

# 09533GA (BG0903)

Φ95X33<sup>L</sup>

## DC Blower Fan



### General Specifications

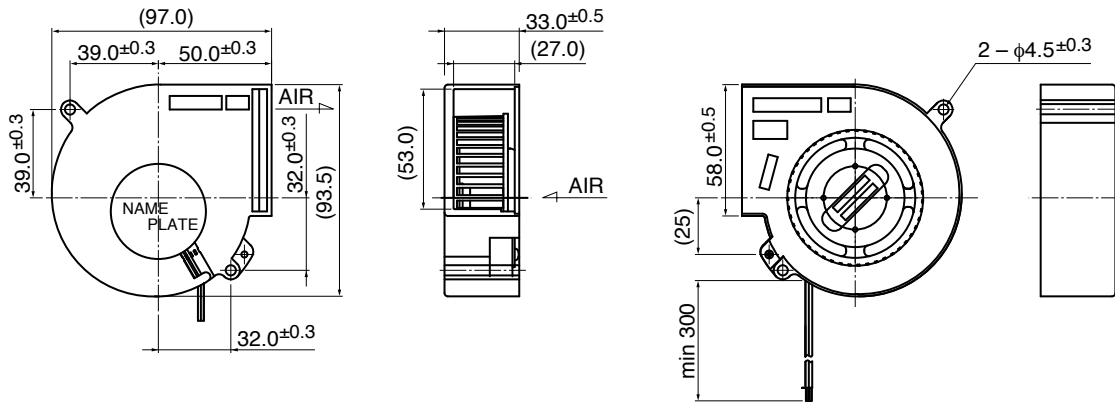
Motor Protection	Auto Restart / Polarity Protection
Insulation Resistance	10MΩ or over with a DC500V Megger
Dielectric Withstand Voltage	: AC700V 1s
Allowable Ambient Temperature Range	: - 10°C ~ + 60°C (Operating) - 40°C ~ + 70°C (Storage) non-condensing environment

### Expected Life

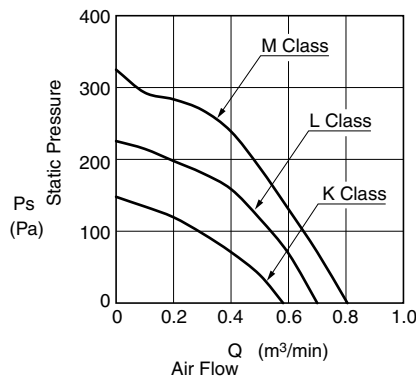
※ Failure Rate: 10% (L10 Life)

25°C 100,000 (Hours)

### Outline



### Characteristic Curves



### Material

Casing	: Plastic (Black) UL94V-0
Impeller	: Plastic (Black) UL94V-0
Bearing	: Ball Bearing
Lead Wire	: UL1007 AWG26 + : Red, - : Black

### Specifications

Model	Product No.	Rating Voltage	Operating Voltage	Current	Input Power	Speed	Max. Air Flow		Max. Static Pressure		Noise	Mass
		(V)	(V)	(A)*1	(W)*1	(min <sup>-1</sup> )*1	(m <sup>3</sup> /min)*1	(CFM)*1	(Pa)	(In H <sub>2</sub> O)	(dB)*1	(g)
09533GA-12K-AA-	00	12	6.0 ~ 13.8	0.40	4.80	2700	0.58	20.4	152.0	0.61	47.5	210
09533GA-12L-AA-	00			0.64	7.68	3200	0.70	24.7	225.0	0.90	51.5	
09533GA-12M-AA-	00			1.03	12.40	3700	0.81	28.6	342.0	1.37	54.5	
09533GA-24K-AA-	00	24	10.0 ~ 27.6	0.21	5.04	2700	0.58	20.4	152.0	0.61	47.5	
09533GA-24L-AA-	00			0.33	7.92	3200	0.70	24.7	225.0	0.90	51.5	
09533GA-24M-AA-	00			0.49	11.80	3700	0.81	28.6	342.0	1.37	54.5	

Rotation: Clockwise as seen from the label side

\*1: Average Values in Free Air

## General Specifications

**Motor Type:** DC Brushless Motor

**Motor Protection:**

Auto Restart/Polarity Protection  
(Motor withstands reverse connection for positive and negative leads.)

**Insulation Resistance:**

10M  $\Omega$  or over with a DC500V Megger

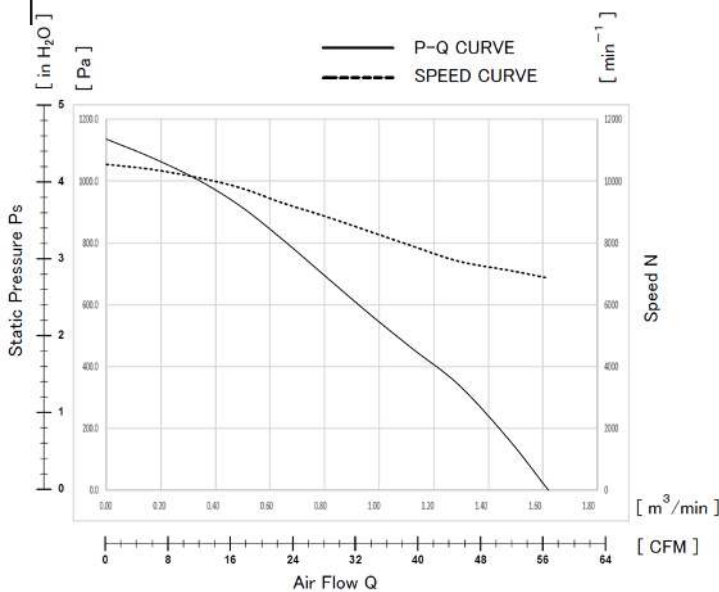
**Dielectric Withstand Voltage:**

AC 700V 1s or 500V 1min

**Allowable Ambient Temperature Range:**

- 10°C ~ +70°C (Operating)
- 40°C ~ +70°C (Storage)
- (non-condensing environment)

## Characteristics Curves



## DC Blower Benefits & Applications

### DC Blower

With high static pressure, NMB centrifugal blowers are suitable for cooling electronic systems generating lots of heat and high impedance from back pressure. A DC blower contains a circular impeller within an enclosed cage, which is often referred to as a “squirrel cage”. This design allows DC Blowers to create directed airflow under high pressure conditions. A DC Blower has a more concentrated airflow in which the equipment pulls air in from the sides and forces it out at a concentrated 90° angle.

### Benefits

- High pressure and high airflow
- Long life and high reliability with NMB precision ball bearings
- Concentrated airflow to effectively cool target
- Smooth PQ curve with no knee
- Tacho Output for Speed Monitoring

### Applications

- Factory Automation
- Humidifiers
- Telecomm
- OA Equipment
- Network Servers
- Home Appliances
- Medical Devices

## Life Expectancy L10

60°C 40,000 Hours

## Specifications

MODEL	Rating Voltage (V)	Operating Voltage (V)	Current		Input Power		Speed (min <sup>-1</sup> )*1	Max. Air Flow		Max. Static Pressure		Noise (dB)*1	Mass (g)
			Avg (A)*1	Max (A)*1	Avg (W)*1	Max (W)*1		(CFM)	(m³/min)	(in H₂O)	(Pa)		
09533GA-12T-ATD-0	12	7.0 ~ 13.2	3.80	4.94	45.60	59.28	6850	56.50	1.60	4.46	1110	67.0	200

\*1: Values in Free Air

## TACHO Specifications

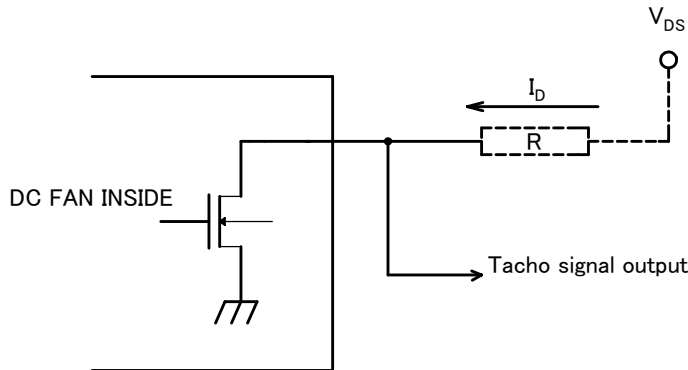
### TACHO SIGNAL

1. OUTPUT CIRCUIT : OPEN DRAIN
2. SPECIFICATION

Absolute Maximum Ratings at Ta=25°C

V<sub>DS</sub> max : +15V

I<sub>D</sub> max : 5mA [V<sub>DS</sub>(low)max = 0.5V]

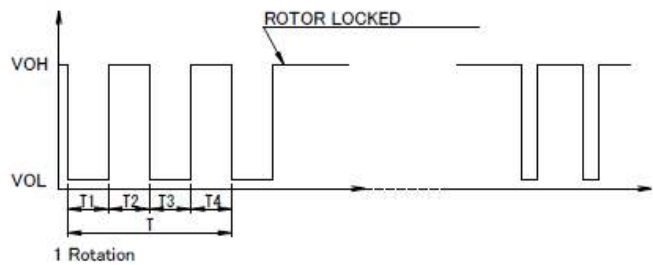


TACHO SIGNAL CIRCUIT

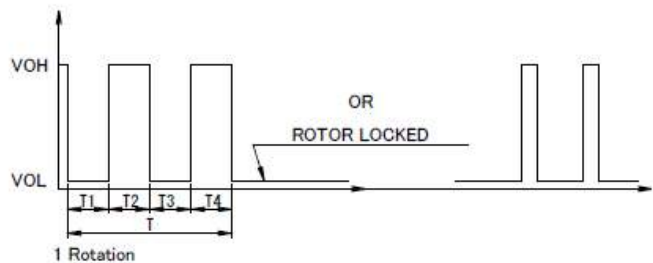
### 3. OUTPUT WAVEFORM: AT RATED VOLTAGE

#### OUTPUT SIGNAL VOLTAGE

##### 3-1 Case-1



##### 3-2 Case-2



1) When the rotor is locked at V<sub>OH</sub> position of signal, signal keeps V<sub>OH</sub> position or signal becomes to V<sub>OL</sub> position for a few seconds at any time of the auto-restart motion.

2) When the rotor is locked at V<sub>OL</sub> position of signal, signal keeps V<sub>OL</sub> position or signal becomes to V<sub>OH</sub> position for a few seconds at any time of the auto-restart motion.

3)  $T = T_1 + T_2 + T_3 + T_4 = 60 / m = 1$  rotation

m : min<sup>-1</sup>

Tach Duty Cycle = 50% ± 10%

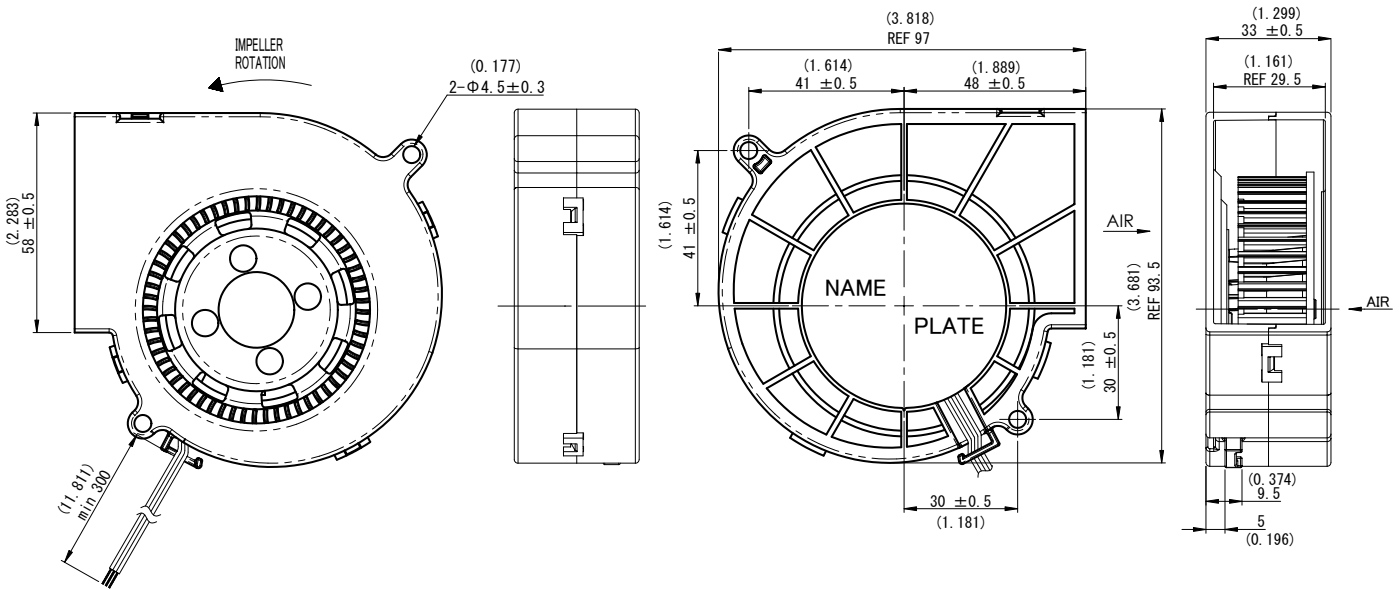
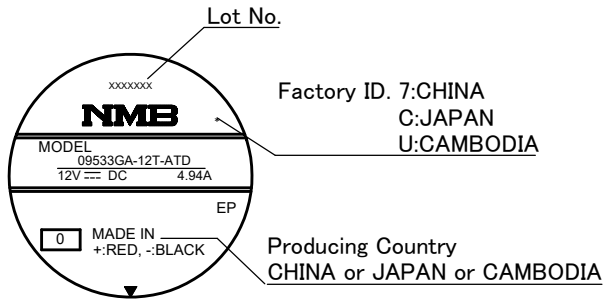
## Materials

- Casing : Plastic (Black UL94V-0)
- Impeller : Plastic (Black UL94V-0)
- Bearing : Ball Bearing
- Lead Wire : UL1007 AWG24

(+) : Red (-) : Black Tach: White

## Outline

### Name Plate



Unit: mm (inch)

## General Specifications

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(Motor withstands reverse connection for positive and negative leads.)

**Insulation Resistance:**

10M Ω or over with a DC500V Megger

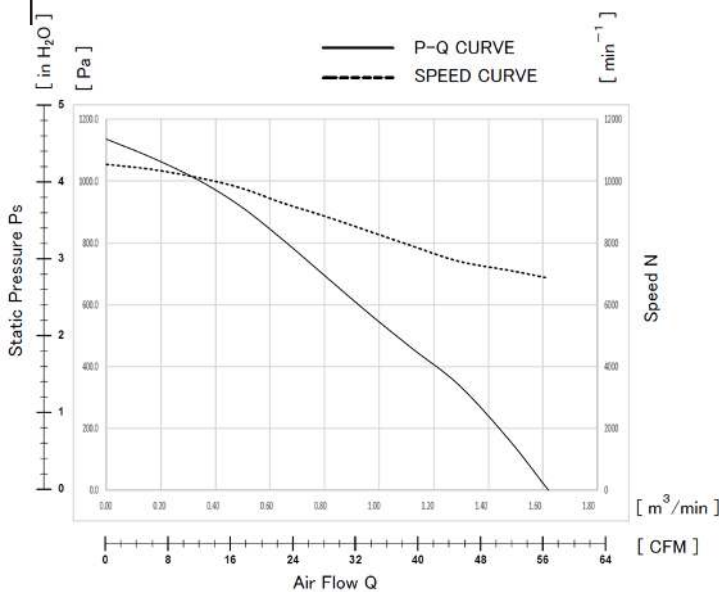
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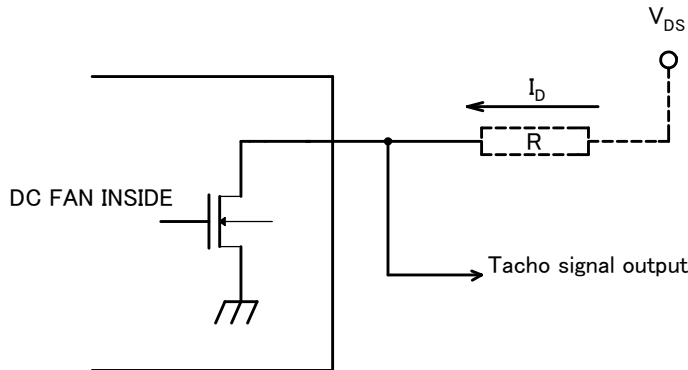
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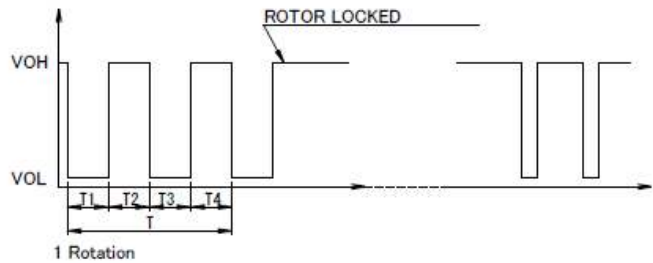


TACHO SIGNAL CIRCUIT

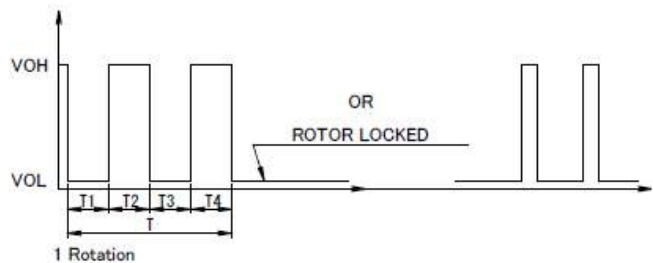
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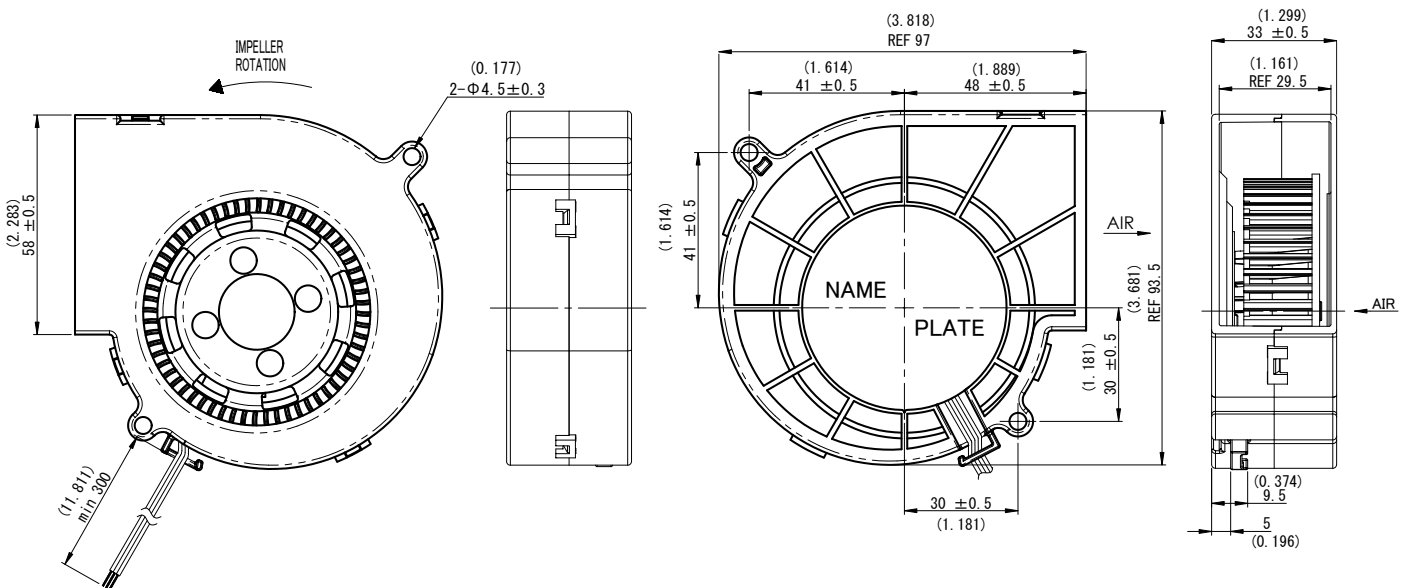
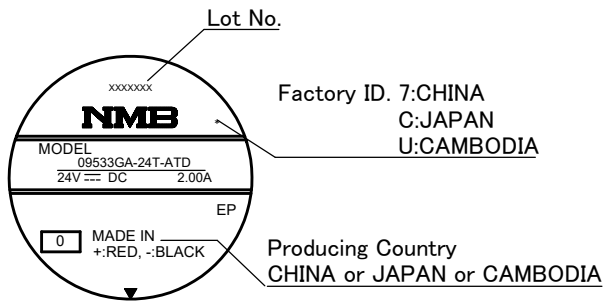
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Unit: mm (inch)