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APPROVAL SHEET

Model	TFD-9225HH12B/KW (RB)
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Customer

Revision No	A1
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File No	20150703A23
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Date	2020/04/24
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PROJECT ENGINEER	CHIEF ENGINEER	R&D MANAGER	SALES
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Chenjie	Xiongwei	Alex	
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CUSTOMER APPROVAL SIGNATURE

THE PRODUCTION ACCORD WITH EUROPE UNION ROHS STANDARD

PRODUCT SPECIFICATION

A.GENERAL SPECIFICATION

ITEM		SPECIFICATION/CONDITION
A-1	Part No.	TFD-9225HH12B/KW(RB)
A-2	Outline Dimension	92*92*25MM
A-3	Sated Voltage	12VDC
A-4	Rated Voltage	7VDC
A-5	Operating Voltage Range	7~13.8VDC
A-6	Rated Current	0.27A
A-7	Power Consumption	3.24W
A-8	Rated Speed	3000±10%RPM
A-9	Airflow	54.8CFM
A-10	Static Pressure	0.16InH ₂ O
A-11	Noise Level	<34dBA
A-12	No. of Pole	4 Pole
A-13	Rotation Direction	Counter-Clockwise
A-14	IP Protection Grade	IP55

B.ELECTRICAL SPECIFICATION

ITEM		SPECIFICTION/CONDITION
B-1	Locked Motor Protection	<input type="checkbox"/> a. Automatic Restart <input checked="" type="checkbox"/> b.Polarity Protection
B-2	Insulation Resistance	10M Ω /b/w unshielded wire and frame at 500 VDC/min
B-3	Dielectric Strength	5Ma Max./Measured b/w lead wire and frame at 500VAC/min

C.MAIN MATERIAL/PARTS SPECIFICATION

ITEM	MAJOR COMPONENTS	MATERIAL OR TYPE	GRADE
C-1	MATERIALS OF FRAME	THERMOPLASTIC PBT(BE)	94V-0
C-2	MATERIALS OF FAN BLADE	THERMOPLASTIC PBT(WE)	94V-0
C-3	PLASTIC MAGNET	STRONTIUM FERRITE (BOB14W)	---
C-4	LEAD WIRES	POLYVINYL CHLORIDE ENAMELED COPPER WIRE(AWG#26)	---

D.ENVIRONMENTAL SPECIFICATION

ITEM		SPECIFICATION/CONDITION
D-1	Operation Temperature	-10℃~+60℃/66%(RH), high / low temperature test for 24 hours, temperature change: 30℃/hours.
D-2	Storage Temperature	-40℃~+70℃/66%(RH), high / low temperature test for 24 hours, temperature change: 30℃/hours.
D-3	Packing Shock Proof Test	1 corner, 3 edges, 6 face natural drop 80cm high packing
D-4	Temperature Rise In Normal Operation	Temperature rise less than 35℃ at external surface Temperature rise less than 65℃ at coil surface
D-5	Insulation Resistance	Between fan frame and terminal wires at least 10MΩ at 500VDC
D-6	Dielectric Strength	Must withstand 500 VAC 1second 1mA between fan frame and both wires

E.LIFE TIME

BEARING TYPE	AMBIENT TEMP	EXPECTANCY
<input type="checkbox"/> SLEEVE BEARING	25°C	25,000HOURS
<input type="checkbox"/> 1B/1S BEARING	25°C	35,000HOURS
<input checked="" type="checkbox"/> TWO BALL BEARING	25°C	50,000HOURS
<input type="checkbox"/> Z-AXIS BEARING	25°C	60,000HOURS

F.SHOCK TEST

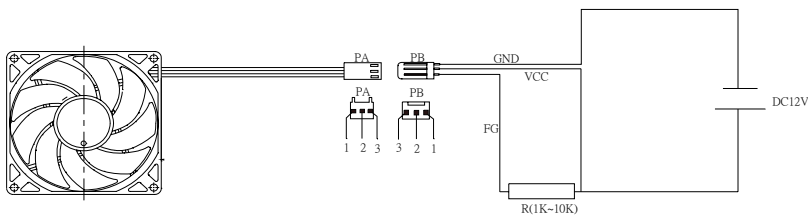
Gravitational acceleration of 50g_{peak}, duration of pulse, 11 mili seconds(half sine wave).

G.DROP TEST

Prepared in minimum packing condition, fan will withstand one drop each on three surfaces from a 30cm height onto a 10mm thick hard wooden board.

H.FG(WAVE) TEST

1 FG(WAVE) Test circuit figure:

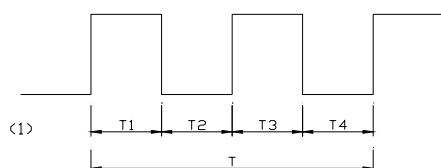


2.Pin assignments:

PA	PB
PIN1 BLACK	PIN1 GND
PIN2 RED	PIN2 VCC
PIN3 YELLOW	PIN3 FG

3.FG(wave) Level & Time :

a. FG WAVE:(The fan in computer user)



(1) Fan rotor running



(2) or (3) Fan rotor locking

b.TIME: $T1=T2=T3=T4=1/4T$

c .FG LEVEL: $V_{pp}=5V$

Figure 1 FAN Assembly

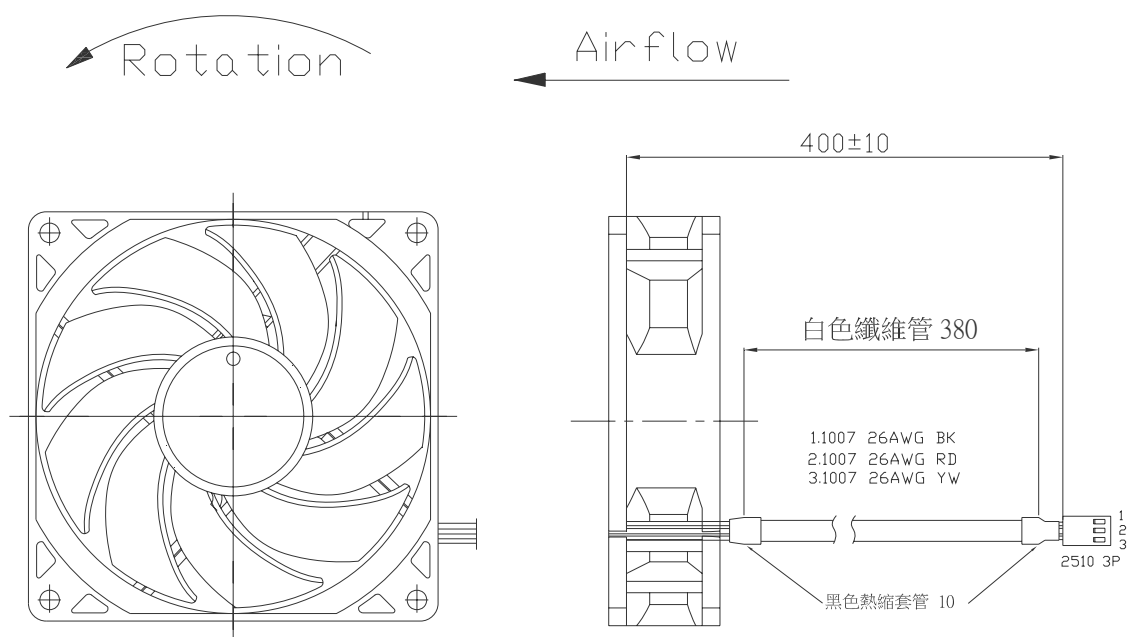
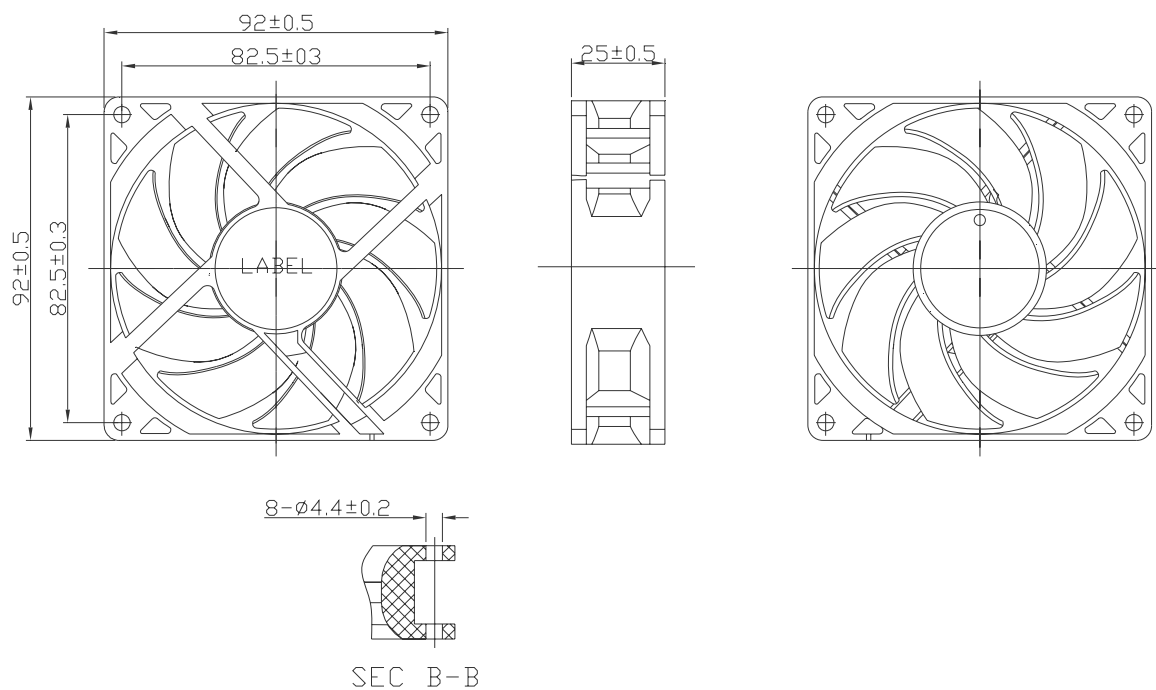


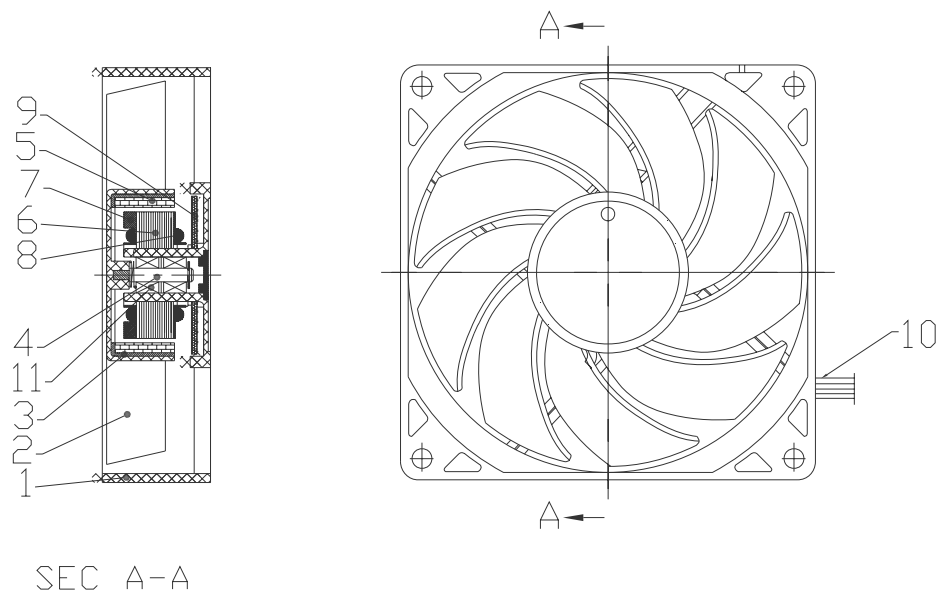
Figure 2 Mechanical Dimensions



Notes:

- 1.Tolerances: ± 0.20
- 2.Impeller must not protrude beyond front surface
- 3.Minimum 0.30 radius at all rib intersections
- 4.Unit: mm

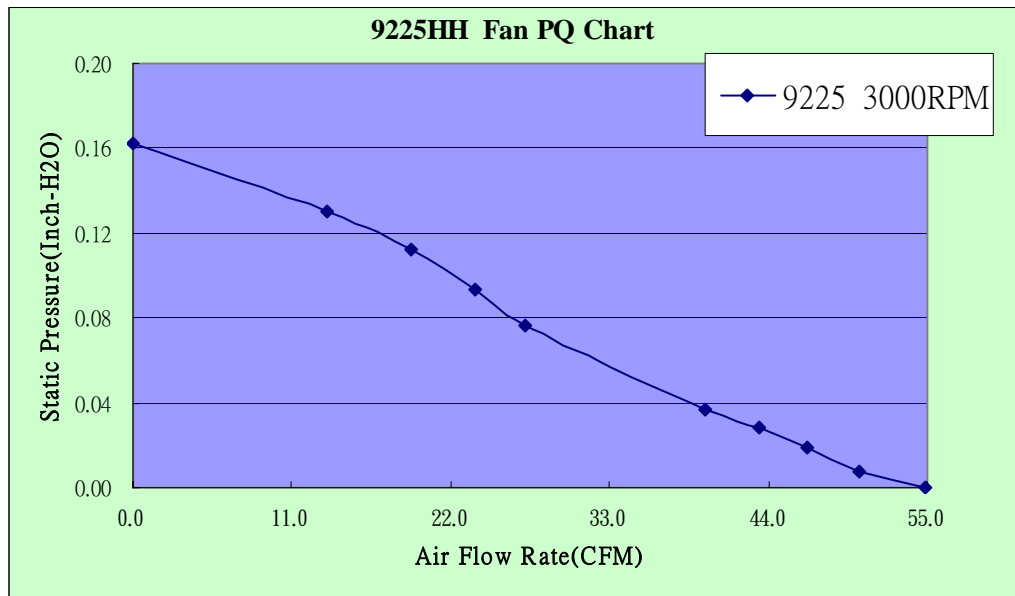
Figure 3 Bill of Material



No	Components	Material	Flame Class	Grade	Manufacturer	UL File No
1	Case	PBT	94-V0	---	SHINKONG SYNTHETIC FIBERS CORP	E107536
2	Fan Blade	PBT	94-V0	---	SHINKONG SYNTHETIC FIBERS CORP	E107536
3	Yoke	Steel	---	---	Kuo chen metal ind co.,ltk	---
4	Shaft	Stainless Steel	---	---	Teng Mao precision on shaft factory.	---
5	Magnet	Rubber	---	---	Best result enter-prise co.,ltd	---
6	Core	Plated Steel Sheets	---	---	Chang yi industry co.,ltd	---
7	Slot Insulation	PBT	94-V0	---	SHINKONGSYNTHET IC FIBERS CORP International.CO.,LTD	E107536
8	Winding	Polyurethane enameled copper	---	---	Chin Yih industry co.,ltd	E196473
9	Printed wiring board	Metal clad idustrial lamination	94-V0	---	Kai Te Electronics Factory co.,ltd	E317342
10	Lead wire	UL 1007 AWG26	---	---	Song Fa Electronic Factory	E327926
11	Ball bearing	Carbon Steel	---	---	Nmb isc.tpi	---

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Figure 4 Fan Performance Curve



	Q(cfm)	Ps(InchH ₂ O)
1	0.000	0.162
2	13.394	0.130
3	19.279	0.112
4	23.648	0.093
5	27.190	0.076
6	39.571	0.037
7	43.407	0.028
8	46.730	0.019
9	50.256	0.008
10	54.799	0.000