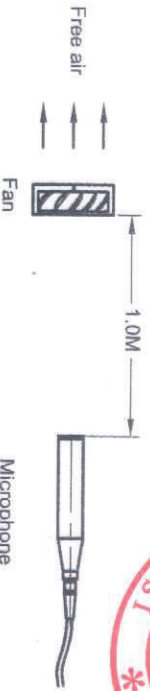


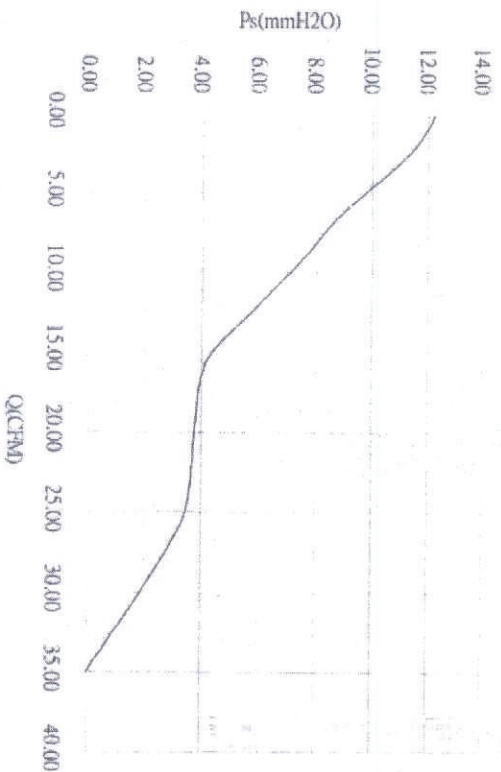
| ITEMS | DESCRIPTION |
|------------------------------------|--|
| Rated Voltage | D.C. 12V |
| Operating voltage | D.C. 5V-13.8V |
| Start up voltage | D.C. 5V (At 25°C Power ON/OFF and 100% duty cycle) |
| Current | 0.38A |
| Power | 4.56W |
| Speed | 6,700±10%rpm (At 25°C, To record speed after fan running normal. This time about 3-5minutes) |
| Air flow (at zero static pressure) | 34.98CFM(0.991m ³ /min) Min:31.48CFM (0.892m ³ /min) |
| Air pressure (at zero air flow) | 12.23mmH ₂ O (0.481inchH ₂ O) Min:9.91mmH ₂ O (0.390inchH ₂ O) |
| Acoustical noise | 42.5dB(A) Max: 45.5dB(A) |
| Life expectancy(L10) | 70,000hrs continuous at 40°C, 15-65% relative humidity |
| Insulation resistance | Min 10M Ω between internal stator and lead wire (+) at 500VDC |
| Dielectric strength | 5mA max at 600VAC 50Hz 1 second between frame and (+) terminal |
| Operating temperature and humidity | -10 to 70°C, 5% to 90%RH |
| Storage temperature and humidity | -40 to 70°C, 5% to 95%RH |

Noise Test: (ISO10302)

1. Measurement within anechoic chamber under free air condition
2. Microphone is placed at a distance of 1m on the axis of air intake side
3. Chamber background noise max 6.7dB(A)
4. Using microphone: G.R.A.S 1/2 inch measure system 40AE+26CA or 1 inch low measure system 40HF
5. Test system: National Instrument NI-4474 data acquisition system
6. Acoustical noise at rated speed
7. The noise level will be according to test result from the chamber



Pq curve: (Rated Voltage or rated voltage at 100%PWM if applied)

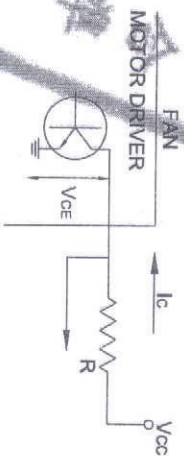


Output of rotary Signal:

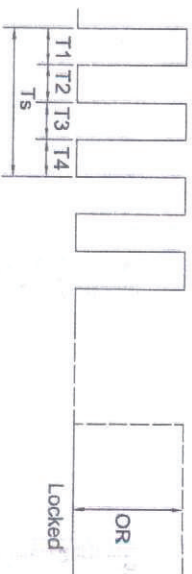
Output method: open collector methode

2-1. Circuit Specification:

- Vcc: =15V MAX
- Vce(sat):=1.0 V MAX
- Ic=5mA MAX
- R \geq Vce/Ic

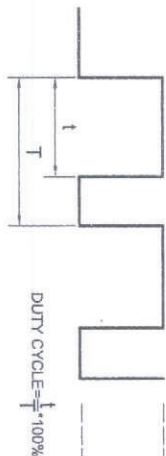


2-2. Frequency Generator Waveform:



One Fan Rotation
N: Revolution per minute (rpm).
 $T1 \sim T4 \approx T1s = \frac{60}{N}$ (sec).
Pulse width duty = $T1 \div (T1+T2) = 50\pm 5\%$

PWM Signal:

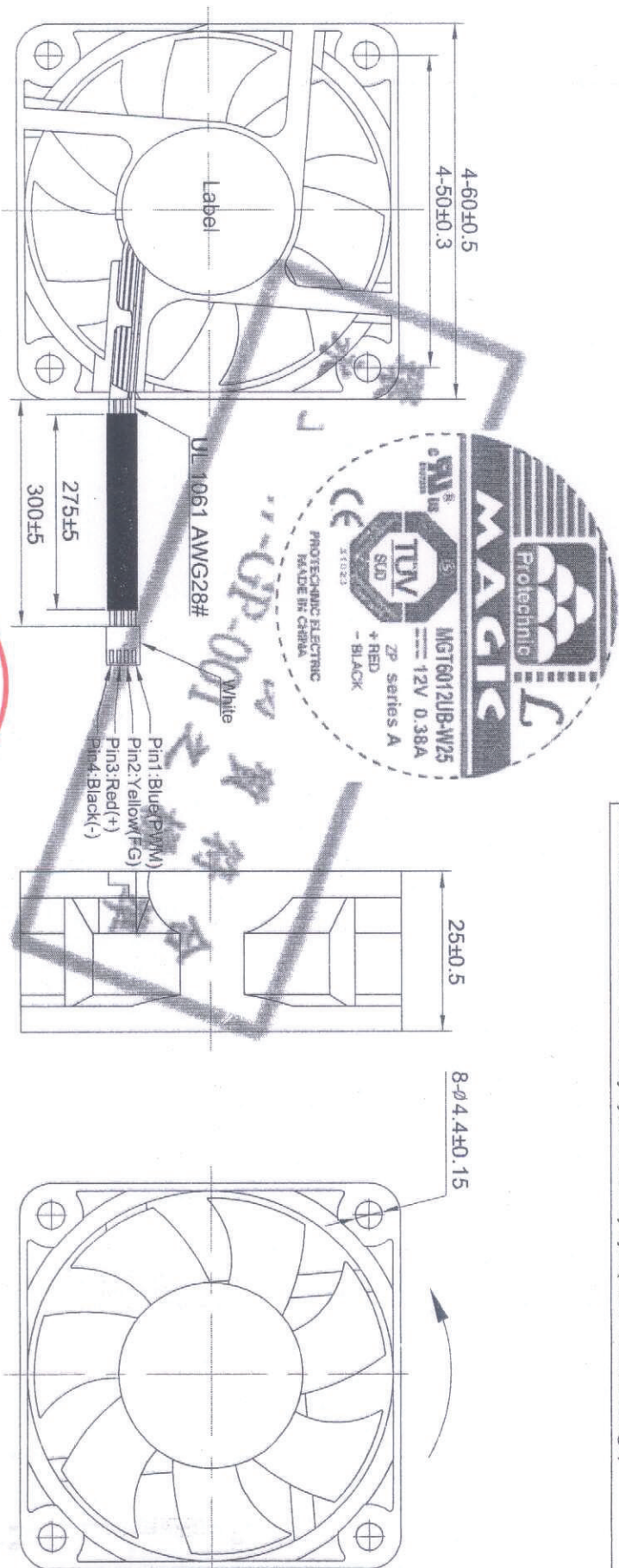


| | |
|--------------|---------------------------|
| High signal: | 20VDC MAX 2.8VDC MIN |
| Low signal: | 0.4VDC MAX -0.8VDC MIN |

1. The control signal frequency of the fan shall be able 18-25KHZ.
2. The preferred operating point for the fan is 25KHZ.
3. At 100% duty cycle, the rotor will spin at maximum speed.
4. With control signal lead disconnected, the fan will spin at maximum speed.

| ITEMS | DESCRIPTION | REMARKS |
|---------------------------|--------------------------------|-------------------------|
| Frame | PBT(30%GF) UL: 94V-0 | |
| Impeller | PBT(30%GF) UL: 94V-0 | |
| Weight | 60g | |
| Bearing | Dual ball bearings | |
| Housing | WST P4-125004 | or equivalence |
| Terminal | WST 125004PS-2 | or equivalence |
| Tube | Black PVC tube ϕ 3.38mm | |
| Label | ϕ 27mm Material: PET | |
| Speed Vs duty cycle (12V) | Duty cycle(%) Speed (R.P.M) | 100% 6,700 \pm 10% |
| | | 56% 3,700 \pm 10% |
| | | 0-20% 1250 \pm 250 |

PWM test method: From 100% duty-cycle to 0% duty-cycle(At 25°C, rated voltage)



| | | | |
|------------------|--|------|----|
| DC BRUSHLESS FAN | | Unit | mm |
|------------------|--|------|----|



PROTECHNIC ELECTRIC CO.,LTD.

R-RD-046R1.4-4/4