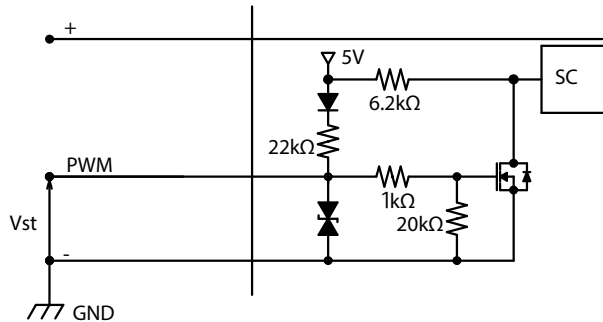


PWM and Tach Output Brushless DC Fan 06076EA-12S (0-Type)

NMB

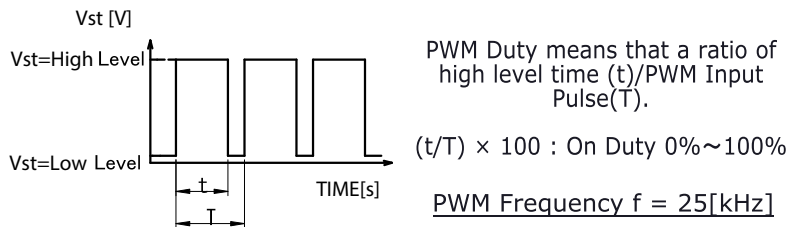
PWM Specifications

Connection



1. PWM Control
 $V_{st} = \text{Low Level (0V} \sim \text{0.4V)} \rightarrow \text{Stop (On Duty 0\%)}$
 $V_{st} = \text{High Level (4.0V} \sim \text{5.0V)} \rightarrow \text{Full Speed (On Duty 100\%)}$
 $V_{st} = \text{Open} \rightarrow \text{Full Speed}$

2. PWM Duty & PWM Input Pulse



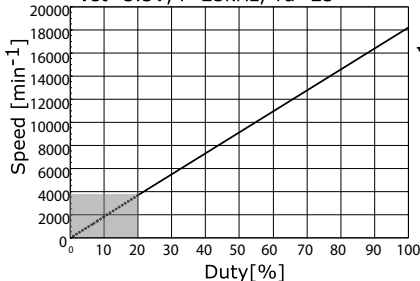
3. The condition for PWM control are as follows

- When you use this under PWM control, always be sure the motor's operation under practical mounting state. Fan motor may not start up caused by PWM control at very low speed condition.)
- To run at Rating Voltage
- Please use the start with Duty 20% or more at 25kHz.[At rated voltage input, Ambient temperature 25°C]

PWM Characteristic Curve

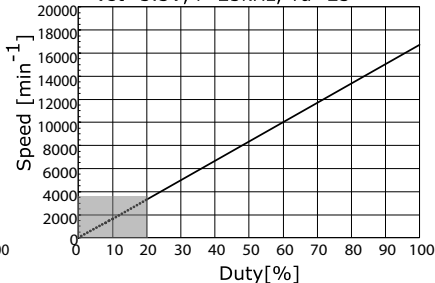
INLET SIDE

PWM Duty vs Speed Curve
 <Reference Value>
 Conditions: At Rating Voltage,
 $V_{st}=3.3V, f=25kHz, T_a=25$



OUTLET SIDE

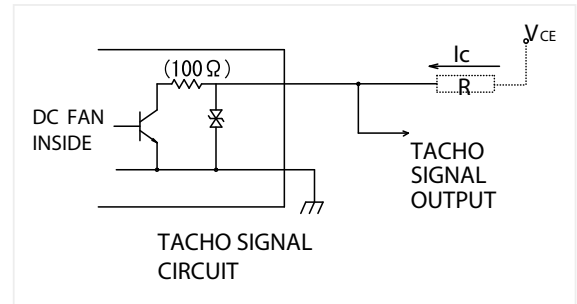
PWM Duty vs Speed Curve
 <Reference Value>
 Conditions: At Rating Voltage,
 $V_{st}=3.3V, f=25kHz, T_a=25$



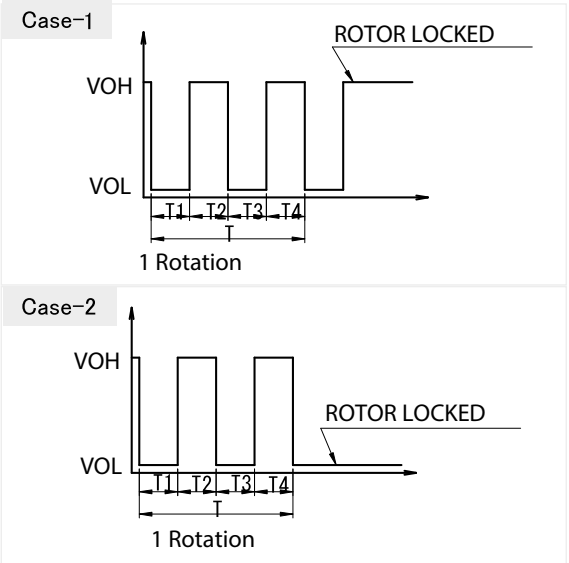
TACHO Specifications

Tachometer Signal

1. OUTPUT CIRCUIT : OPEN COLLECTOR
2. SPECIFICATION
 Absolute Maximum Ratings at $T_a=25^\circ\text{C}$
 $V_{CE \text{ max}} : +15V$
 $I_c \text{ max} : 5mA [V_{CE(sat)max} = 1.5V]$



3. Output Waveform: At Rated Voltage Output Signal Voltage



- 1) When the rotor is locked at VOH position of signal, signal keeps VOH position.
- 2) When the rotor is locked at VOL position of signal, signal keeps VOL position.
- 3) $T = T_1 + T_2 + T_3 + T_4 = 60/m = 1 \text{ rotation}$

m : Fan Speed (min^{-1})

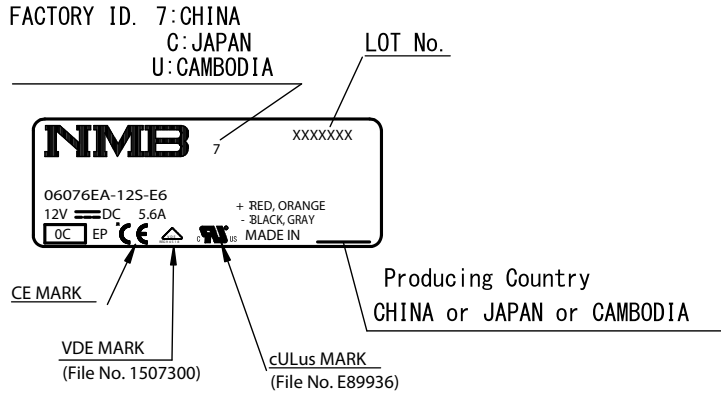
Tacho Duty Cycle = $50\% \pm 10\%$

PWM and Tach Output Brushless DC Fan 06076EA-12S (0-Type)

NMB

Outlines

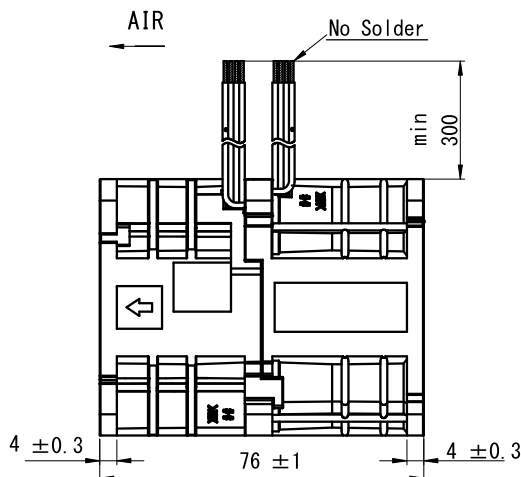
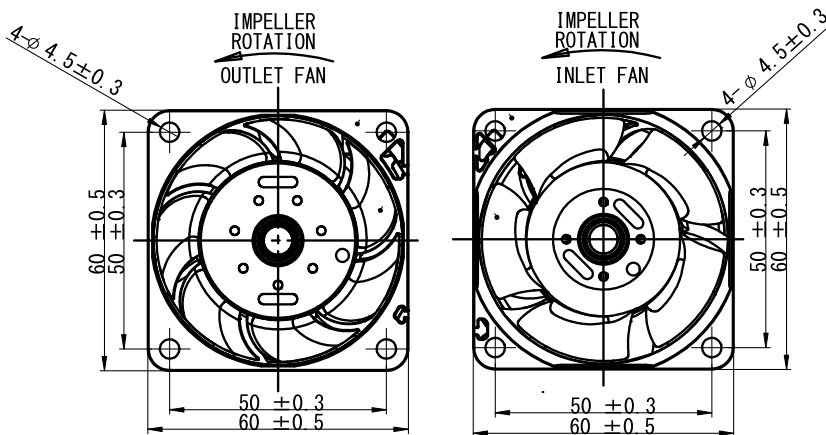
(Name Plate)



Materials

Casing [Inlet & Outlet]: Plastic(Black UL94V-0)
Impeller [Inlet & Outlet]: Plastic(Black UL94V-0)
Bearing: Steel Ball Bearing
Lead Wire: UL10368 AWG22 for Red, Black Orange, Gray or Equivalent
 UL10368 AWG24 for White, Brown, Yellow, Blue or Equivalent
[Inlet Fan]: Red (+), Black (-), White (Tach), Brown (PWM)
[Outlet Fan]: Orange (+), Gray (-), Yellow (Tach), Blue (PWM)

(Outline)



(Panel Out-line)

