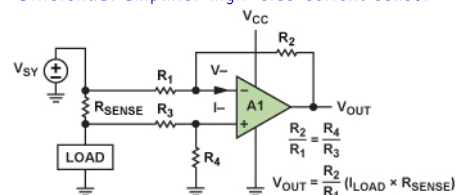


Currents up to 320mA can be measured with high precision through the INA219. For higher currents the semi-precise differential amplifier can be used.

Differential amplifier high-side current sensor



- 2 pcb concept. To be used together with frontpanel pcb
- Powered from standard pc psu (12V)
- Preregulation with SEPIC converter
- based on David Jones' uSupply project

Sheet: /CurrentSense/

File: CurrentSense.sch

**Title: Lab Psu (0-20V 0-2A)**

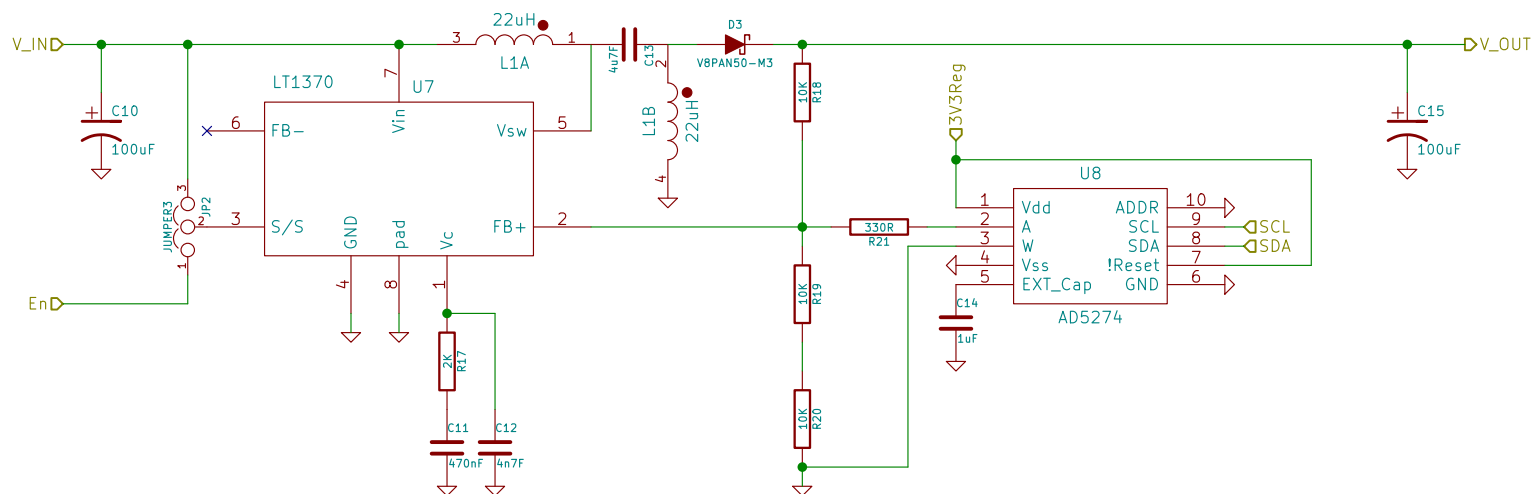
Size: A4

Date:

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Rev: B

Id: 2/5



- Switching pre regulator
- SEPIC converter
- Powered from standard pc psu (12V)

Sheet: /Preregulation/  
File: Preregulation.sch

**Title: Lab Psu (0-20V 0-2A)**

Size: A4 Date: KiCad E.D.A. kicad (2015-06-26 BZR 5832)-product

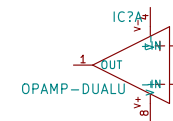
Rev: B  
Id: 3/5

constant current load

load resistors

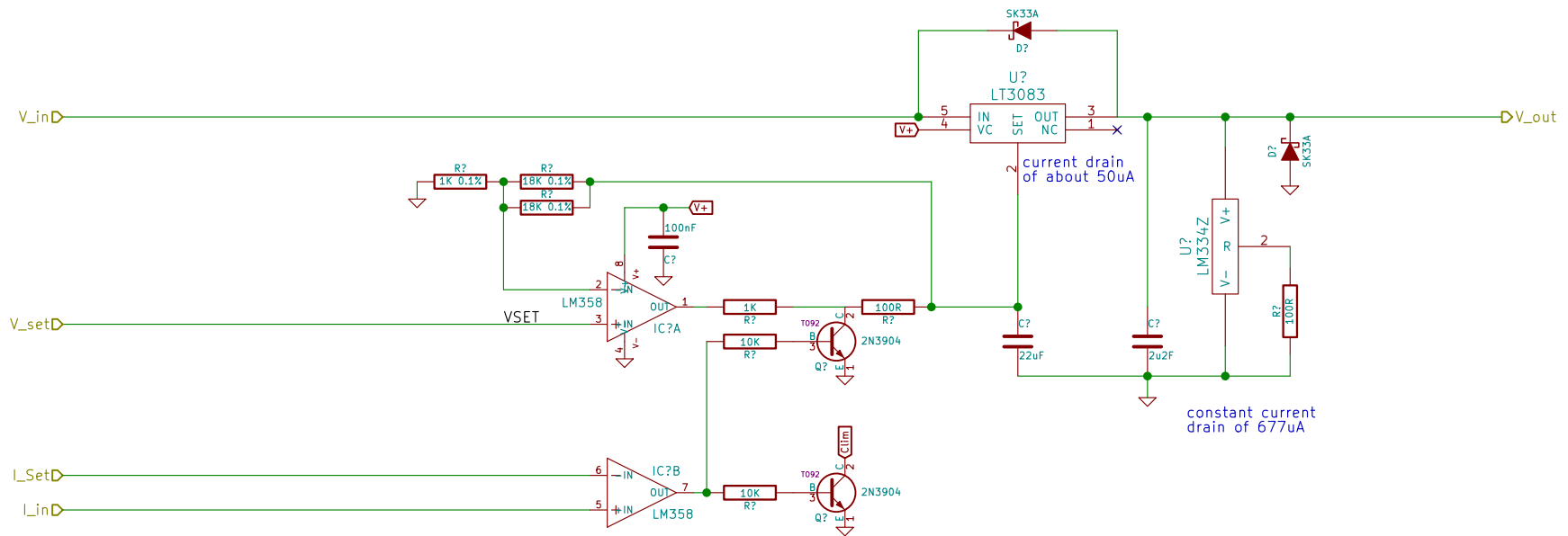
SetCurrent: 1V = 1A  
ReadVolt: 1V = 10V

|  |       |         |
|--|-------|---------|
| Sheet: /loads/                                   |       |         |
| File: loads.sch                                  |       |         |
| Title: Lab Psu (0-20V 0-2A)                      |       |         |
| Size: A4   | Date: | Rev:    |
| KiCad E.D.A. kicad (2015-06-26 BZR 5832)-product |       | Id: 4/5 |



SetCurrent:  $1V = 1A$   
ReadVolt:  $1V = 10V$

|  |       |         |
|--|-------|---------|
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| Sheet: /loads/<br>File: loads.sch                |       |         |
| <b>Title: Lab Psu (0-20V 0-2A)</b>               |       |         |
| Size: A4   | Date: | Rev:    |
| KiCad E.D.A. kicad (2015-06-26 BZR 5832)-product |       | Id: 4/5 |



Sheet: /Regulation/  
File: Regulation.sch

**Title:**

Size: A4 Date:  
KiCad E.D.A. kicad (2015-06-26 BZR 5832)-product

**Rev:**  
Id: 5/5