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COOLTRON

PRODUCT SPECIFICATION SHEET

CUSTOMER:	
CUSTOMER MODEL NO.:	
COOLTRON MODEL NO.:	FD6025B24W9-87D-3SP1
DESCRIPTION:	DC Fan, 60x60x25mm, 24VDC,
	6500RPM, Dual Ball Bearing
	IP68, Flange mounting, No Connector.
EDITION:	A01
ISSUE DATE:	5/8/2024

Products will meet the specifications stated on this data sheet for all future production orders unless a revision has been approved by both parties.

Standards and Specifications of Model: FD6025B24W9-87D-3SP1

RoHS Compliance

A. General Specification

Item		Specification / Standard / Condition		
01	Outline Dimension	60 x 60 x 25 mm		
02	Bearing	Dual Ball Bearing		
03	Rated Voltage	DC 24 V		
04	Operating Voltage	DC 12 V ~ DC 26.4 V		
05	Starting Voltage	DC 12 V (At 25°C, Power ON / OFF)		
06	Rated Current (Max.)	0.25	A	1. Rated Voltage 2. 25°C, 65% RH
07	Actual Current	0.14	A	
08	Power Consumption	3.36	W (MAX. 6W)	
09	Rated Speed	6500	RPM ± 10%	1. Free Air 2. Rated Voltage 3. After 10 Min. Rotating.
10	Max. Air Flow	29.73	CFM	1. Rated Voltage 2. AMCA Standard 3. Rated Current
11	Max. Static Pressure	8.68	mm-H_2O	
12	Noise Level(AVG.)	38.27	dB(A)	1. Rated Voltage 2. Measured in a Non-Echo Chamber 3. ISO 3745 Test Condition
13	Life Expectancy	70,000	Hrs at 40°C	1. L10 at Conf. Level 90% 2. Rated Voltage
14	Net Weight	60	Gram	
15	Number of Blade	7	Blades	
16	Number of Pole	4	Poles	
17	Rotating Direction	Counter-Clockwise		Looking at Rotor Side
18	Material:	Housing: Plastic UL 94V-0 P.B.T. Blade: Plastic UL 94V-0 P.B.T.		
19	Lead Wire	UL Type #28 AWG, 110mm length with stripped and tinned leads 5±1		
20	Lead Wire	Red: (+) Black: (-) Blue (PWM)		
21	Special Function	Auto restart+PWM+FG+IP68 (Glue Filling Technology)		

B. Electrical Specification

Item		Specification / Condition	
01	Locked Rotor Protection	√	Safety Condition
		√	a. Auto power off after locked at rated voltage for 1 sec. b. After auto power off, circuit attempt to restart in a few seconds.
02	Polarity Protection	√	Be capable of withstanding if reverse connection for positive and negative leads.
03	Insulation Resistance	√	10m.Ohm / between unshielded wire and frame at 500 VDC/min.
04	Dielectric Strength	√	5mA Maximum. / Measured between lead wire (+) and frame at 500 VAC/min.

C. Environmental Specification

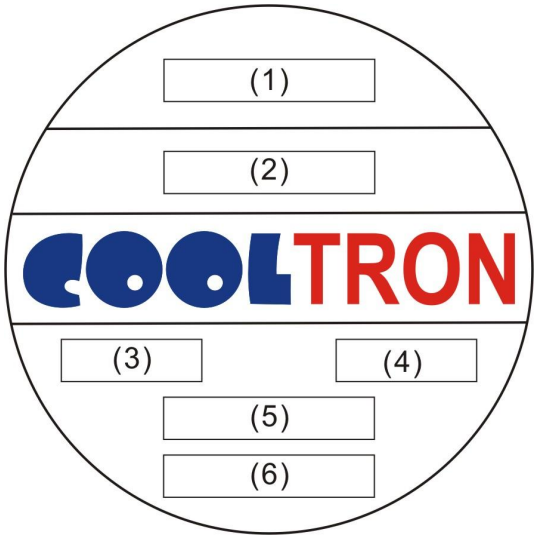
Item		Specification / Condition
01	Operating Condition	Temperature: -10ºC ~ + 70ºC
		Humidity: 5% ~ 90% RH
02	Storage Temperature	Temperature: -40ºC ~ + 80ºC
		Humidity: 5% ~ 95% RH

D. Safety Approvals

Safety Approval	File No.
CE	TB10088262
UL	E194726
CUL	E194726

E. Label Marking

01: Fan Label Marking

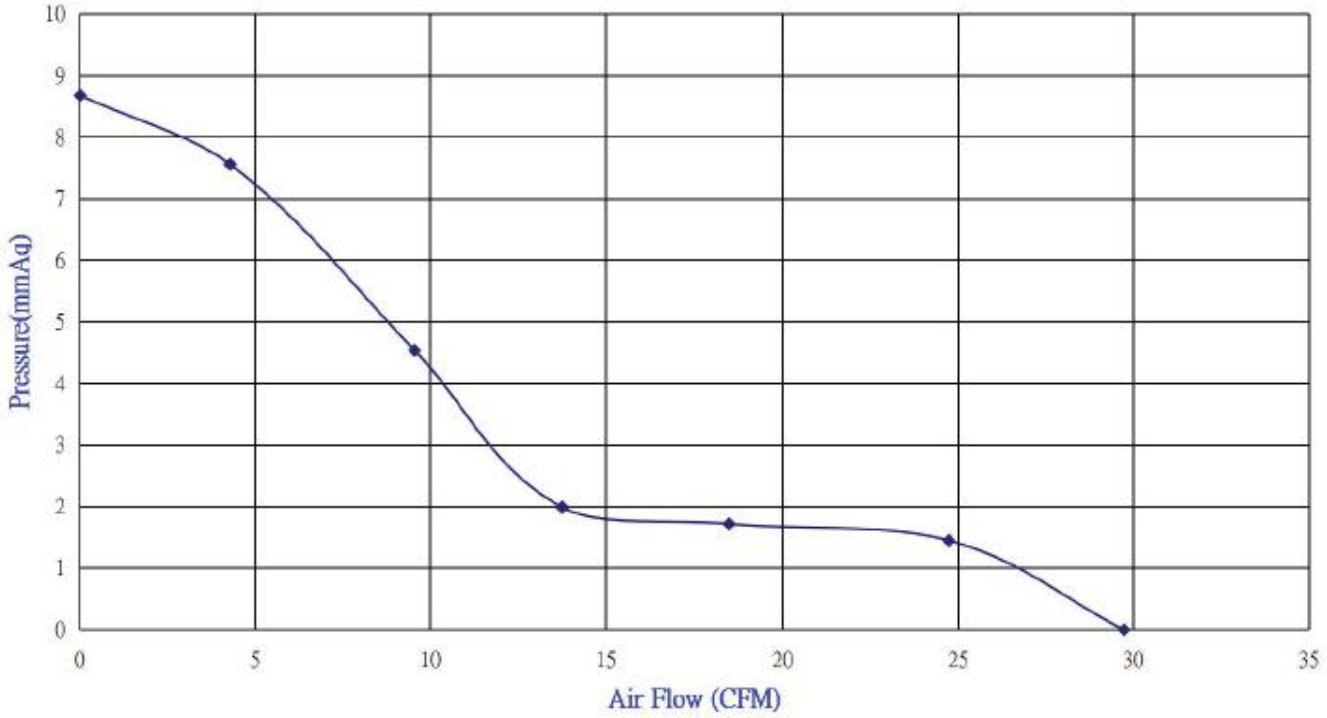


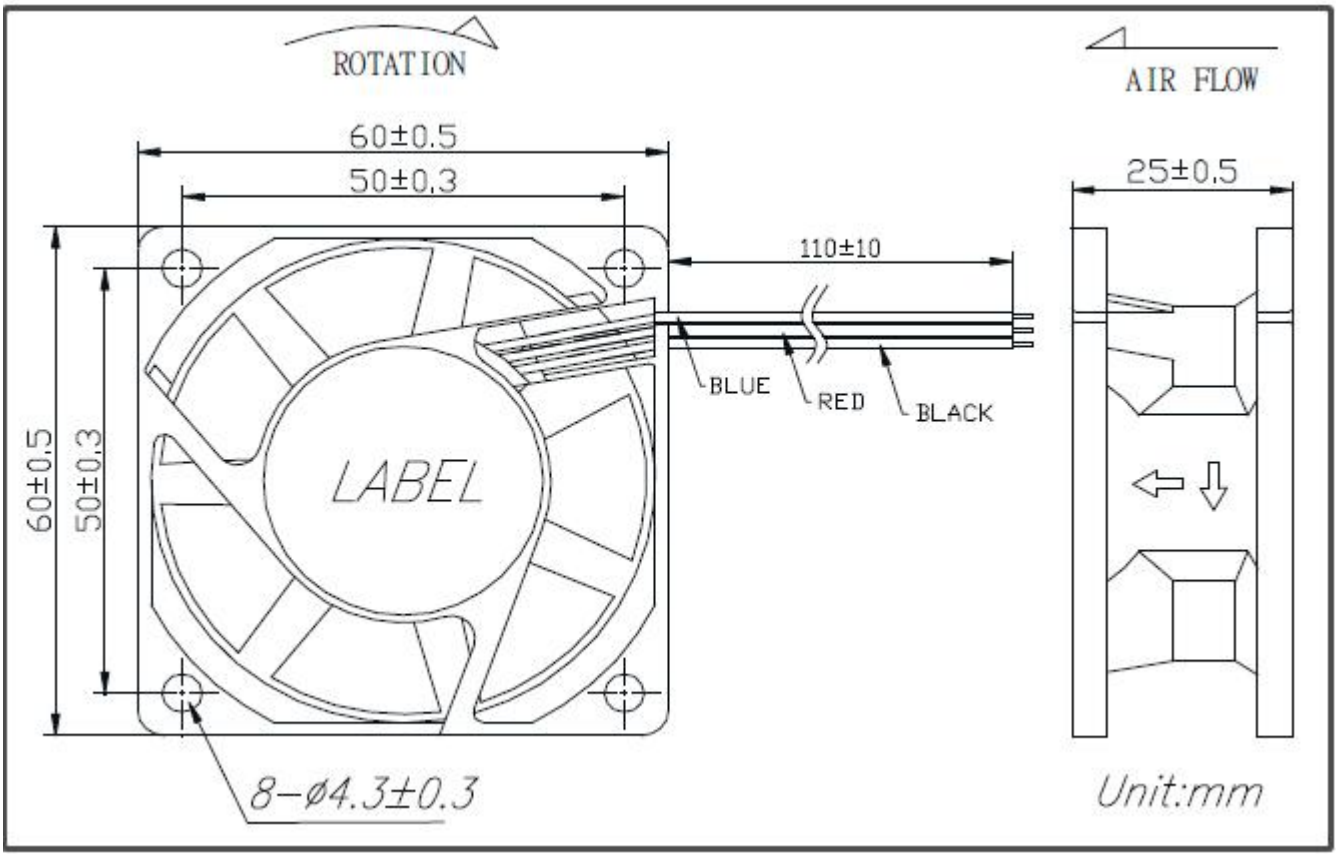
(1)	Safety Approval
(2)	Model Number & Appendix Code
(3)	Rated Voltage
(4)	Power Consumption
(5)	Bearing Type
(6)	Location

02: RoHS Label Marking:

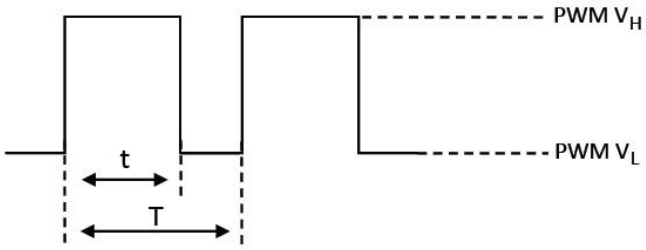
Label	Location
RoHS & Date Code	Fan Outlet Frame

Air Flow Performance Cure





12-1. Signal description

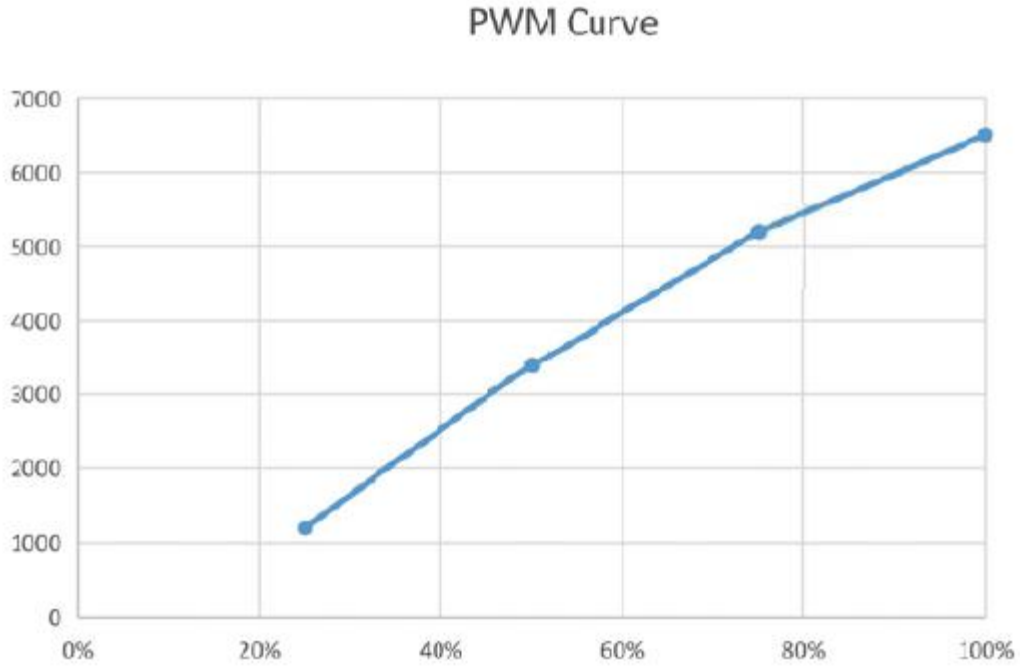


• Duty cycle=t / T * 100%

Characteristic	conditions/descriptions	min.	type	max.	units
PWM VH		3.3	5	5.6	V
PWM VL				0.5	V
Max. sink current				8	mA
PWM frequency range		1	25	100	KHz

. PWM duty vs RPM curve

Characteristic	conditions/descriptions	min.	type	max.	units
100%	Duty cycle		6500		RPM
75%	Duty cycle		5200		RPM
50%	Duty cycle		3400		RPM
25%	Duty cycle		1200		RPM



REMARKS

1. COOLTRON will not assume responsibility for the performance of the products if the application conditions fall outside the parameters stated forth in this specification.
2. A written request should be submitted to COOLTRON prior to approval if abnormality and deviation from this specification is required.
3. Please be cautious when fan is being exercised or handled. Damages may be resulted when apply pressure to the impeller or hold the fan by the lead wires or drop the fans to the production platform.
4. With exception of suitability of some particular designs, any failure and problems regarding safety of the product caused by the introduction of powder, droplets of water or encroachment of insert in the hub are not guaranteed.
5. All general specifications and quality values are measured under condition of free air and fan vertical set up. COOLTRON highly suggests practicing a test when fan apply to a special application.
6. COOLTRON fans are not suitable to be used in an environment that contains aggressive or corrosive fluids.
7. Always ensure that fans are stored according to the storage temperatures specified. Do not store in an environment with a high humidity level. If the fans were stored for longer than 6 months, it is highly recommended to apply functional testing before shipping.
8. Except for the feature of the Lock Rotor Protection specifically stated, this feature is not applied to all fans. COOLTRON highly suggests not to stop the impellers of the working fans such interruption will cause adverse effect.
9. During installation, please be cautious. COOLTRON is not responsible for any excess resonance, vibration and subsequent noise caused by incorrect mounting of fans.
10. During testing it is important to consider safety at all times. A suitable guard should be fitted to the fan to prevent personal injury.
11. All test environments are conducted under the condition of relative (ambient) temperature and humidity at 25°C, 65%RH. The test result stated above is effective only for unique fan performance.
12. The above conditions are examples of extreme application. However they are very important and should receive top priority.