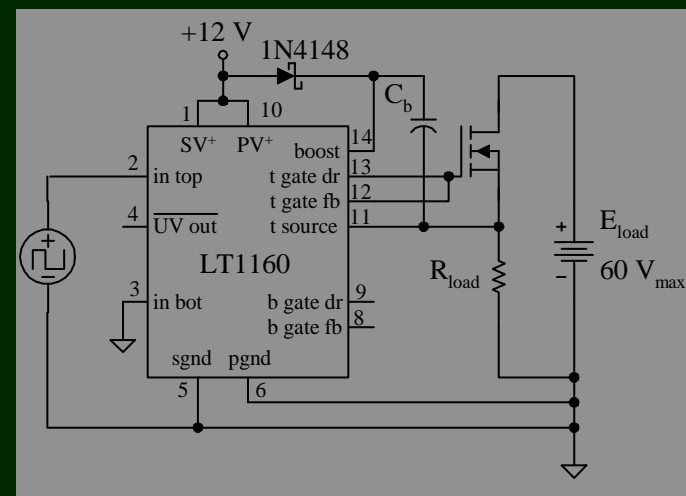
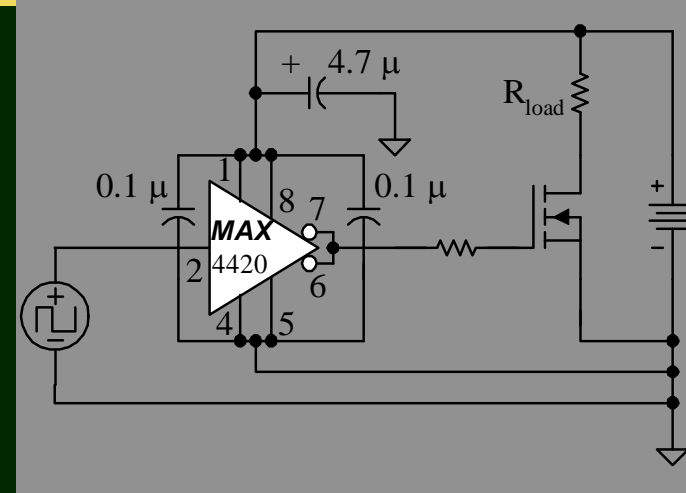
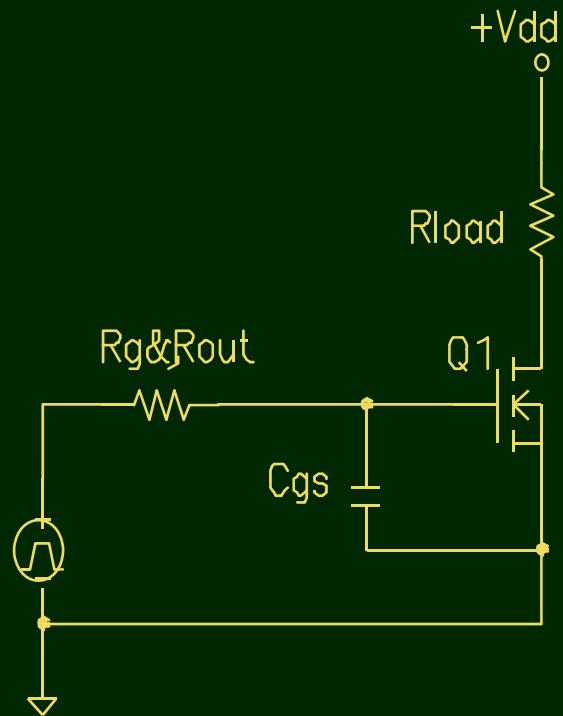
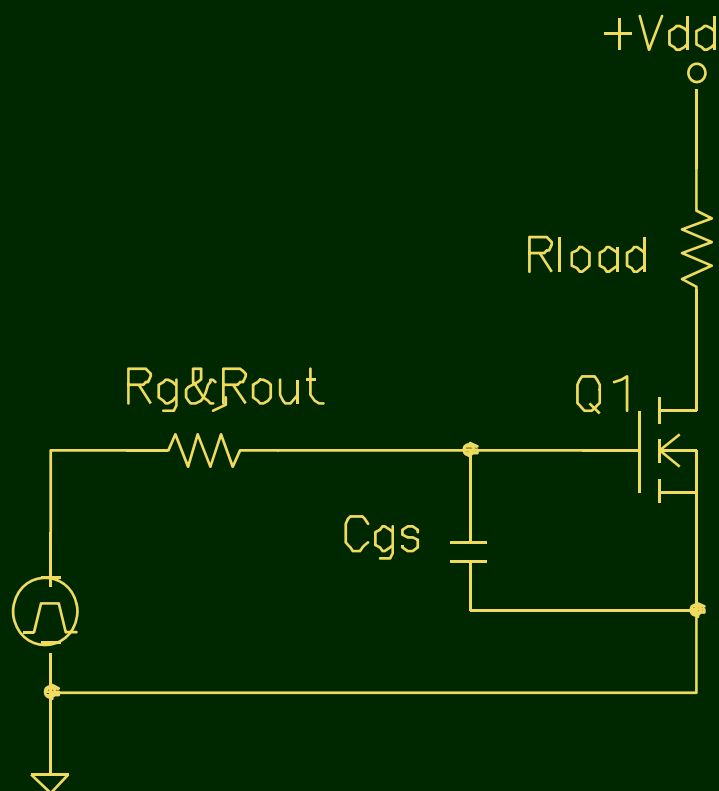


Switch Drivers



MosFet Driver Requirements



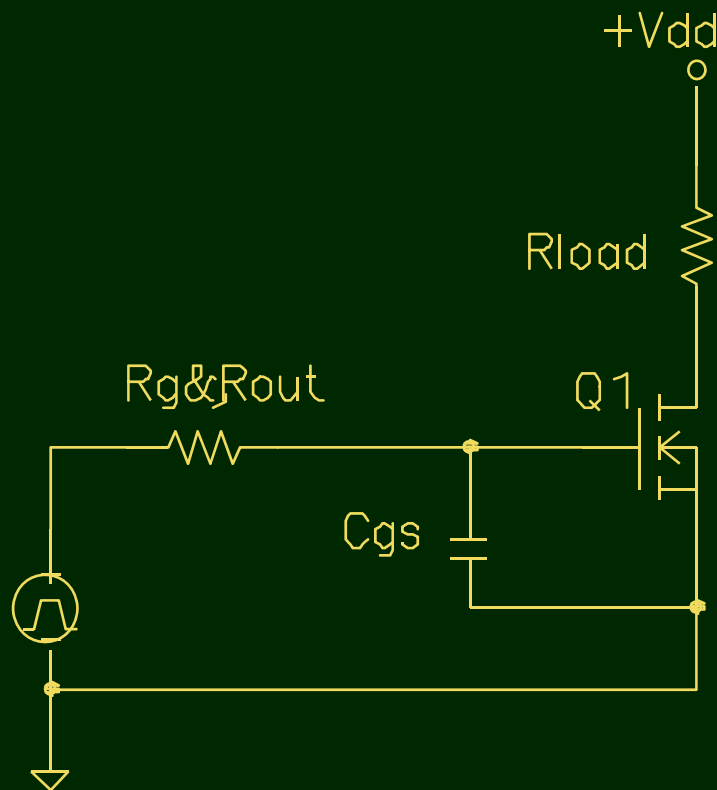
C_{gs} parasitic $\sim C_{iss}$
for IRF3710?

must charge to $V_{th} \Rightarrow ON$

ΔQ_g total charge to gate $\Rightarrow ON$
for IR3710?

t_f fall time of V_{DS} (Δt)
for IRF3710?

MosFet Driver Requirements



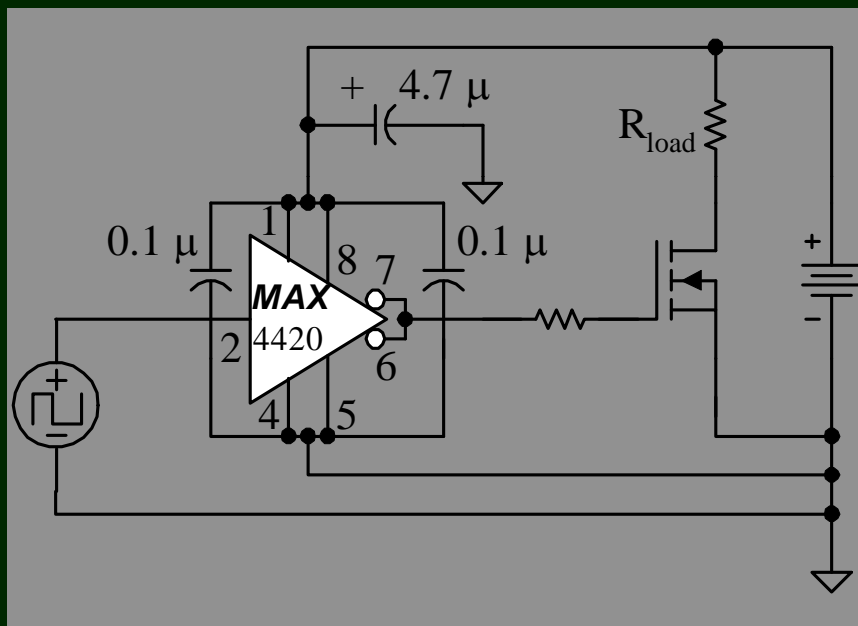
$$\Delta Q_g <$$

$$\Delta t \sim$$

$$i(t) = \frac{dq}{dt} \approx \frac{\Delta Q}{\Delta t}$$

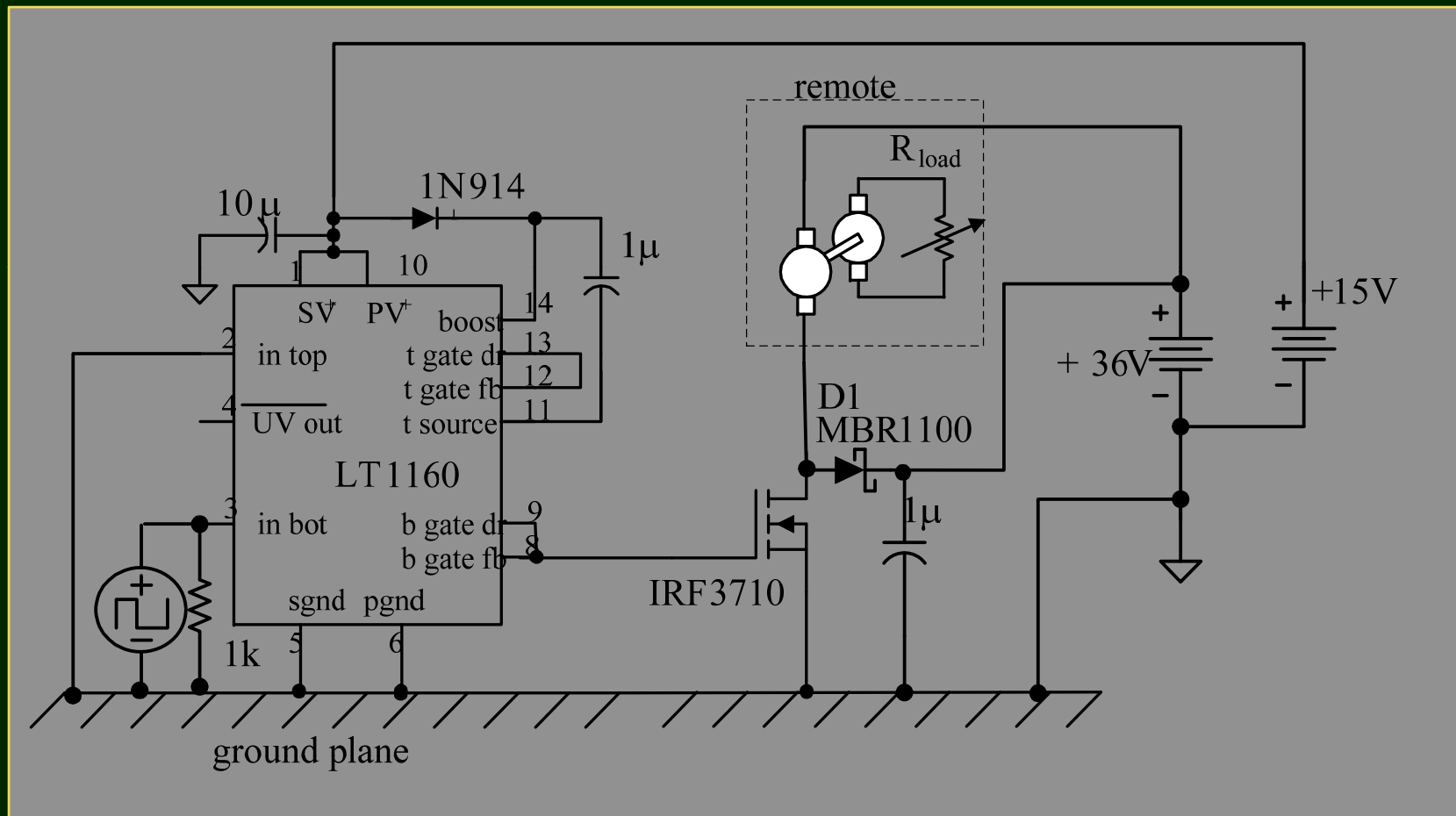
$$i(t) = ?$$

MAX 4420 Low Side Driver



- V_{dd} 4.5 V to 18 V
- Noninverting
- 25 mV saturation
- I_{out} 6A into 2500 pF
- $f_{max} > 300$ kHz
- Layout, ground plane, Decoupling!!

LT1160 Low Side Driver (lab)



High-side motor driver (lab)

