50,60,70,  
75,80,90,92,120,140; X3=10,15,18,20,25,28,32,38,40,56,80;  
X4=B,D,S;X5=L,M,H,U; Z=20 variables, each variable may be  
A-Z, 0-9, "(", ")", "-", " " or blank)**

|     |                  |    |      |
|-----|------------------|----|------|
| 183 | R124028BUZ       | 12 | 3.50 |
| 184 | R121225BLZ       | 12 | 0.20 |
| 185 | R121225BMZ       | 12 | 0.35 |
| 186 | R121225BHZ       | 12 | 0.50 |
| 187 | R121225BUZ       | 12 | 1.30 |
| 188 | F548080(B/D/S)LZ | 54 | 0.5  |
| 189 | F548080(B/D/S)MZ | 54 | 1.2  |
| 190 | F548080(B/D/S)HZ | 54 | 2.1  |
| 191 | F548080(B/D/S)UZ | 54 | 3.16 |
| 192 | F488080(B/D/S)LZ | 48 | 0.5  |
| 193 | F488080(B/D/S)MZ | 48 | 1.5  |
| 194 | F488080(B/D/S)HZ | 48 | 2.4  |
| 195 | F488080(B/D/S)UZ | 48 | 3.5  |
| 196 | F248080(B/D/S)LZ | 24 | 1    |
| 197 | F248080(B/D/S)MZ | 24 | 2.7  |
| 198 | F248080(B/D/S)HZ | 24 | 5.5  |
| 199 | F248080(B/D/S)UZ | 24 | 7.5  |
| 200 | F128080(B/D/S)LZ | 12 | 1.5  |
| 201 | F128080(B/D/S)MZ | 12 | 2.7  |
| 202 | F128080(B/D/S)HZ | 12 | 6.3  |
| 203 | F128080(B/D/S)UZ | 12 | 11   |
| 204 | R123010(B/D/S)LZ | 12 | 0.08 |
| 205 | R123010(B/D/S)MZ | 12 | 0.12 |

## Appendix to TÜV approved Certificate No.: R 50035343

Certified Product : DC Fan

Report Number : 10008452 011

Type Designation : RX1X2X3X4X5Z, F X1X2X3X4X5Z, TX1X2X3X4X5Z,  
 SX1X2X3X4X5Z, BX1X2X3X4X5Z, KX1X2X3X4X5Z,  
 XX1X2X3X4X5Z (EVERFLOW) (X1=05,12,24; X2=12,  
 35,40,50,60,70,75,80,90; X3=10,11,15,20,25,28,30,32,  
 X4=B,D,S; X5=L,M,H,U; Z=20 variables, each variable  
 may be A-Z, 0-9, "(", ")", "-", " " or blank)

|    |                              |    |      |
|----|------------------------------|----|------|
| 24 | (R/F/S/X/T/K)127025(B/D/S)UZ | 12 | 0.40 |
| 25 | (R/F/S/X/T/K)128025(B/D/S)UZ | 12 | 0.40 |
| 26 | (R/F/S/X/T/K)128032(B/D/S)LZ | 12 | 0.22 |
| 27 | (R/F/S/X/T/K)128032(B/D/S)MZ | 12 | 0.30 |
| 28 | (R/F/S/X/T/K)128032(B/D/S)HZ | 12 | 0.38 |
| 29 | (R/F/S/X/T/K)128032(B/D/S)UZ | 12 | 0.45 |
| 30 | (R/F/S/X/T/K)129025(B/D/S)UZ | 12 | 0.38 |
| 31 | (R/F/S/X/T/K)129032(B/D/S)UZ | 12 | 1    |
| 32 | (R/F/S/X/T/K)121225(B/D/S)LZ | 12 | 0.20 |
| 33 | (R/F/S/X/T/K)121225(B/D/S)MZ | 12 | 0.25 |
| 34 | (R/F/S/X/T/K)121225(B/D/S)HZ | 12 | 0.32 |
| 35 | (R/F/S/X/T/K)121225(B/D/S)UZ | 12 | 0.40 |
| 36 | (R/F/S/X/T/K)246015(B/D/S)LZ | 24 | 0.14 |
| 37 | (R/F/S/X/T/K)246015(B/D/S)MZ | 24 | 0.18 |
| 38 | (R/F/S/X/T/K)246015(B/D/S)HZ | 24 | 0.20 |
| 39 | (R/F/S/X/T/K)246015(B/D/S)UZ | 24 | 0.27 |
| 40 | (R/F/S/X/T/K)248025(B/D/S)UZ | 24 | 0.21 |

Date: March 17, 2023



Certification

  
 Jacky Chen

# GPWV2.E236658 - Fans, Electric - Component

*Note: We are enhancing our systems and you may notice duplicate entries/missing/outdated data. During this interim period, please contact our Customer Service at <https://www.ul.com/about/locations>.*

## Fans, Electric - Component

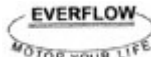
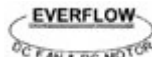
### EVERFLOW PRECISION ELECTRONIC (DONG GUAN) CO LTD

E236658

GE KENG INDUSTRIAL ZONE

HENG LI TOWN

DONGGUAN, GUANGDONG 523460 China

Marking: Company name or tradename "E236658", or trademark  ,  , and model designation.

Note: For additional marking information, refer to the [Guide Information Page](#).

Model(s): 103142H, 103142L, 103142M, B126013BH, B126013BM, B126013BU, B127015BH, B127015BM, B127015BU

Model(s): (A)121225(C)((x)(Z) Above (A) may be R or F, (C) may be S, D or B, (x) may be U, H, M or L, (Z) stands for 20 variables, each variable maybe A-Z, 0-9, "(", ")", "-", or blank.

Model(s): (A)121238(C)((x)(Z) Above (A) may be R or F, (C) may be S, D or B, (x) may be U, H, M or L, (Z) stands for 20 variables, each variable maybe A-Z, 0-9, "(", ")", "-", or blank.

Model(s): (A)124028(C)(D)(Z) Above (A) may be R, F, T represents screw hold on Frame, (C) may be S, D or B, B represents Bearing Type, (D) may be L, M, H or U represents Fan Speed, (Z) stands for 20 variables, each variable maybe A-Z, 0-9, "(", ")", "-", or blank.

Model(s): (A)124028(C)((x)(Z) Above (A) may be R or F, (C) may be S, D or B, (x) may be U, H, M or L, (Z) stands for 20 variables, each variable maybe A-Z, 0-9, "(", ")", "-", or blank.

Model(s): (A)126038(C)((x)(Z) Above (A) may be R or F, (C) may be S, D or B, (x) may be U, H, M or L, (Z) stands for 20 variables, each variable maybe A-Z, 0-9, "(", ")", "-", or blank.

Model(s): (A)128038(C)((x)(Z) Above (A) may be R or F, (C) may be S, D or B, (x) may be U, H, M or L, (Z) stands for 20 variables, each variable maybe A-Z, 0-9, "(", ")", "-", or blank.

Model(s): (A)128056(C)((x)(Z) Above (A) may be R or F, (C) may be S, D or B, (x) may be U, H, M or L, (Z) stands for 20 variables, each variable maybe A-Z, 0-9, "(", ")", "-", or blank.

Model(s): (A)128080(C)((x)(Z) Above (A) may be R or F, (C) may be S, D or B, (x) may be U, H, M or L, (Z) stands for 20 variables, each variable maybe A-Z, 0-9, "(", ")", "-", or blank.

Model(s): F128080CDZ C may be B, D or S, D may be L, M, H or U. Z may be A through Z, 0 through 9, "(", ")", "-", or blank

Model(s): F248080CDZ C may be B, D or S, D may be L, M, H or U. Z may be A through Z, 0 through 9, "(", ")", "-", or blank

Model(s): F488080CDZ A may be R, F or T, C may be B, D or S, D may be L, M, H or U. Z may be A through Z, 0 through 9, "(", ")", "-", or blank

Model(s): F548080CDZ C may be B, D or S, D may be L, M, H or U. Z may be A through Z, 0 through 9, "(", ")", "-", or blank

Model(s): R053010CDZ C may be B, D or S, D may be L, M, H or U. Z may be A through Z, 0 through 9, "(", ")", "-", or blank

Model(s): R123010CDZ C may be B, D or S, D may be L, M, H or U. Z may be A through Z, 0 through 9, "(", ")", "-", or blank





Shenzhen Tian Hai Test Technology Co.,Ltd.

# CE Certificate of Conformity

Certification number: TH2302237-C01-C01

Report number: TH2302237-C01-R01

**Shenzhen Tian Hai Test Technology Co., Ltd. hereby declares that testing has been completed and reports have been generated for:**

Applicant: EVERFLOW PRECISION ELECTRONIC (DONG GUAN) CO LTD  
Address: GE KENG INDUSTRIAL ZONE HENG LI TOWN DONGGUAN, GUANGDONG, 523460, CN  
Manufacturer: EVERFLOW PRECISION ELECTRONIC (DONG GUAN) CO LTD  
Address: GE KENG INDUSTRIAL ZONE HENG LI TOWN DONGGUAN, GUANGDONG, 523460, CN  
Product: DC FAN  
Model: See the model lists below

And, in accordance with the following applicable directives:

**2014/30/EU Electromagnetic Compatibility (EMC)**

This product has been assessed against the following applicable standards:

**Standard(s): EN 55032:2015+A1:2020  
EN 55035:2017+A11:2020**

Therefore, Shenzhen Tian Hai Test Technology Co., Ltd. hereby acknowledges that the applicant may issue a DECLARATION of CONFORMITY and apply the CE marking in accordance with European Union Rules.

Attestation by:



Thomas Wong



Date of Issued: 2023-03-02





# Shenzhen Tian Hai Test Technology Co.,Ltd.

|     |             |                  |    |       |             |
|-----|-------------|------------------|----|-------|-------------|
|     |             | F121238BUZ       | 12 | 5.80  | 7800        |
| 110 | 8080 Series | F128080BLZ       | 12 | 1.25  | 8000+8000   |
|     |             | F128080BMZ       | 12 | 4.00  | 12000+12000 |
|     |             | F128080BHZ       | 12 | 6.80  | 15000+15000 |
|     |             | F128080BUZ       | 12 | 10.00 | 18000+15000 |
| 111 | 8056 Series | F128056BLZ       | 12 | 0.30  | 5000        |
|     |             | F128056BMZ       | 12 | 0.70  | 7000        |
|     |             | F128056BHZ       | 12 | 2.00  | 10000       |
|     |             | F128056BUZ       | 12 | 3.90  | 12500       |
| 112 | 8038 Series | F128038BLZ       | 12 | 0.62  | 8000        |
|     |             | F128038BMZ       | 12 | 2.00  | 12000       |
|     |             | F128038BHZ       | 12 | 3.40  | 15000       |
|     |             | F128038BUZ       | 12 | 5.60  | 18000       |
| 113 | 6038 Series | F126038BLZ       | 12 | 0.18  | 5000        |
|     |             | F126038BMZ       | 12 | 0.65  | 10000       |
|     |             | F126038BHZ       | 12 | 2.00  | 15000       |
|     |             | F126038BUZ       | 12 | 4.30  | 20000       |
| 114 | 4028 Series | R124028BLZ       | 12 | 0.18  | 8000        |
|     |             | R124028BMZ       | 12 | 0.50  | 15000       |
|     |             | R124028BHZ       | 12 | 1.50  | 25000       |
|     |             | R124028BUZ       | 12 | 3.50  | 34000       |
| 115 | 1225 Series | R121225BLZ       | 12 | 0.20  | 1500        |
|     |             | R121225BMZ       | 12 | 0.35  | 2200        |
|     |             | R121225BHZ       | 12 | 0.50  | 3000        |
|     |             | R121225BUZ       | 12 | 1.30  | 3800        |
| 116 | 8080 Series | F548080(B/D/S)LZ | 54 | 0.5   | 8000+6000   |
|     |             | F548080(B/D/S)MZ | 54 | 1.2   | 12000+10000 |
|     |             | F548080(B/D/S)HZ | 54 | 2.1   | 15000+13000 |
|     |             | F548080(B/D/S)UZ | 54 | 3.16  | 17000+15000 |
| 117 | 8080 Series | F488080(B/D/S)LZ | 48 | 0.5   | 8000+6000   |
|     |             | F488080(B/D/S)MZ | 48 | 1.5   | 12000+10000 |
|     |             | F488080(B/D/S)HZ | 48 | 2.4   | 15000+13000 |
|     |             | F488080(B/D/S)UZ | 48 | 3.5   | 17000+15000 |
| 118 | 8080 Series | F248080(B/D/S)LZ | 24 | 1     | 8000+6000   |
|     |             | F248080(B/D/S)MZ | 24 | 2.7   | 12000+10000 |
|     |             | F248080(B/D/S)HZ | 24 | 5.5   | 15000+13000 |
|     |             | F248080(B/D/S)UZ | 24 | 7.5   | 17000+15000 |



# Shenzhen Tian Hai Test Technology Co.,Ltd.

|    |             |                              |    |      |       |
|----|-------------|------------------------------|----|------|-------|
|    |             | (R/F/S/X/T/K)124020(B/D/S)MZ | 12 | 0.16 | 8000  |
|    |             | (R/F/S/X/T/K)124020(B/D/S)HZ | 12 | 0.23 | 11000 |
|    |             | (R/F/S/X/T/K)124020(B/D/S)UZ | 12 | 0.45 | 14000 |
| 27 | 4028 Series | (R/F/S/X/T/K)124028(B/D/S)LZ | 12 | 0.15 | 6000  |
|    |             | (R/F/S/X/T/K)124028(B/D/S)MZ | 12 | 0.18 | 8000  |
|    |             | (R/F/S/X/T/K)124028(B/D/S)HZ | 12 | 0.28 | 10000 |
|    |             | (R/F/S/X/T/K)124028(B/D/S)UZ | 12 | 0.40 | 12000 |
| 28 | 5010 Series | (T/F/R/S/K/X)125010(B/D/S)LZ | 12 | 0.13 | 3500  |
|    |             | (T/F/R/S/K/X)125010(B/D/S)MZ | 12 | 0.15 | 4500  |
|    |             | (T/F/R/S/K/X)125010(B/D/S)HZ | 12 | 0.25 | 5500  |
|    |             | (T/F/R/S/K/X)125010(B/D/S)UZ | 12 | 0.32 | 6500  |
| 29 | 7015 Series | (R/F/S/X/T/K)127015(B/D/S)UZ | 12 | 0.40 | 5500  |
| 30 | 7020 Series | (R/F/S/X/T/K)127020(B/D/S)LZ | 12 | 0.20 | 3600  |
|    |             | (R/F/S/X/T/K)127020(B/D/S)MZ | 12 | 0.26 | 4200  |
|    |             | (R/F/S/X/T/K)127020(B/D/S)HZ | 12 | 0.30 | 4800  |
|    |             | (R/F/S/X/T/K)127020(B/D/S)UZ | 12 | 0.40 | 5400  |

Z stands for 20 variables, each variable may be A through Z,0 through 9,"(" , ")","-" or blank.  
The variable (Z) is for marketing purpose only.





Shenzhen Tian Hai Test Technology Co.,Ltd.



## Certificate of Conformity

Certification number: TH2302238-C08-C01

Report number: TH2110138-C08-R01

**Shenzhen Tian Hai Test Technology Co.,Ltd. hereby declares that testing has been completed and reports have been generated for:**

**Applicant:** EVERFLOW PRECISION ELECTRONIC (DONG GUAN) CO LTD  
**Address:** GE KENG INDUSTRIAL ZONE HENG LI TOWN DONGGUAN, GUANGDONG, 523460, CN  
**Manufacturer:** EVERFLOW PRECISION ELECTRONIC (DONG GUAN) CO LTD  
**Address:** GE KENG INDUSTRIAL ZONE HENG LI TOWN DONGGUAN, GUANGDONG, 523460, CN  
**Product:** DC FAN  
**Model:** See attachment  
**Rating:** See attachment  
**Tested according to:** BS EN IEC 62368-1:2020+A11:2020

The submitted products have been tested by us with the listed standards.

This Attestation of Compliance is issued according to the Great Britain legislation Electrical Equipment (Safety) Regulations 2016. It confirms that the listed product complies with all essential requirements of the Regulations and applies only to the sample and its technical documentation submitted to Shenzhen Tian Hai Test Technology Co.,Ltd. for testing.

After preparation of the necessary technical documentation (which must be kept for up to 10years after the product is placed on the GB market) as well as the UK Declaration of Conformity, the required UKCA marking can be affixed on the product. Other relevant Regulations have to be observed.



Attestation by

Thomas Wong



Date of Issued: 2023-02-28





# Shenzhen Tian Hai Test Technology Co.,Ltd.

|     |             |                  |    |       |             |
|-----|-------------|------------------|----|-------|-------------|
| 109 | 1238 Series | F121238BLZ       | 12 | 0.30  | 3000        |
|     |             | F121238BMZ       | 12 | 1.00  | 4500        |
|     |             | F121238BHZ       | 12 | 2.20  | 6000        |
|     |             | F121238BUZ       | 12 | 5.80  | 7800        |
| 110 | 8080 Series | F128080BLZ       | 12 | 1.25  | 8000+8000   |
|     |             | F128080BMZ       | 12 | 4.00  | 12000+12000 |
|     |             | F128080BHZ       | 12 | 6.80  | 15000+15000 |
|     |             | F128080BUZ       | 12 | 10.00 | 18000+15000 |
| 111 | 8056 Series | F128056BLZ       | 12 | 0.30  | 5000        |
|     |             | F128056BMZ       | 12 | 0.70  | 7000        |
|     |             | F128056BHZ       | 12 | 2.00  | 10000       |
|     |             | F128056BUZ       | 12 | 3.90  | 12500       |
| 112 | 8038 Series | F128038BLZ       | 12 | 0.62  | 8000        |
|     |             | F128038BMZ       | 12 | 2.00  | 12000       |
|     |             | F128038BHZ       | 12 | 3.40  | 15000       |
|     |             | F128038BUZ       | 12 | 5.60  | 18000       |
| 113 | 6038 Series | F126038BLZ       | 12 | 0.18  | 5000        |
|     |             | F126038BMZ       | 12 | 0.65  | 10000       |
|     |             | F126038BHZ       | 12 | 2.00  | 15000       |
|     |             | F126038BUZ       | 12 | 4.30  | 20000       |
| 114 | 4028 Series | R124028BLZ       | 12 | 0.18  | 8000        |
|     |             | R124028BMZ       | 12 | 0.50  | 15000       |
|     |             | R124028BHZ       | 12 | 1.50  | 25000       |
|     |             | R124028BUZ       | 12 | 3.50  | 34000       |
| 115 | 1225 Series | R121225BLZ       | 12 | 0.20  | 1500        |
|     |             | R121225BMZ       | 12 | 0.35  | 2200        |
|     |             | R121225BHZ       | 12 | 0.50  | 3000        |
|     |             | R121225BUZ       | 12 | 1.30  | 3800        |
| 116 | 8080 Series | F548080(B/D/S)LZ | 54 | 0.5   | 8000+6000   |
|     |             | F548080(B/D/S)MZ | 54 | 1.2   | 12000+10000 |
|     |             | F548080(B/D/S)HZ | 54 | 2.1   | 15000+13000 |
|     |             | F548080(B/D/S)UZ | 54 | 3.16  | 17000+15000 |
| 117 | 8080 Series | F488080(B/D/S)LZ | 48 | 0.5   | 8000+6000   |
|     |             | F488080(B/D/S)MZ | 48 | 1.5   | 12000+10000 |
|     |             | F488080(B/D/S)HZ | 48 | 2.4   | 15000+13000 |
|     |             | F488080(B/D/S)UZ | 48 | 3.5   | 17000+15000 |



# Shenzhen Tian Hai Test Technology Co.,Ltd.

|     |             |                  |    |      |             |
|-----|-------------|------------------|----|------|-------------|
| 118 | 8080 Series | F248080(B/D/S)LZ | 24 | 1    | 8000+6000   |
|     |             | F248080(B/D/S)MZ | 24 | 2.7  | 12000+10000 |
|     |             | F248080(B/D/S)HZ | 24 | 5.5  | 15000+13000 |
|     |             | F248080(B/D/S)UZ | 24 | 7.5  | 17000+15000 |
| 119 | 8080 Series | F128080(B/D/S)LZ | 12 | 1.5  | 8000+6000   |
|     |             | F128080(B/D/S)MZ | 12 | 2.7  | 10000+8000  |
|     |             | F128080(B/D/S)HZ | 12 | 6.3  | 13000+11000 |
|     |             | F128080(B/D/S)UZ | 12 | 11   | 15500+14000 |
| 120 | 3010 Series | R123010(B/D/S)LZ | 12 | 0.08 | 6500        |
|     |             | R123010(B/D/S)MZ | 12 | 0.12 | 9000        |
|     |             | R123010(B/D/S)HZ | 12 | 0.15 | 12000       |
|     |             | R123010(B/D/S)UZ | 12 | 0.18 | 14500       |
| 121 | 3010 Series | R053010(B/D/S)LZ | 5  | 0.06 | 6000        |
|     |             | R053010(B/D/S)MZ | 5  | 0.08 | 7000        |
|     |             | R053010(B/D/S)HZ | 5  | 0.12 | 8000        |
|     |             | R053010(B/D/S)UZ | 5  | 0.15 | 9500        |

Z stands for 20 variables, each variable may be A through Z,0 through 9,"(" , ")","-" or blank.  
The variable (Z) is for marketing purpose only.





Shenzhen Tian Hai Test Technology Co.,Ltd.



## Certificate of Conformity

Certification number: TH2302238-C07-C01

Report number: TH2302238-C07-R01

**Shenzhen Tian Hai Test Technology Co., Ltd. hereby declares that testing has been completed and reports have been generated for:**

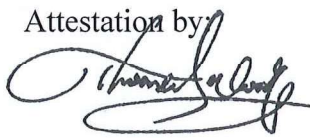
Applicant: EVERFLOW PRECISION ELECTRONIC (DONG GUAN) CO LTD  
Address: GE KENG INDUSTRIAL ZONE HENG LI TOWN DONGGUAN, GUANGDONG, 523460, CN  
Manufacturer: EVERFLOW PRECISION ELECTRONIC (DONG GUAN) CO LTD  
Address: GE KENG INDUSTRIAL ZONE HENG LI TOWN DONGGUAN, GUANGDONG, 523460, CN  
Product: DC FAN  
Model: See the model lists below  
Tested BS EN 55032:2015+A11:2020  
according to: BS EN 55035:2017+A11:2020

The submitted products have been tested by us with the listed standards.

This Attestation of Compliance is issued according to the Great Britain legislation Electromagnetic Compatibility Regulations 2016. It confirms that the listed product complies with all essential requirements of the Regulations and applies only to the sample and its technical documentation submitted to Shenzhen Tian Hai Test Technology Co.,Ltd. for testing.

After preparation of the necessary technical documentation (which must be kept for up to 10years after the product is placed on the GB market) as well as the UK Declaration of Conformity, the required UKCA marking can be affixed on the product. Other relevant Regulations have to be observed.



Attestation by:  
  
Thomas Wong



Date of Issued: 2023-03-02

4F,A3 BLDG,The Silicon Valley Power intelligent terminal industrial park,Guan lan street,Longhua district,Shenzhen

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Fax:+86-755-86615105

<http://www.tianhaitest.com>





# Shenzhen Tian Hai Test Technology Co.,Ltd.

|     |             |                  |    |       |             |
|-----|-------------|------------------|----|-------|-------------|
|     |             | F121238BHZ       | 12 | 2.20  | 6000        |
|     |             | F121238BUZ       | 12 | 5.80  | 7800        |
| 110 | 8080 Series | F128080BLZ       | 12 | 1.25  | 8000+8000   |
|     |             | F128080BMZ       | 12 | 4.00  | 12000+12000 |
|     |             | F128080BHZ       | 12 | 6.80  | 15000+15000 |
|     |             | F128080BUZ       | 12 | 10.00 | 18000+15000 |
| 111 | 8056 Series | F128056BLZ       | 12 | 0.30  | 5000        |
|     |             | F128056BMZ       | 12 | 0.70  | 7000        |
|     |             | F128056BHZ       | 12 | 2.00  | 10000       |
|     |             | F128056BUZ       | 12 | 3.90  | 12500       |
| 112 | 8038 Series | F128038BLZ       | 12 | 0.62  | 8000        |
|     |             | F128038BMZ       | 12 | 2.00  | 12000       |
|     |             | F128038BHZ       | 12 | 3.40  | 15000       |
|     |             | F128038BUZ       | 12 | 5.60  | 18000       |
| 113 | 6038 Series | F126038BLZ       | 12 | 0.18  | 5000        |
|     |             | F126038BMZ       | 12 | 0.65  | 10000       |
|     |             | F126038BHZ       | 12 | 2.00  | 15000       |
|     |             | F126038BUZ       | 12 | 4.30  | 20000       |
| 114 | 4028 Series | R124028BLZ       | 12 | 0.18  | 8000        |
|     |             | R124028BMZ       | 12 | 0.50  | 15000       |
|     |             | R124028BHZ       | 12 | 1.50  | 25000       |
|     |             | R124028BUZ       | 12 | 3.50  | 34000       |
| 115 | 1225 Series | R121225BLZ       | 12 | 0.20  | 1500        |
|     |             | R121225BMZ       | 12 | 0.35  | 2200        |
|     |             | R121225BHZ       | 12 | 0.50  | 3000        |
|     |             | R121225BUZ       | 12 | 1.30  | 3800        |
| 116 | 8080 Series | F548080(B/D/S)LZ | 54 | 0.5   | 8000+6000   |
|     |             | F548080(B/D/S)MZ | 54 | 1.2   | 12000+10000 |
|     |             | F548080(B/D/S)HZ | 54 | 2.1   | 15000+13000 |
|     |             | F548080(B/D/S)UZ | 54 | 3.16  | 17000+15000 |
| 117 | 8080 Series | F488080(B/D/S)LZ | 48 | 0.5   | 8000+6000   |
|     |             | F488080(B/D/S)MZ | 48 | 1.5   | 12000+10000 |
|     |             | F488080(B/D/S)HZ | 48 | 2.4   | 15000+13000 |
|     |             | F488080(B/D/S)UZ | 48 | 3.5   | 17000+15000 |
| 118 | 8080 Series | F248080(B/D/S)LZ | 24 | 1     | 8000+6000   |
|     |             | F248080(B/D/S)MZ | 24 | 2.7   | 12000+10000 |
|     |             | F248080(B/D/S)HZ | 24 | 5.5   | 15000+13000 |



# Shenzhen Tian Hai Test Technology Co.,Ltd.

|                                                                                                                                                     |             |                  |    |      |             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------------|----|------|-------------|
|                                                                                                                                                     |             | F248080(B/D/S)UZ | 24 | 7.5  | 17000+15000 |
| 119                                                                                                                                                 | 8080 Series | F128080(B/D/S)LZ | 12 | 1.5  | 8000+6000   |
|                                                                                                                                                     |             | F128080(B/D/S)MZ | 12 | 2.7  | 10000+8000  |
|                                                                                                                                                     |             | F128080(B/D/S)HZ | 12 | 6.3  | 13000+11000 |
|                                                                                                                                                     |             | F128080(B/D/S)UZ | 12 | 11   | 15500+14000 |
| 120                                                                                                                                                 | 3010 Series | R123010(B/D/S)LZ | 12 | 0.08 | 6500        |
|                                                                                                                                                     |             | R123010(B/D/S)MZ | 12 | 0.12 | 9000        |
|                                                                                                                                                     |             | R123010(B/D/S)HZ | 12 | 0.15 | 12000       |
|                                                                                                                                                     |             | R123010(B/D/S)UZ | 12 | 0.18 | 14500       |
| 121                                                                                                                                                 | 3010 Series | R053010(B/D/S)LZ | 5  | 0.06 | 6000        |
|                                                                                                                                                     |             | R053010(B/D/S)MZ | 5  | 0.08 | 7000        |
|                                                                                                                                                     |             | R053010(B/D/S)HZ | 5  | 0.12 | 8000        |
|                                                                                                                                                     |             | R053010(B/D/S)UZ | 5  | 0.15 | 9500        |
| Z stands for 20 variables, each variable may be A through Z,0 through 9,"(", ")", "- " or blank.<br>The variable (Z) is for marketing purpose only. |             |                  |    |      |             |