

The peak current of the motor is 9.5A and the peak phase current of the driver is 8A.
The motor have 3 phases and at least two of them active at once. This means that the approximate minimum peak phase current needed for efficient control is:

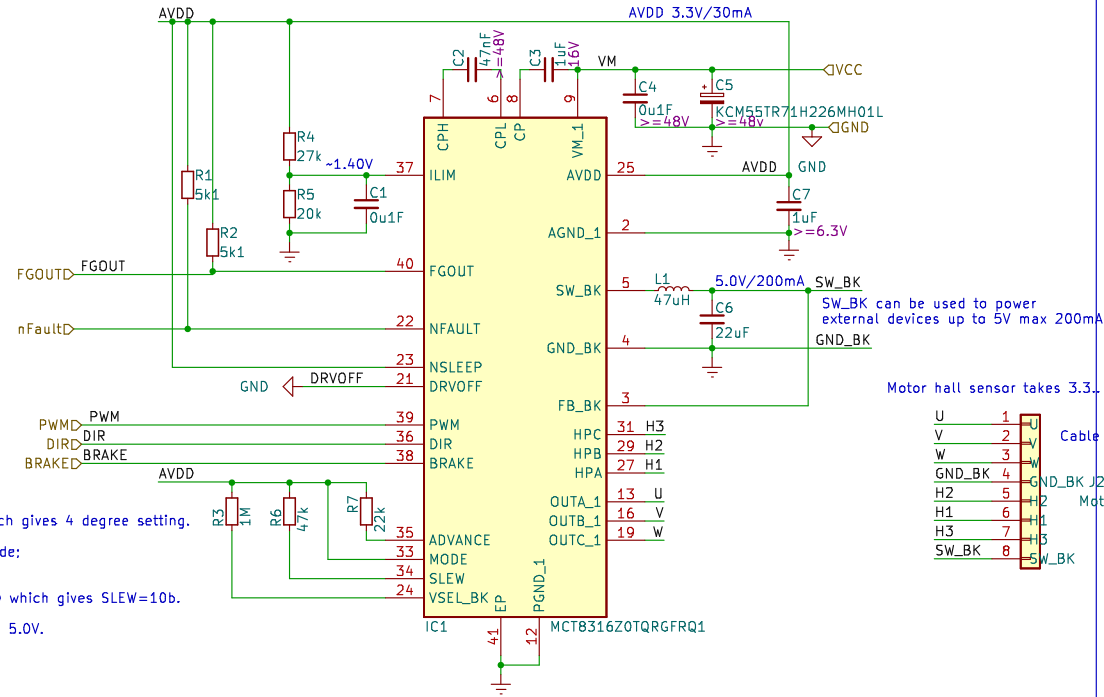
$$I_{outx} = 9.5A / \sqrt{3} = 5.48A.$$

Therefore if cycle-by-cycle threshold is set to $5.48A \cdot 0.9 > I_{lim}$ it will be sufficient for the driver to handle the motor load.

$$I_{lim} = 5.48 \cdot 0.9 = 4.94A$$

$$\Rightarrow V_{lim} = AVDD/2 - 0.4 \cdot I_{lim}/8 = 1.40V \text{ (Calc. according datasheet)}$$

Motor Driver and Connectors



ADVANCE is tied to 22k Ohms to AVDD which gives 4 degree setting.

MODE is tied to AVDD which gives PWM Mode; synchronous digital hall input.

SLEW is tied to 47k Ohms resistor to AVDD which gives SLEW=10b.

VSEL_BK is set to HI-z which gives SW_BK 5.0V.