

matei repair lab

Sheet: /usb/
File: usb.kicad_sch

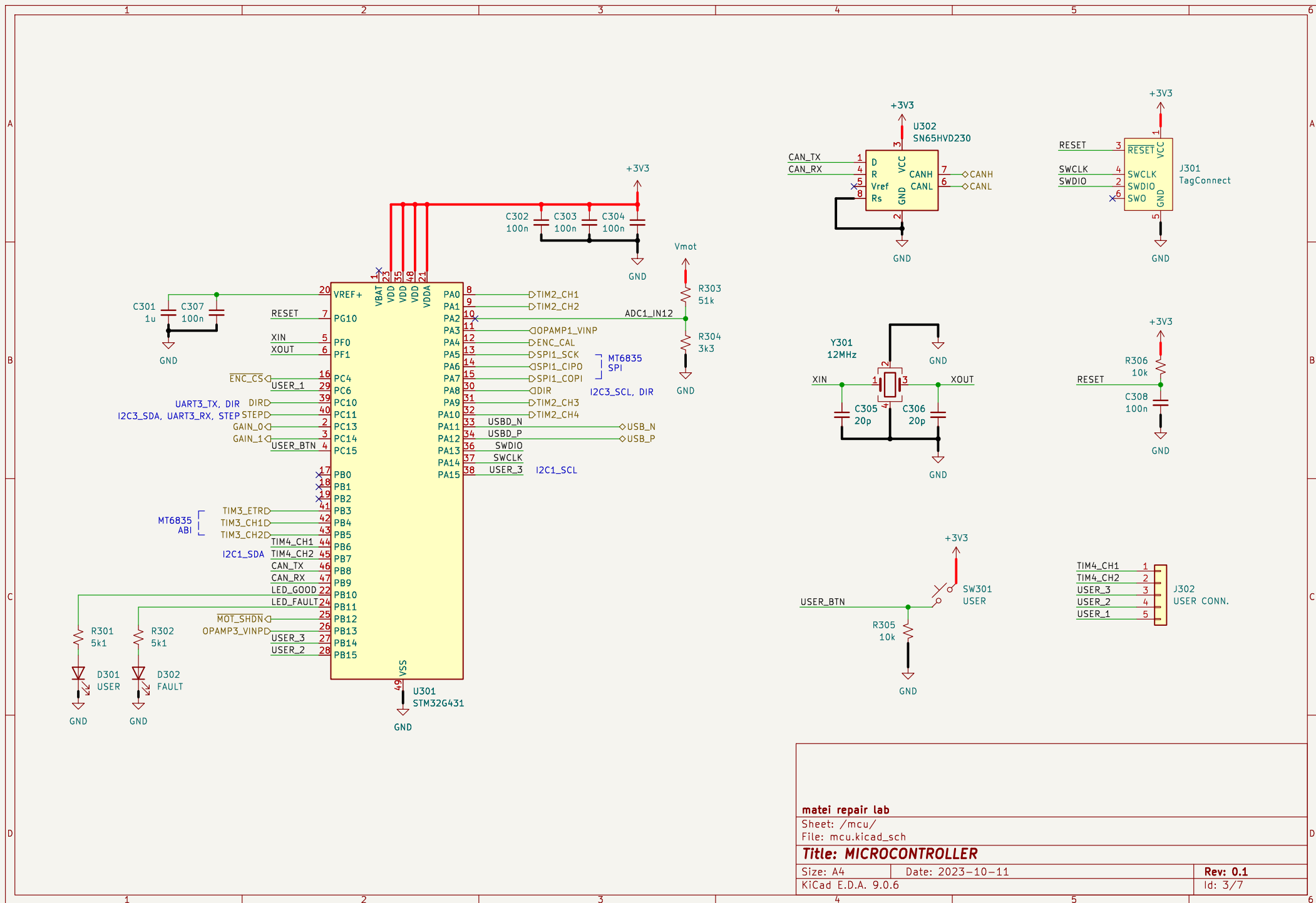
Title: USB & ESD

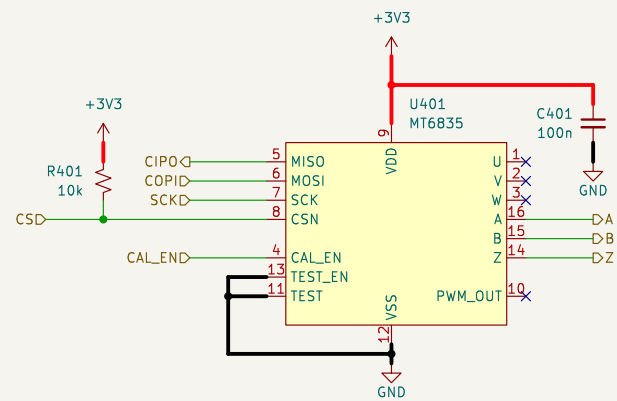
Size: A4 Date: 2023-10-11

KiCad E.D.A. 9.0.6

Rev: 0.1

Id: 2/7





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Sheet: /encoder/

File: encoder.kicad_sch

Title: MAGNETIC ENCODER 14 BIT

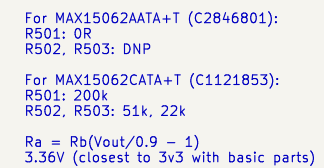
Size: A4

Date: 2023-10-11

Rev: 0.1

KiCad E.D.A. 9.0.6

Id: 4/7



Sheet: /psu/
File: psu.kicad_sch

Title: POWER SUPPLY & FILTERING

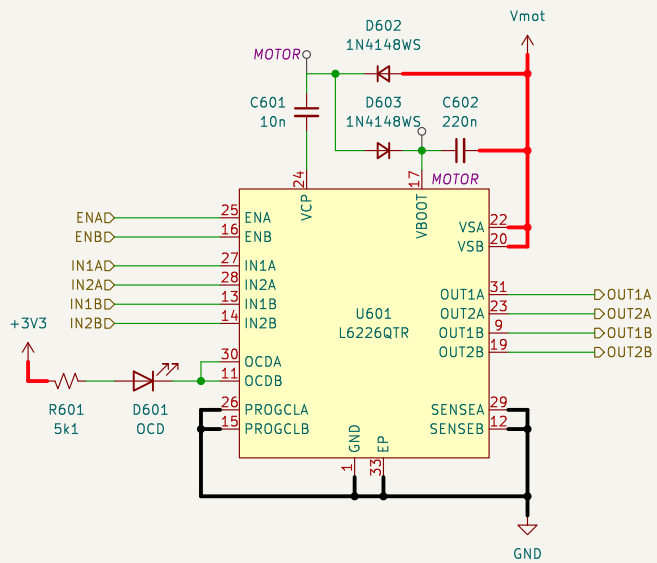
Size: A4

Date: 2023-10-11

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Rev: 0.1

Id: 6/7



Sheet: /half bridges/
File: halfbridges.kicad_sch

Title:

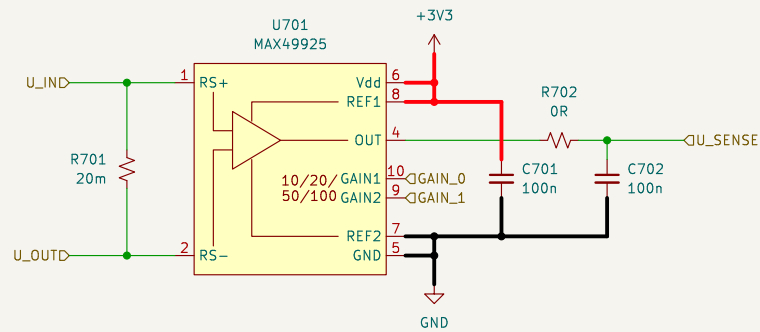
Size: A4

Date:

KiCad E.D.A. 9.0.6

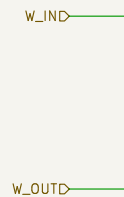
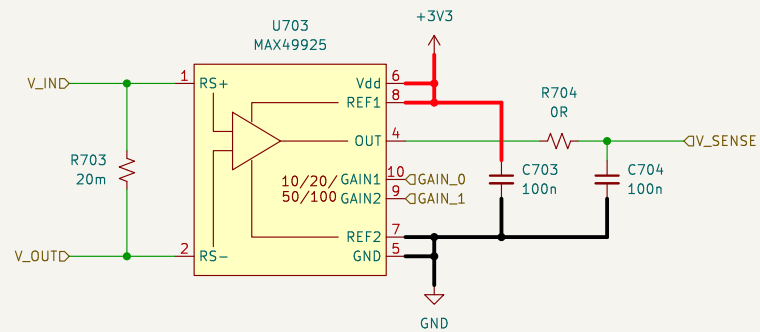
Rev:

Id: 7/7



$V = IR$
 $2.9V \text{ ADC } V_{RefBuff} / 20 \Rightarrow 0.145V \text{ input}$
 $R = 0.145V / 2A \Rightarrow 72m \text{ sense resistor}$
 $P = 0.145 * 2 \Rightarrow 300mW \text{ rating}$

Gain 50V/V
 $2.9 / 50 \Rightarrow 58mV \text{ full range}$
 $2 * 0.020 \Rightarrow 40mV$
 $0.04 * 2 = 80mW$



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Sheet: /current sense/
 File: currentsense.kicad_sch

Title: HALL CURRENT SENSING

Size: A4 Date: 2023-10-11

KiCad E.D.A. 9.0.6

Rev: 0.1

Id: 8/7