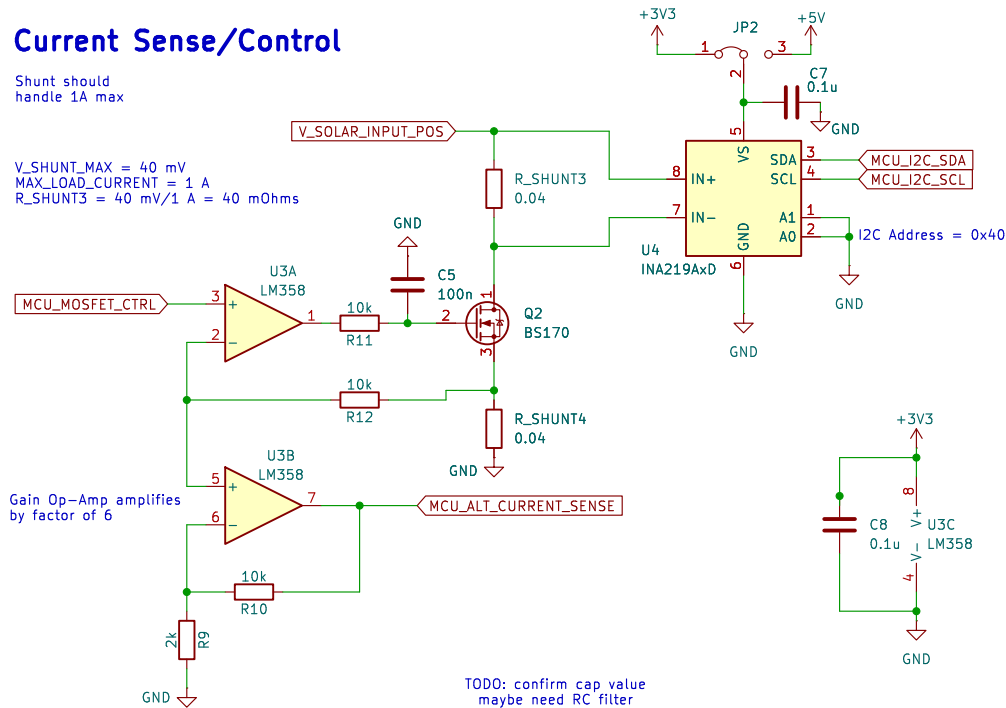


Shunt should
handle 1A max

Gain Op-Amp amplifies
by factor of 6



TODO: confirm cap value
maybe need RC filter

PWM Pins: 3 5 6 9 10 11

```
V_out = 3.3
V_in = 20
R_top = 10000
I_leakage = 0.005
min_sum = V_in / I_leakage
R_bottom = (V_out * R_top) / (V_in - V_out)
```

Rev 0 Perfboard = 9.68k, 2.18k, so ratio = 0.183811

Pinout diagram for J3 connector:

- Pin 1: +3V3
- Pin 2: +5V
- Pin 3: MCU_ADC_SENSE
- Pin 4: MCU_I2C_SCL
- Pin 5: MCU_I2C_SDA
- Pin 6: MCU_MOSFET_CTRL
- Pin 7: GND

Connector: J3 Conn_01x07

This schematic will first be built on a perfboard, and will likely be manufactured into a PCB shortly thereafter.

Rev: Rev 0
Id: 1/1