

Under higher current (>2.5A) and room temperature (25°C), the typical current sense ratio is 9700.

So the voltage on Sense for each Ampere is about

$$U = R \cdot I / 9700 = 220\Omega \cdot 1A / 9700 = 0.02268V$$

The typical current on fault conditions is  $I_{\text{fault}} = 5.2\text{mA}$ , so

$$U_{\text{fault}} = 220\Omega \cdot 5.2\text{mA} = 1.144V$$

The maximum sense current is 7.5mA, so

$$U_{\text{max}} = 220\Omega \cdot 7.5\text{mA} = 1.65V$$

**Raphael Peters**

Sheet: /Switch 1/

File: power.kicad\_sch

**Title: Power distribution module**

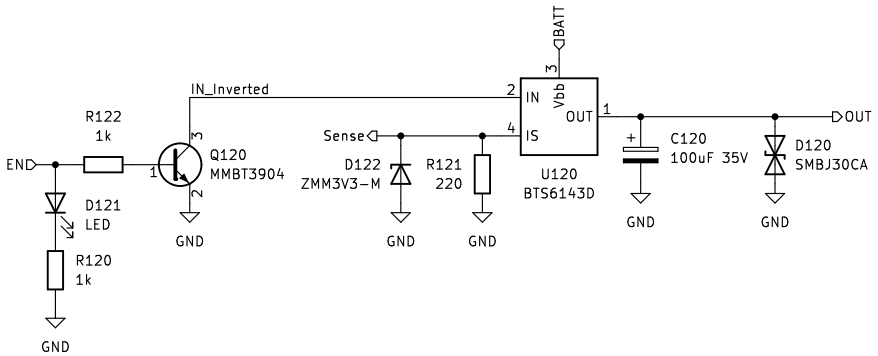
Size: A5

Date: 2023-07-18

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**Raphael Peters**

Sheet: /Switch 2/

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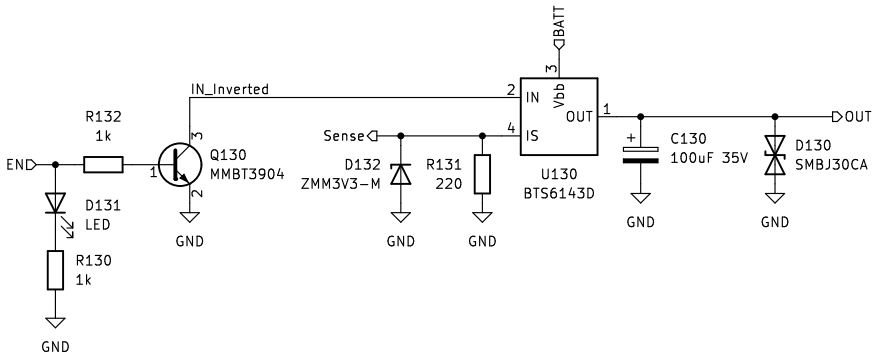
**Title: Power distribution module**

Size: A5 Date: 2023-07-18

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**Rev:**

Id: 3/10



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**Raphael Peters**

Sheet: /Switch 3/

File: power.kicad\_sch

**Title: Power distribution module**

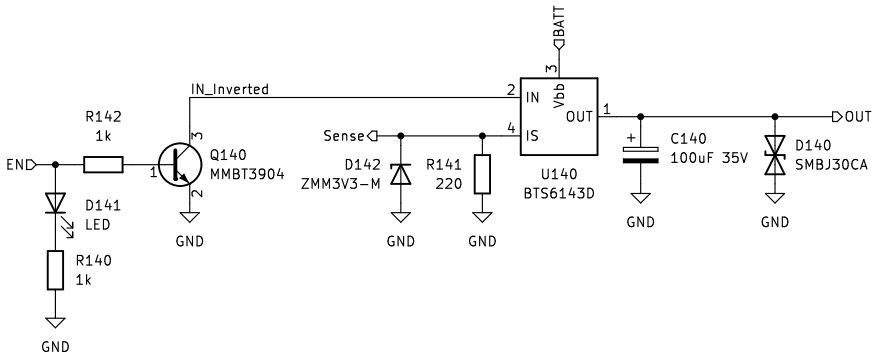
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Date: 2023-07-18

Rev:

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**Raphael Peters**

Sheet: /Switch 4/

File: power.kicad\_sch

**Title: Power distribution module**

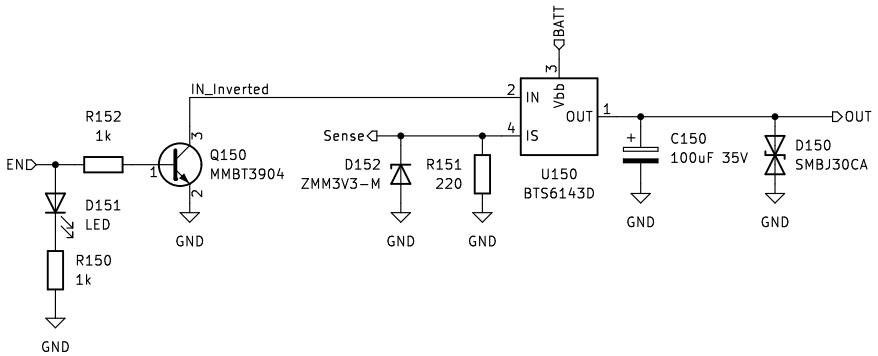
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Date: 2023-07-18

**Rev:**

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Id: 5/10



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**Raphael Peters**

Sheet: /Switch 5/

File: power.kicad\_sch

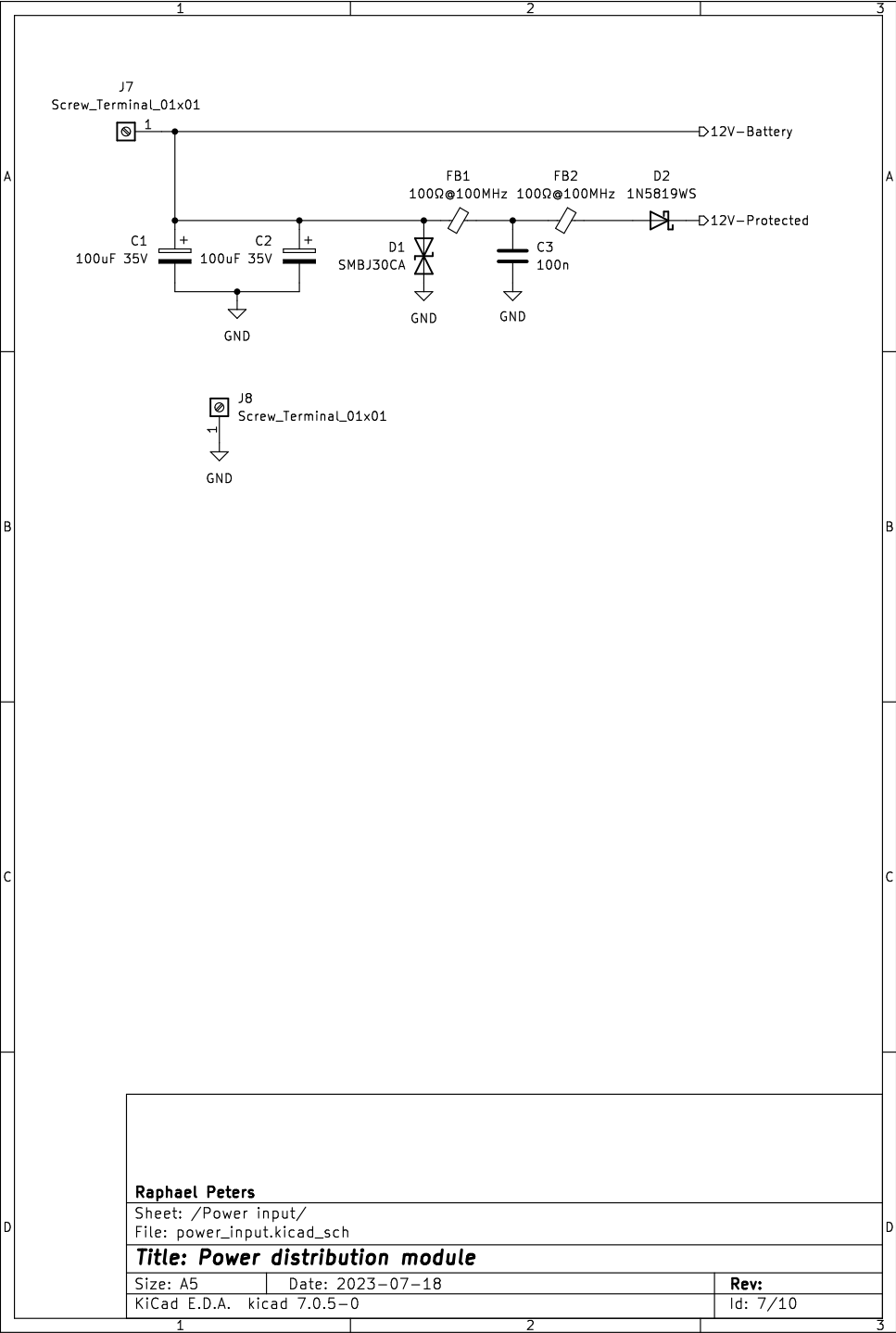
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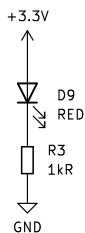
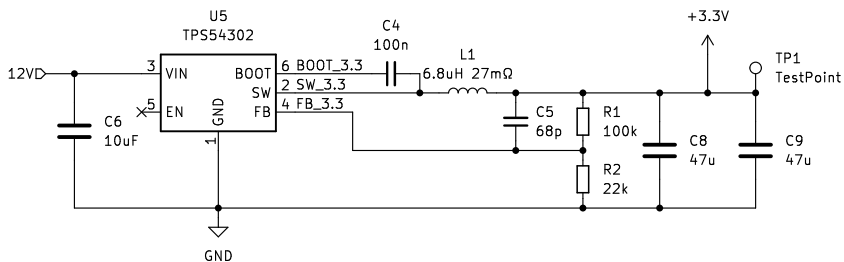
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**Raphael Peters**

Sheet: /Power supply/  
File: power\_supply.kicad\_sch

**Title: Power distribution module**

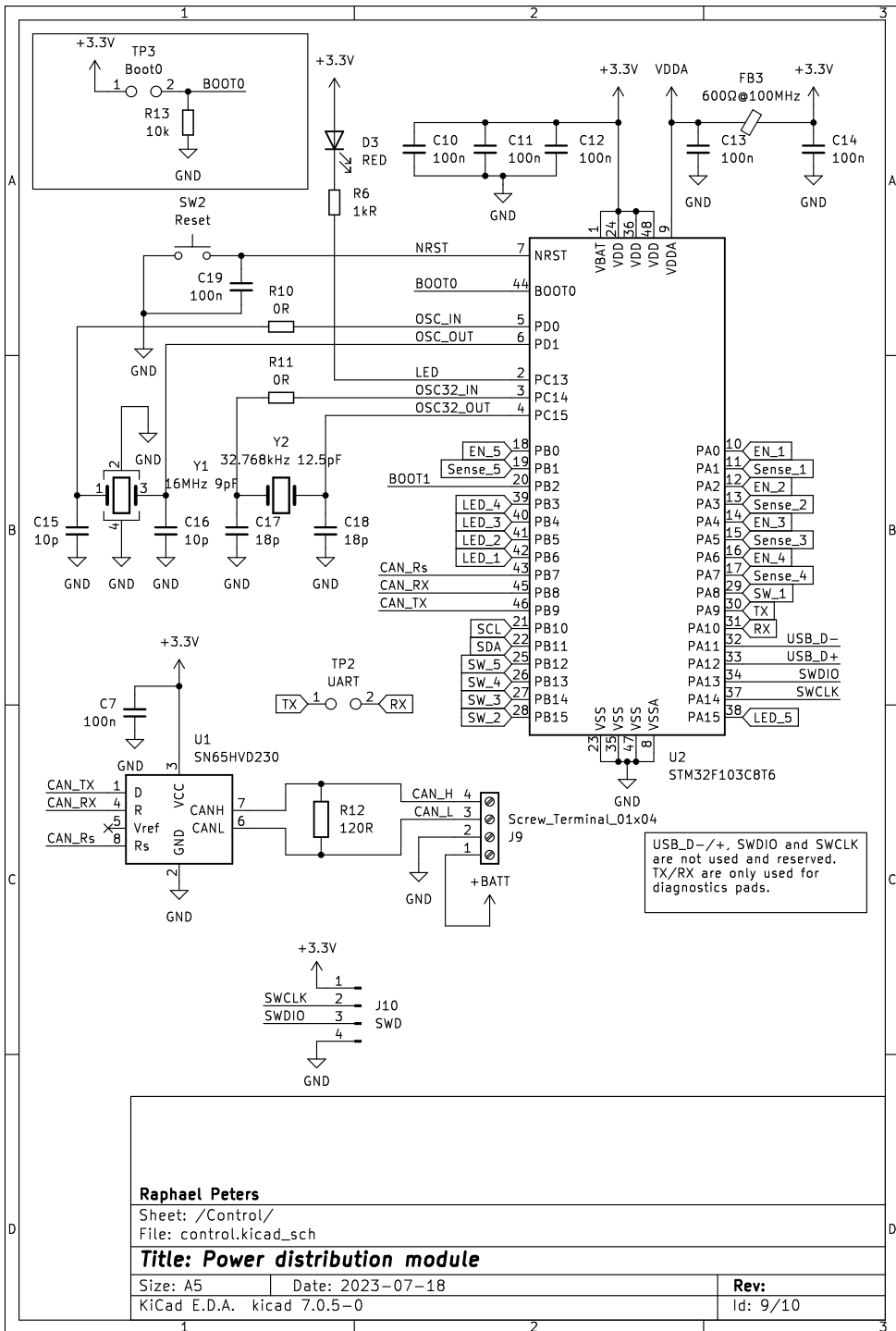
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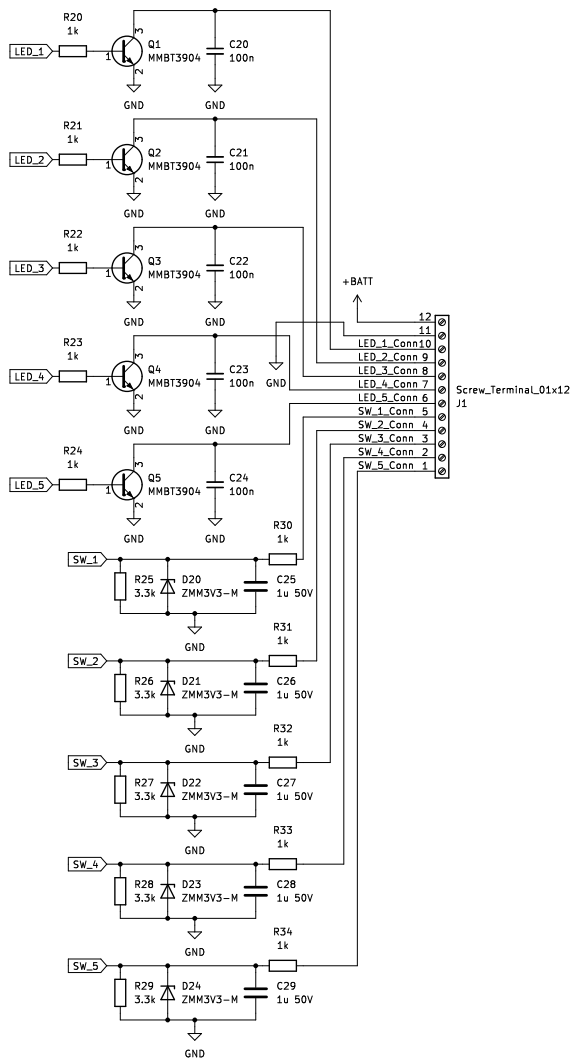
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Sheet: /IO Ports/

File: io.kicad\_sch

**Title: Power distribution module**

Size: A4

Date: 2023-07-18

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