

For L :  
 $E^*T = (V_{IN} - V_{OUT}) * (V_{OUT} / V_{IN}) * (1000 / 52)$   
With  $V_{IN} = 20V$   
 $E^*T(max) = 96.154 V * us$  at  $V_{OUT} = 10V$   
 $L = 150uH$   
 $I_{MAX} = 1.15 * 3 = 3.45A$

Check Python Notebook for Resistors calculations

Sheet: /SMPS/  
File: smps.kicad\_sch

**Title:**

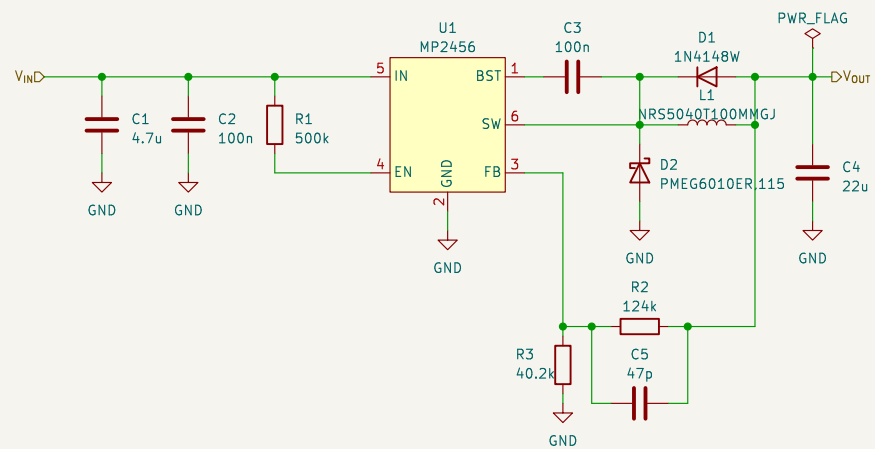
Size: A4

Date:

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Sheet: /MCU DCDC/  
File: mcu\_dcdc.kicad\_sch

**Title:**

Size: A4

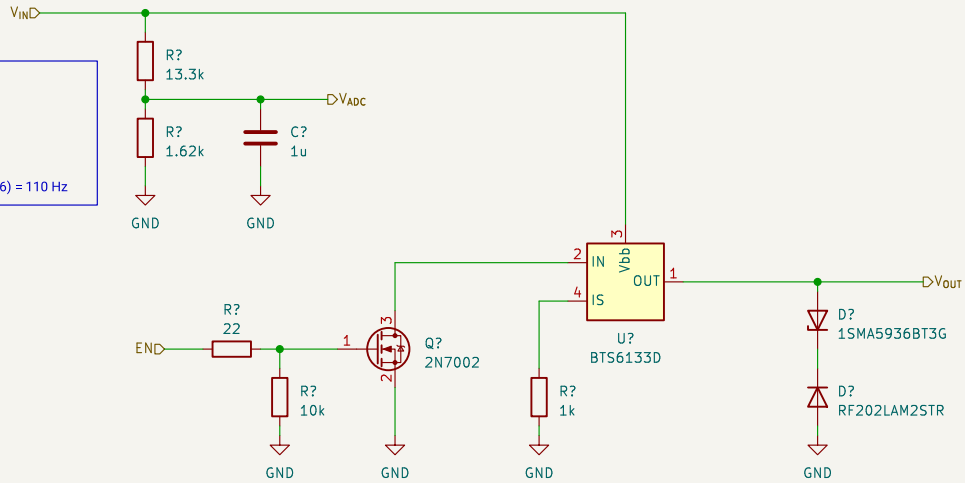
Date:

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$V_{MAX} = 30V$   
For  $V_{ADC} = 3.3V$   
 $R_h = 13.3k$   
 $R_l = 1.62k$   
For  $C = 1\mu$   
 $f_{ADC} = 1/(2*\pi*(R_h/R_l)*1e-6) = 110\text{ Hz}$



Sheet: /Out Power Control/  
File: outpowercontrol.kicad\_sch

**Title:**

Size: A4

Date:

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Rev:

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