

2 **Electrical Specifications**

2.1 **Voltage**

Fan operating voltage shall be within the range 12 V \pm 1.2 V.

2.2 **Current**

Peak fan current draw during start-up operation (with 13.2 V applied, with fan operating in the free stream condition) shall not exceed 2.0 A.

Fan current spike during start-up operation (with 13.2 V applied, with fan operating in the free stream condition) shall be allowed to exceed 1.0 A for a duration of no greater than 1.0 sec.

2.3 **Tachometer Output Signal**

Fan shall provide tachometer output signal with the following characteristics:

- Two pulses per revolution
- Open-collector or open-drain type output
- Motherboard will have a pull up to 12V, maximum 13.2V

2.4 **PWM Control Input Signal**

The following requirements are measured at the PWM (control) pin of the fan cable connector:

PWM Frequency: Target frequency 25 kHz, acceptable operational range 21 kHz to 28 kHz

Maximum voltage for logic low: $V_{IL} = 0.8 \text{ V}$

Absolute maximum current sourced: $I_{max} = 5 \text{ mA}$ (short circuit current)

Absolute maximum voltage level: $V_{Max} = 5.25 \text{ V}$ (open circuit voltage)

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