

# San Ace 52 GA type

## Low power consumption fan

Low power consumption fan 52mm

### ■ Features

#### Energy-saving

Power consumption is reduced by approx. 62 % compared with our conventional fan\*1, 2, 3.

#### Low noise

Sound pressure level is reduced by approx. 4 dB(A) compared with our conventional fan\*1, 2, 3.

#### High air flow and high static pressure

- Max. air flow : increased by approx. 33 %
- Max. static pressure : increased by approx. 31 % compared with our conventional product\*1, 2.

\*1: 52sq.x15mm thick. San Ace 52, Model No. 109P0512A701.

\*2: Specification of Model No. 9GA0512P7A001.

\*3: When air flow and static pressure is almost identical.



**52×52×15mm**

### ■ Specifications

Model No.	Rated Voltage [V]	Operating Voltage Range [V]	PWM Duty Cycle [%] <small>Note1</small>	Rated Current [A]	Rated Input [W]	Rated Speed [min <sup>-1</sup> ]	Max. Air Flow [m <sup>3</sup> /min] [CFM]		Max. Static Pressure [Pa] [inchH <sub>2</sub> O]		SPL [dB(A)]	Operating Temperature [°C]	Expected Life [h]
9GA0512P7G001	12	10.2 to 13.8	100	0.13	1.56	7,800	0.50	17.7	91.5	0.367	38	-10 to +70	40,000
9GA0512P7A001				0.08	0.96	6,300	0.40	14.1	59	0.237	32		
9GA0512P7H001				0.05	0.60	4,300	0.275	9.7	27.5	0.110	22		
9GA0512P7M001				0.04	0.48	3,400	0.215	7.6	17	0.068	16		
9GA0524P7G001	24	20.4 to 27.6	100	0.07	1.68	7,800	0.50	17.7	91.5	0.367	38		
9GA0524P7A001				0.05	1.20	6,300	0.40	14.1	59.0	0.237	32		
9GA0524P7H001				0.03	0.72	4,300	0.275	9.7	27.5	0.110	22		
9GA0524P7M001				0.02	0.48	3,400	0.215	7.6	17.0	0.068	16		

Note1: PWM Frequency : 25kHz

Note2: Fan does not rotate when PWM duty cycle is 0%.

### ■ Common Specifications

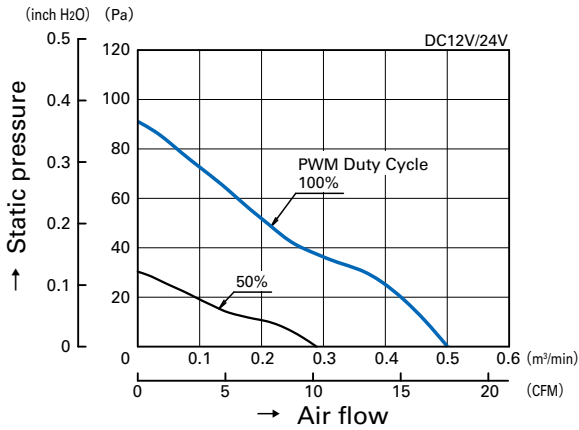
- Material ..... Frame, Impeller : Plastics (Flammability: UL94V-0)
- Expected Life ..... Varies for each model  
(L10: Survival rate: 90% at 60°C, rated voltage, and continuously run in a free air state)
- Motor Protection System ..... Current blocking function and Reverse polarity protection
- Dielectric Strength ..... 50/60 Hz, 500VAC, 1 minute (between lead conductor and frame)
- Sound Pressure Level (SPL) ..... Expressed as the value at 1m from air inlet side
- Operating Temperature ..... Varies for each model (Non-condensing)
- Storage Temperature ..... -30°C to +70°C (Non-Condensing)
- Lead Wire ..... ⊕Red ⊖Black Sensor: Yellow Control: Brown
- Mass ..... Approx. 40g

52mm

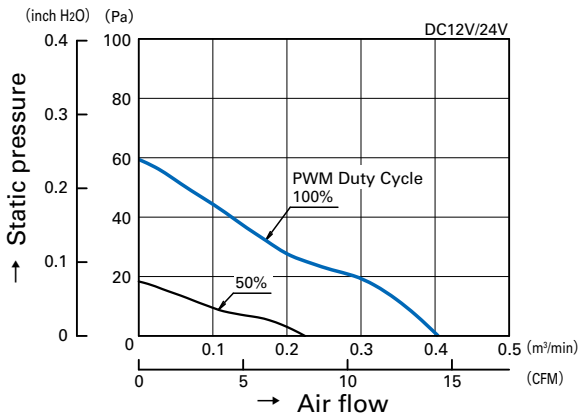
# San Ace 52 GA type

## Air Flow - Static Pressure Characteristics

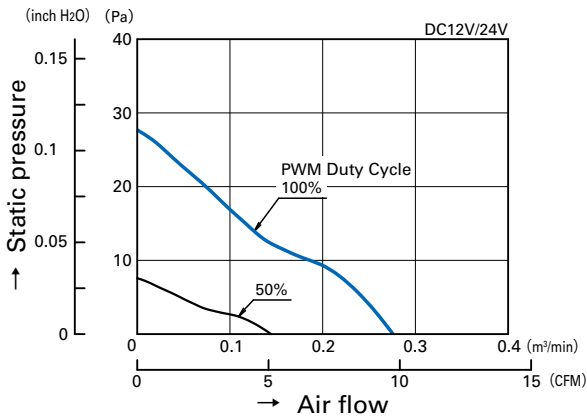
### • PWM Duty Cycle



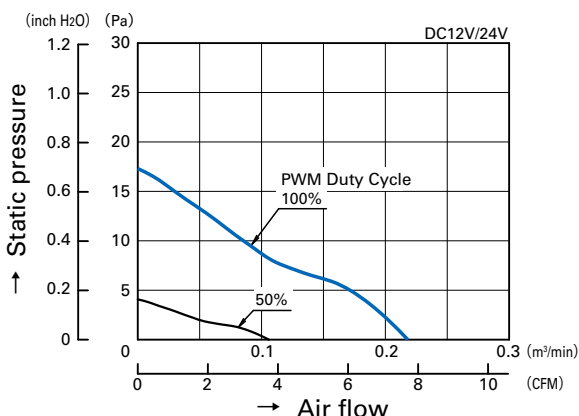
9GA0512P7G001 • 9GA0524P7G001



9GA0512P7A001 • 9GA0524P7A001

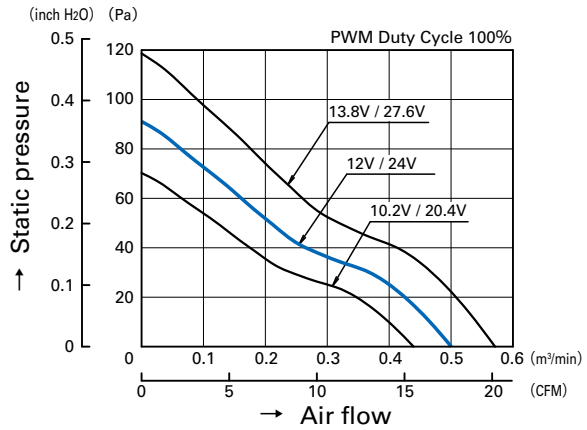


9GA0512P7H001 • 9GA0524P7H001

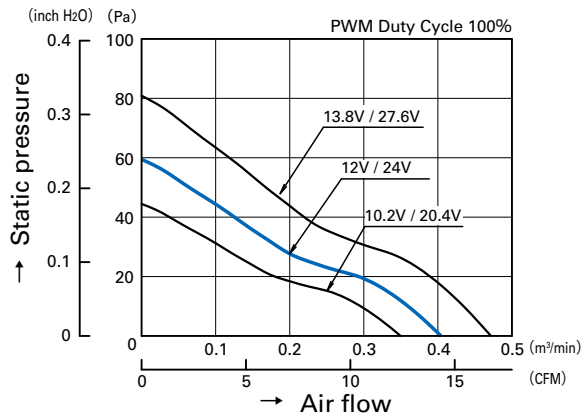


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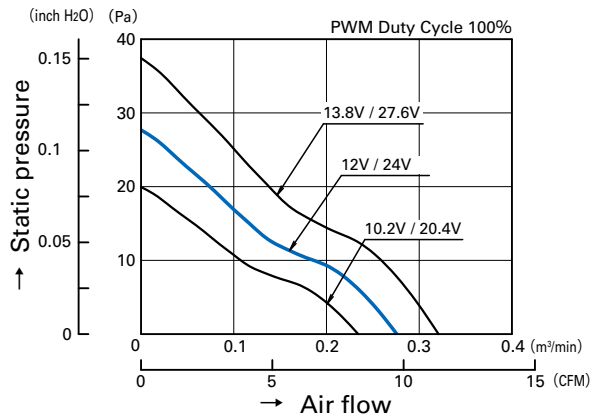
### • Operating Voltage Range



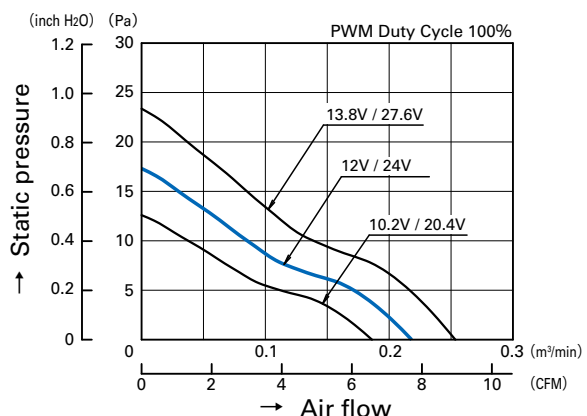
9GA0512P7G001 • 9GA0524P7G001



9GA0512P7A001 • 9GA0524P7A001

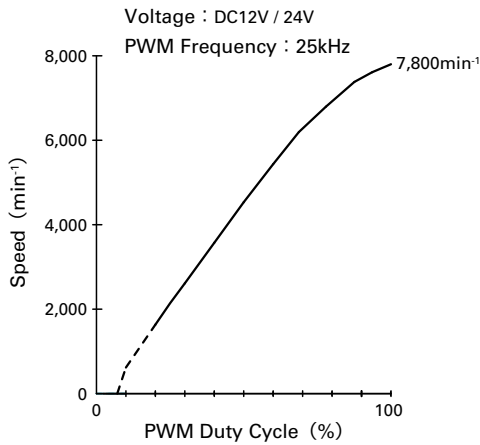


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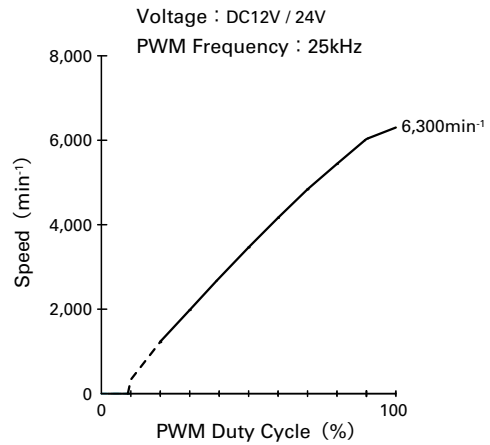


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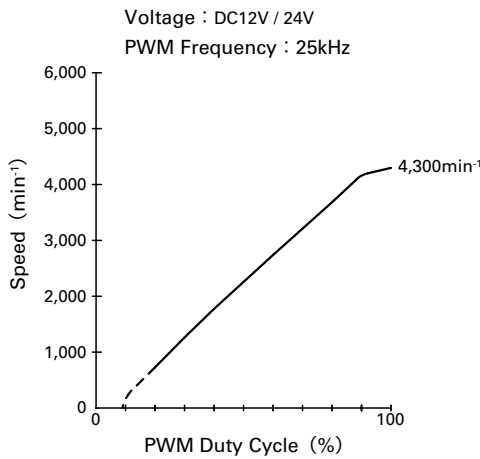
**PWM Duty - Speed Characteristics Example**



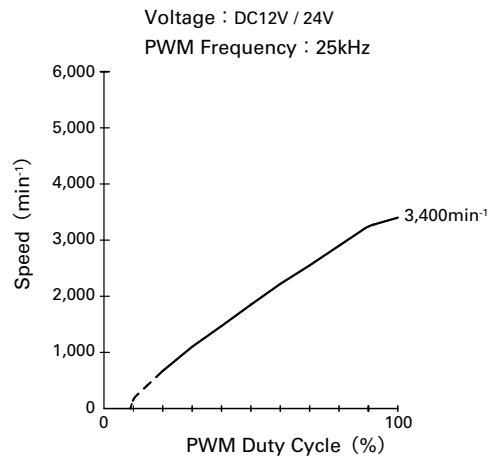
**9GA0512P7G001 · 9GA0524P7G001**



**9GA0512P7A001 · 9GA0524P7A001**



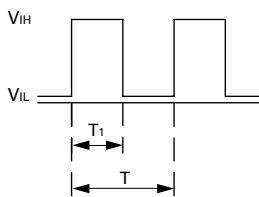
**9GA0512P7H001 · 9GA0524P7H001**



**9GA0512P7M001 · 9GA0524P7M001**

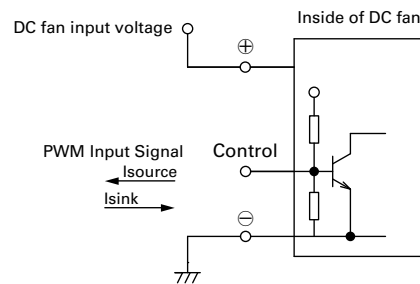
**PWM Input Signal Example**

Input Signal Wave Form



$V_{IH}=4.75V$  to  $5.25V$   
 $V_{IL}=0V$  to  $0.4V$   
 PWM Duty Cycle (%) =  $\frac{T_1}{T} \times 100$   
 PWM Frequency 25 (kHz) =  $\frac{1}{T}$   
 Source Current : 1mA Max. at control voltage 0V  
 Sink Current : 1mA Max. at control voltage 5.25V  
 Control Terminal Voltage : 5.25V Max. (Open Circuit)  
 When the control lead wire is open,  
 speed is same as one at 100% PWM duty cycle.  
 Fan speed could be controlled by PWM input signal  
 of either TTL input or open collector, drain input.

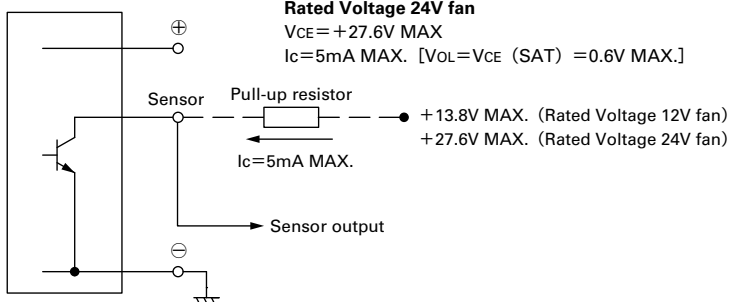
**Connection Schematic**



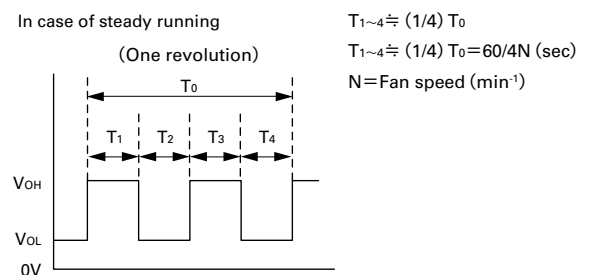
**Pulse Sensor Specification**

Output circuit : Open collector

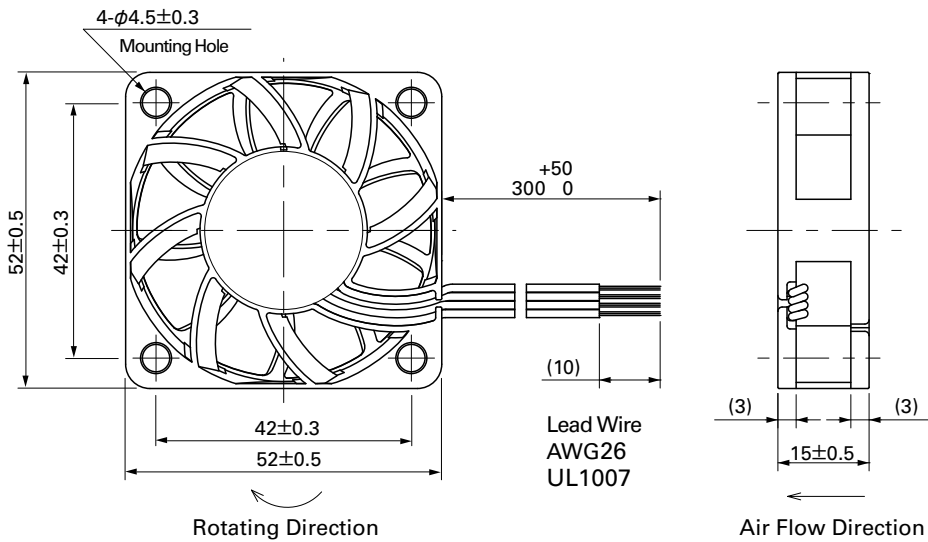
Inside of DC fan



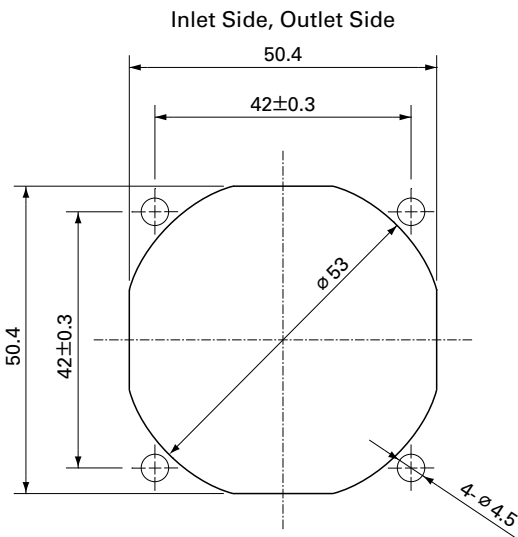
Output waveform (Need pull-up resistor)



## ■ Dimensions (unit : mm)



## ■ Reference dimension of mounting holes and vent opening (unit : mm)



### Notice

- The products shown in the catalog are subject to Japanese Export Control Law. Diversion contrary to the law of exporting country is prohibited.
- To protect against electrolytic corrosion that may occur in locations with strong electromagnetic noise, we provide fans that are unaffected by electrolytic corrosion.