

Gate Resistor calculations:

With VDD=9V of Gate Driver  
 $R_{max\_rise} = 7\text{ohm} (1.3A) \rightarrow \text{use } 10\text{ohm}$   
 $R_{max\_fall} = 5\text{ohm} (1.8A) \rightarrow 10\text{ ohm for diode in parallel } 10\text{ohm} \rightarrow 5\text{ohm}$

Diode Candidates (fast switching):  
 - UF4007

<- new cap  
 tests showed this reduces noise caused by mosfet switching

Sheet: /Motor1\_Output\_Power\_Stage\_A/  
 File: Motor\_Output\_Power\_Stage.kicad\_sch

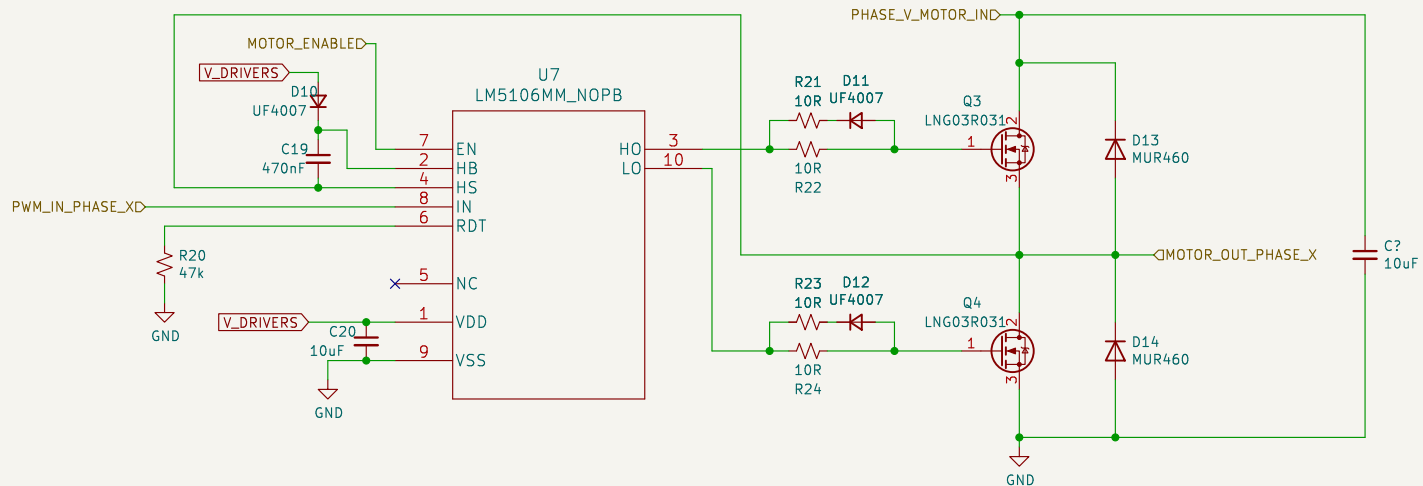
**Title: Motor Driver – Power Stage**

Size: A4 Date: 2025-11-1

KiCad E.D.A. 9.0.6

Rev: 0

Id: 2/7



Gate Resistor calculations:

With VDD=9V of Gate Driver  
 $R_{max\_rise} = 7\text{ohm} (1.3A) \rightarrow \text{use } 10\text{ohm}$   
 $R_{max\_fall} = 5\text{ohm} (1.8A) \rightarrow 10\text{ ohm for diode in parallel } 10\text{ohm} \rightarrow 5\text{ohm}$

Diode Candidates (fast switching):

– UF4007

<– new cap tests showed this reduces noise caused by mosfet switching

Sheet: /Motor1\_Output\_Power\_Stage\_B/  
 File: Motor\_Output\_Power\_Stage.kicad\_sch

**Title: Motor Driver – Power Stage**

Size: A4 Date: 2025-11-1

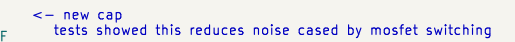
KiCad E.D.A. 9.0.6

Rev: 0

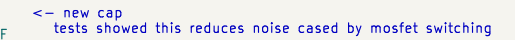
Id: 3/7







Id: 6/7



Id: 7/7