Info from datasheet NJM3774

Current control

The output current to the motor is de-termined by the voltage at the reference input and value of sensing resistor, RS (R1 or R2).

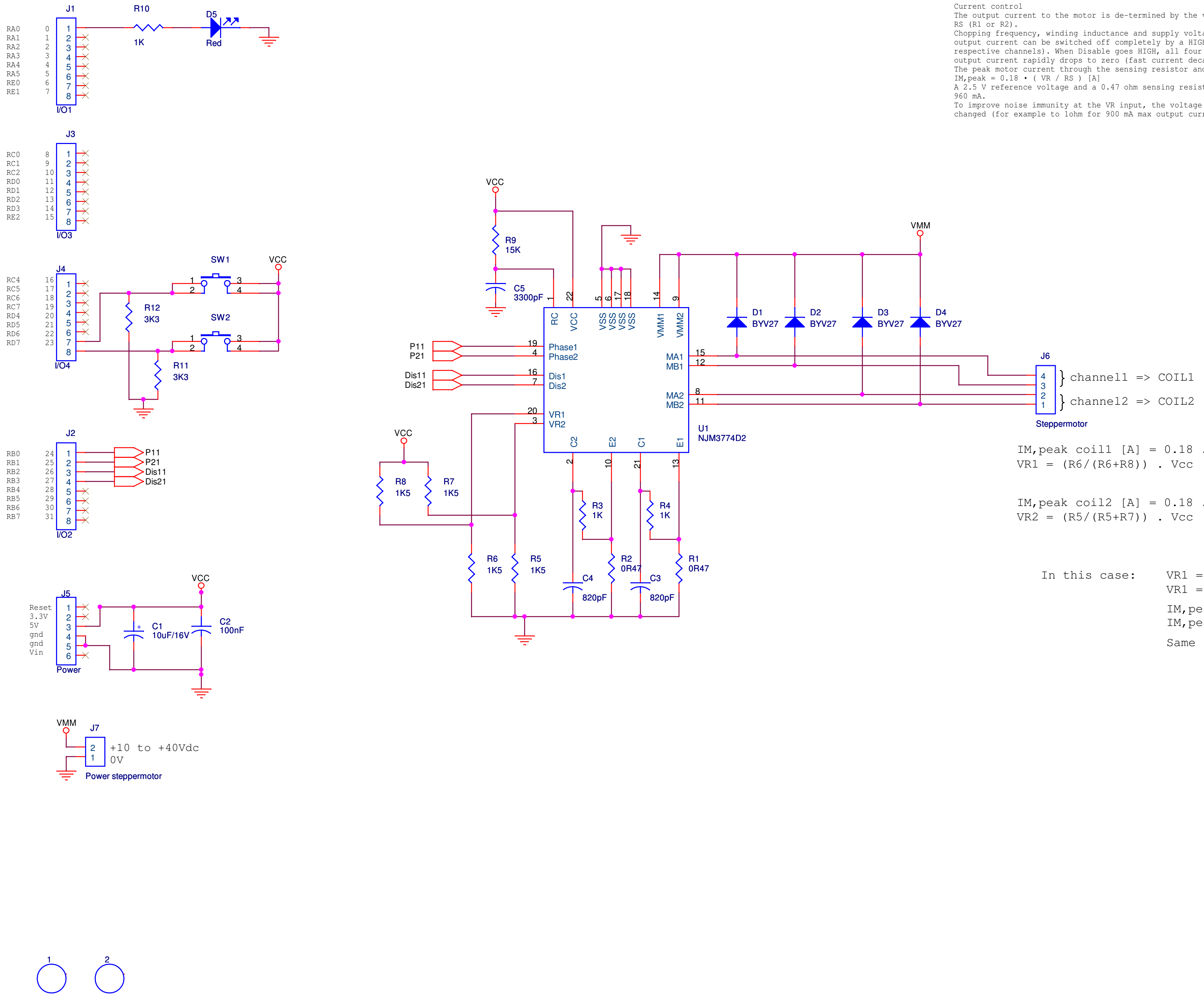
Chopping frequency, winding inductance and supply voltage also affect the current, but to much less extent. The output current can be switched off completely by a HIGH input level at the Dis-able input (Dis1 and Dis2 for respective channels). When Disable goes HIGH, all four transistors in the output stage are switched off, and the output current rapidly drops to zero (fast current decay see figure 3).

The peak motor current through the sensing resistor and the motor winding can be expressed as:

IM,peak = 0.18 • (VR / RS) [A]

A 2.5 V reference voltage and a 0.47 ohm sensing resistor will produce an out-put current level of approximately 960 mA.

To improve noise immunity at the VR input, the voltage control range can be increased to 5 V if RS is correspondingly changed (for example to 1ohm for 900 mA max output current).



BIPOLAIR steppermotor

IM,peak coil1 [A] = 0.18 . (VR1 / R1)
VR1 = (R6/(R6+R8)) . Vcc

IM,peak coil2 [A] = 0.18 . (VR2 / R2)
VR2 = (R5/(R5+R7)) . Vcc

In this case: VR1 = (R6/(R6+R8)) . Vcc
VR1 = (1K5/(1K5+1K5)) . 5V => VR1 = 2,5V

IM,peak coil1 [A] = 0.18 . (2,5V /0.47 Ohm)
IM,peak coil1 = 0.96A

Same for IM,peak coil2

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