

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. 0.50 A Duty cycle =100%
2 - 5	Rated Power	Max. 3.60 W Duty cycle =100%
2 - 6	Start Peak Current	N/A In Free Air & At 12 V DC
2 - 7	UL Current On Label	0.18 A
2 - 8	Rated Speed	13000±10% RPM Duty cycle =100%
		(Testing Speed after Continuous 3 Minutes Operation at Ambient Temperature of 25°C)
2 - 9	Air Flow (At Zero Static Pressure)	15.19 CFM (Min. 13.67 CFM)
		0.43 m ³ /min (Min. 0.39 m ³ /min) Duty cycle =100%
2 - 10	Static Pressure (At Zero Air Flow)	29.17 mm-H ₂ O (Min.23.63 mm-H ₂ O)
		1.15 inch-H ₂ O (Min. 0.93 inch-H ₂ O) Duty cycle =100%
2 - 11	Sound Pressure Level	45.5 dB(A) [Max. 48.5 dB(A)]
2 - 12	Product Type	☒ RoHS ☐ HF
2 - 13	Life Expectancy	70000 HRS at 40°C, 65% humidity and 90% CL.
2 - 14	Bearing Type	☒ Two Ball ☐ EBR ☐ Ball And Sleeve
2 - 15	Protection & Function	☒ Locked Protection ☐ Impedance Protection
		☐ Hot Swap Protection ☐ Current-Limit
		☒ Polarity Protection ☐ E-Brake
		☒ Auto-Restart
2 - 16	Pole	☐ 4 Pole ☐ 8 Pole ☒ Three Phase
2 - 17	Signal Output	Frequency Generator (FG)
2 - 18	Safety Approval	☒ CE ☒ TUV ☒ UL ☒ UKCA

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3. MECHANICAL

No.	ITEM	SPECIFICATION
3 - 1	DIMENSIONS	SEE DIMENSIONS DRAWING
3 - 2	FRAME	☒ PBT (BLACK) PLASTIC (UL 94V-0) ☐ PC PLASTIC (UL 94V-2)
3 - 3	IMPELLER	☒ PBT (BLACK) PLASTIC (UL 94V-0) ☐ 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.

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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

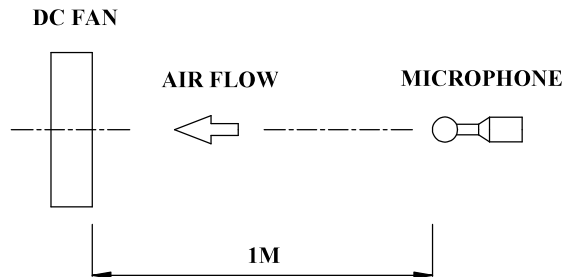
FREQUENCY(Hz)	PSD (G ² /Hz)
10	0.040
20	0.100
40	0.100
800	0.002
1000	0.002

TEST TIME: 2 HRS FOR EACH
DIRECTION

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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



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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.

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- 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.

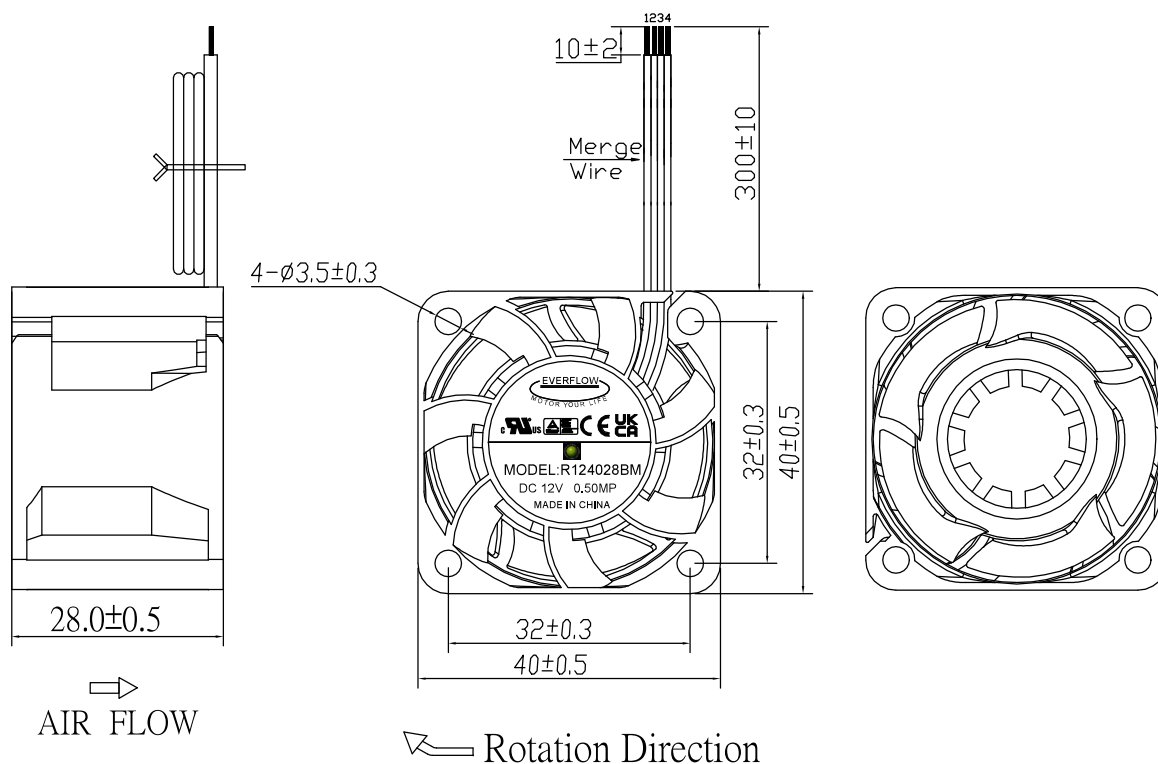
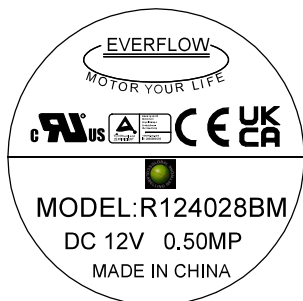
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- 5 - 13 CUSTOMER SHALL CONFIRM THE COMPATIBILITY AND RELIABILITY OF THE FAN IN THE ACTUAL SETUP OR UNIT APPLICATION. THIS INCLUDES CONFIRMATION ON SET OR UNIT LIFE, ELECTRICAL NOISE, MECHANICAL NOISE, VIBRATION, STATIC ELECTRICITY, ELECTRIC POWER 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 μ F OR GREATER” CAPACITOR TO THE FAN EXTERNALLY WHEN THE APPLICATION CALLS FOR USING MULTIPLE FANS IN PARALLEL TO AVOID ANY UNSTABLE POWER.

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6. DIMENSIONS DRAWING (Unit: mm)

EF Part No. : R124028BM



NOTES:

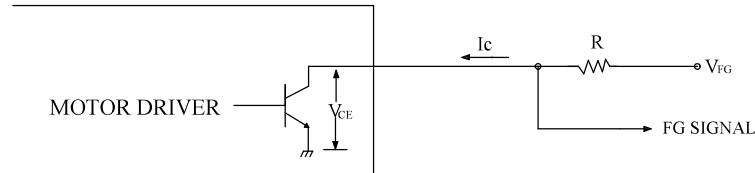
1. LEAD WIRE UL 1061 AWG#28
PIN 1: BLACK WIRE--- (-)
PIN 2: YELLOW WIRE---(+)
PIN 3: GREEN WIRE---(SIGNAL)
PIN 4: BLUE WIRE---(PWM INPUT)

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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

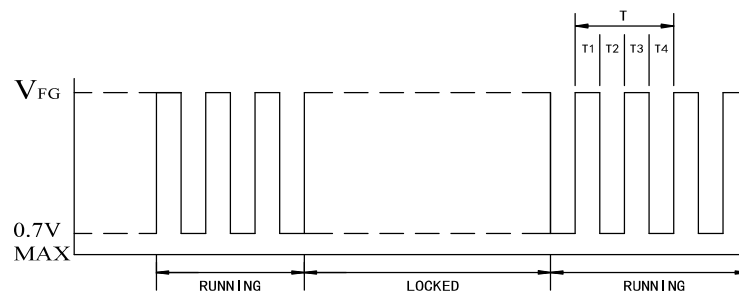
V_{FG} MAXIMUM VOLTAGE = 5.5 V

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 kΩ

● FREQUENCY GENERATOR WAVEFORM

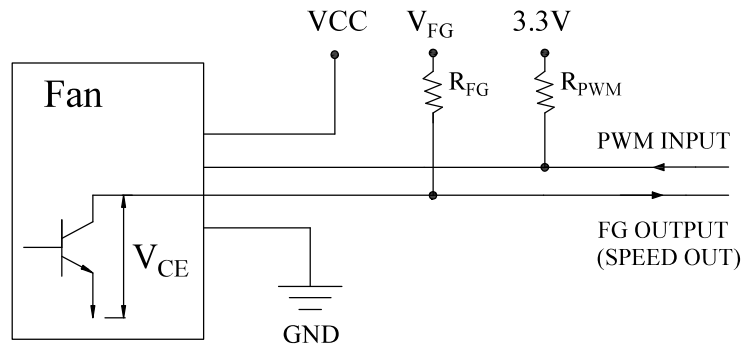


$T = T1 + T2 + T3 + T4 = 60/N$ Sec, WHERE N REPRESENTS RPM

SPECIFICATION FOR APPROVAL

8. PWM CHARACTERISTICS & DEFINITION

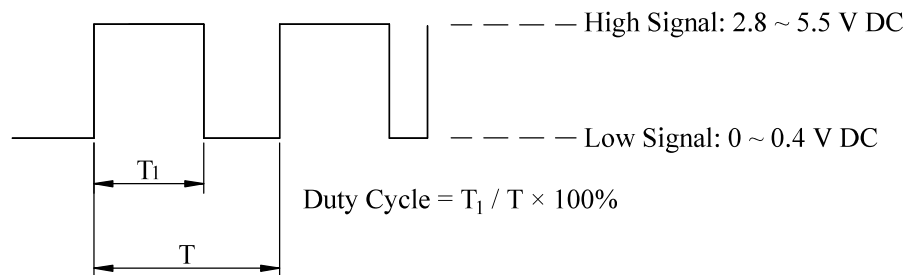
● PWM CIRUIT (FOR REFERENCE)



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

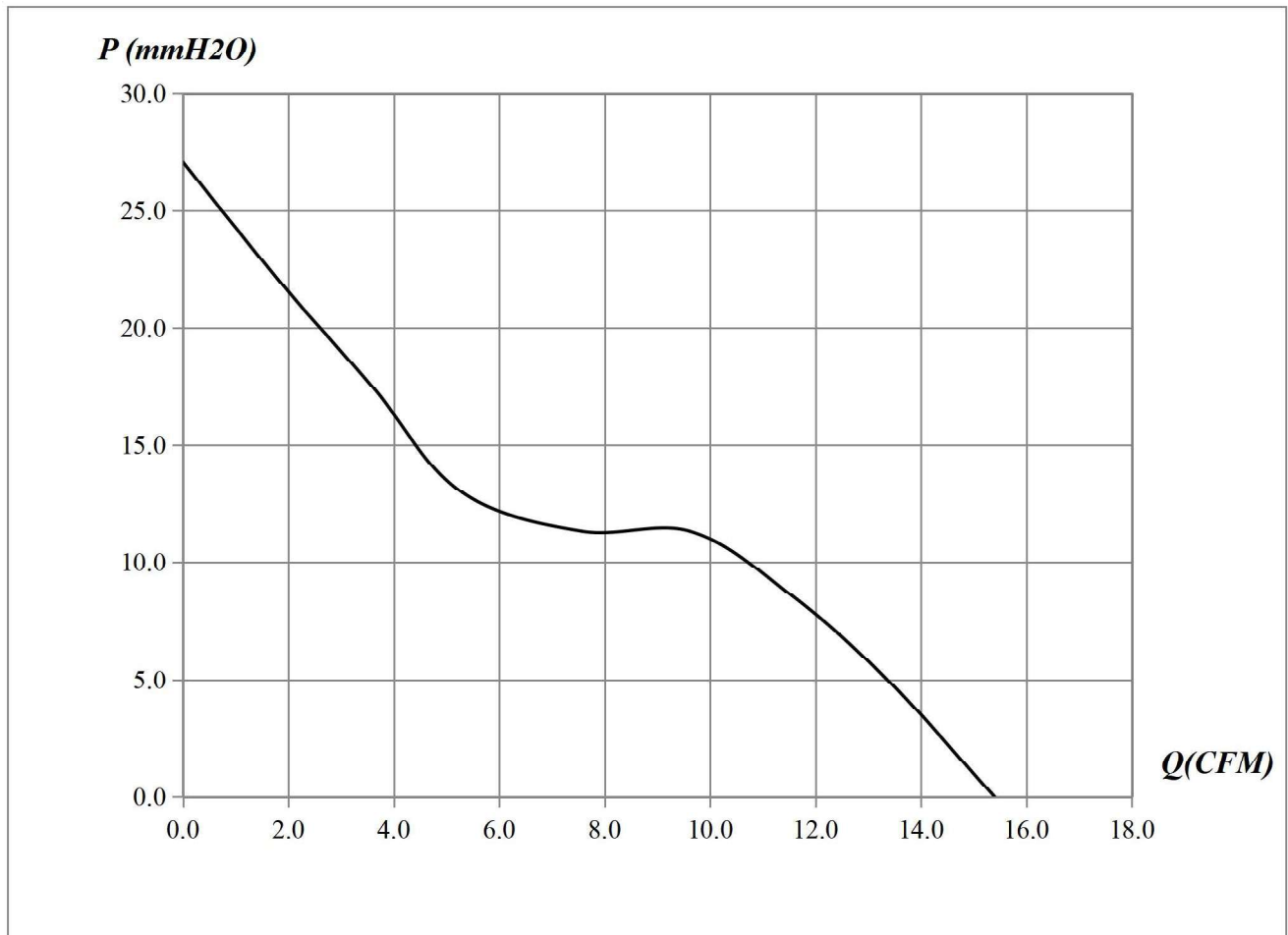
9. P - Q CURVE

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

Industrial Services, Mobility and Transport,
Product Safety and Quality, Education and
Consulting, IT Services and Innovation



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)

160	F121238BLZ	12	0.30
161	F121238BMZ	12	1.00
162	F121238BHZ	12	2.20
163	F121238BUZ	12	5.80
164	F128080BLZ	12	1.25
165	F128080BMZ	12	4.00
166	F128080BHZ	12	6.80
167	F128080BUZ	12	10.00
168	F128056BLZ	12	0.30
169	F128056BMZ	12	0.70
170	F128056BHZ	12	2.00
171	F128056BUZ	12	3.90
172	F128038BLZ	12	0.62
173	F128038BMZ	12	2.00
174	F128038BHZ	12	3.40
175	F128038BUZ	12	5.60
176	F126038BLZ	12	0.18
177	F126038BMZ	12	0.65
178	F126038BHZ	12	2.00
179	F126038BUZ	12	4.30
180	R124028BLZ	12	0.18
181	R124028BMZ	12	0.50
182	R124028BHZ	12	1.50

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

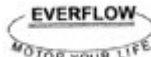
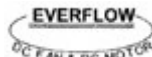
EVERFLOW PRECISION ELECTRONIC (DONG GUAN) CO LTD

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:

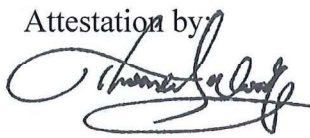
Applicant: EVERFLOW PRECISION ELECTRONIC (DONG GUAN) CO LTD
Address: GE KENG INDUSTRIAL ZONE HENG LI TOWN DONGGUAN, GUANGDONG, 523460, CN
Manufacturer: EVERFLOW PRECISION ELECTRONIC (DONG GUAN) CO LTD
Address: GE KENG INDUSTRIAL ZONE HENG LI TOWN DONGGUAN, GUANGDONG, 523460, CN
Product: DC FAN
Model: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

Tel: +86-755-86615100

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. The variable (Z) is for marketing purpose only.					