

A

A

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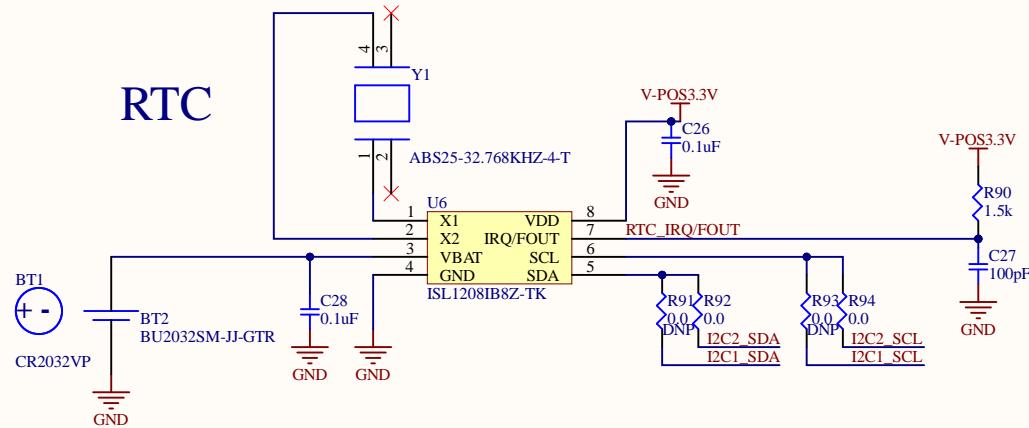
B

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D



Title <b>RTC</b>		Badgerloop Electrical
Engineer: Zach Gunderson, McGregor Farah		133 Engineering Research Building 1500 Engineering Drive Madison, Wi 53706
Date: 10/16/2022	Time: 11:18:13 AM	Revision: A Sheet 1 of 1
File: RTC.SchDoc		<b>BADGER</b> <b>LOOP</b>

A

A

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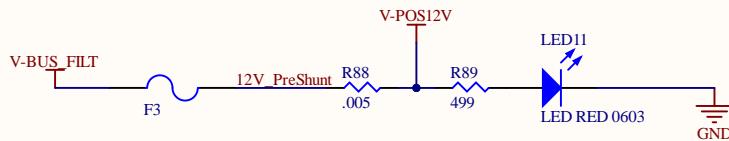
B

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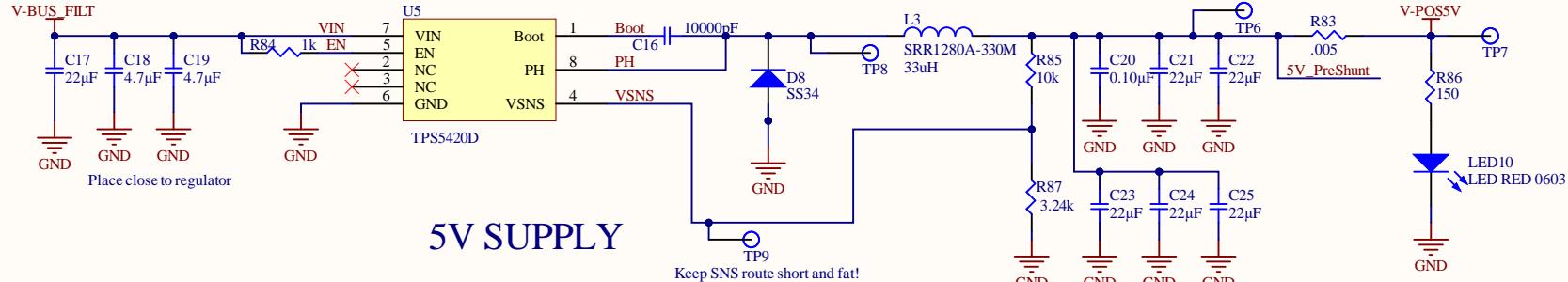


Placeholder until it is determined whether we need to regulate to 12V

Title <b>12V Power</b>		Badgerloop Electrical
Engineer: McGregor Farah		133 Engineering Research Building
Date: 10/16/2022 Time: 11:18:13 AM Sheet 1 of 1		1500 Engineering Drive
File: power_12V.SchDoc		Madison, WI 53706

**BADGER**  
**LOOP**

A



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Title **5V Power**

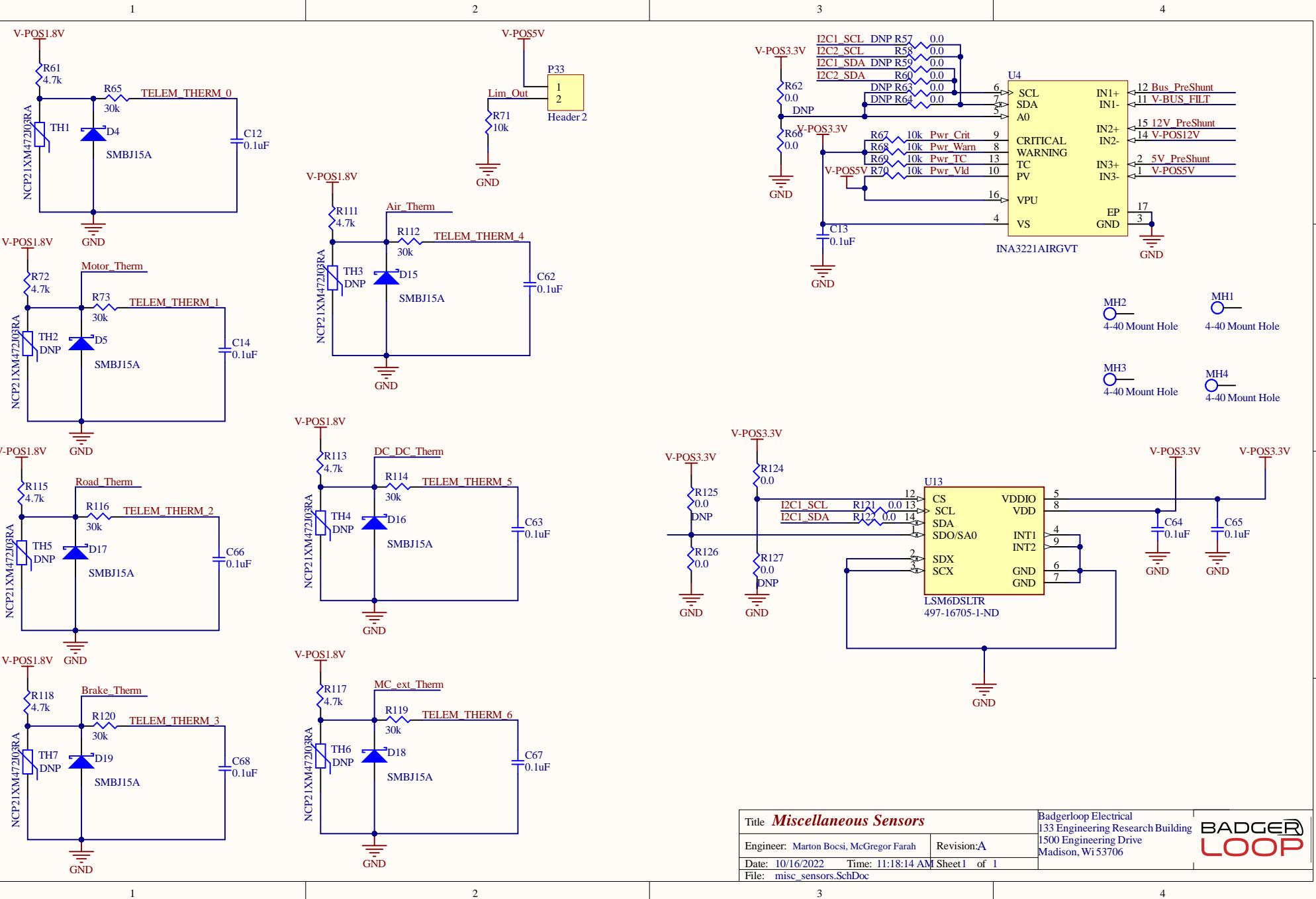
Engineer: McGregor Farah

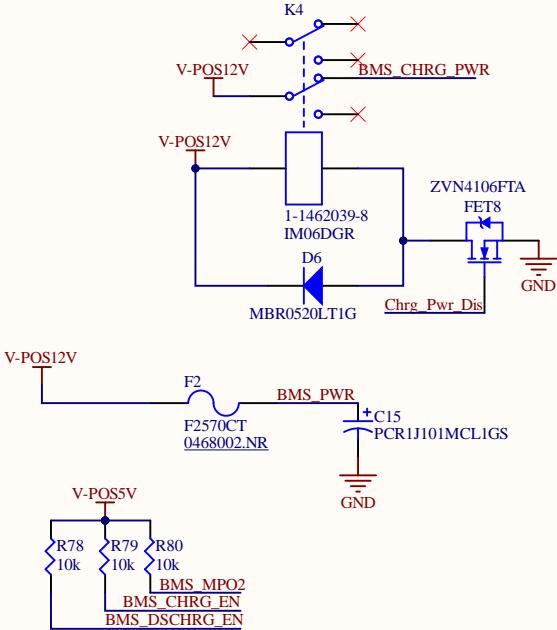
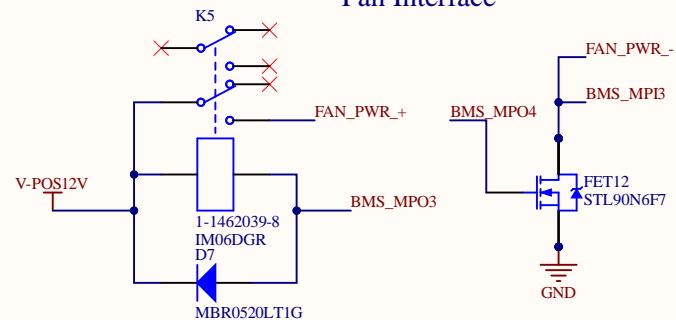
Date: 10/16/2022

File: power\_5V.SchDoc

Badgerloop Electrical  
133 Engineering Research Building  
1500 Engineering Drive  
Madison, WI 53706

**BADGER**  
**LOOP**



**BMS****Fan Interface**Title ***Motor Controller/BMS Interface***

Engineer: M. Farah, A. Marshall, O. D'Souza | Revision: A

Date: 10/16/2022 Time: 11:18:14 AM Sheet 1 of 1

File: mc\_bms\_interface.SchDoc

 Badgerloop Electrical  
 133 Engineering Research Building  
 1500 Engineering Drive  
 Madison, WI 53706

**BADGER**  
**LOOP**

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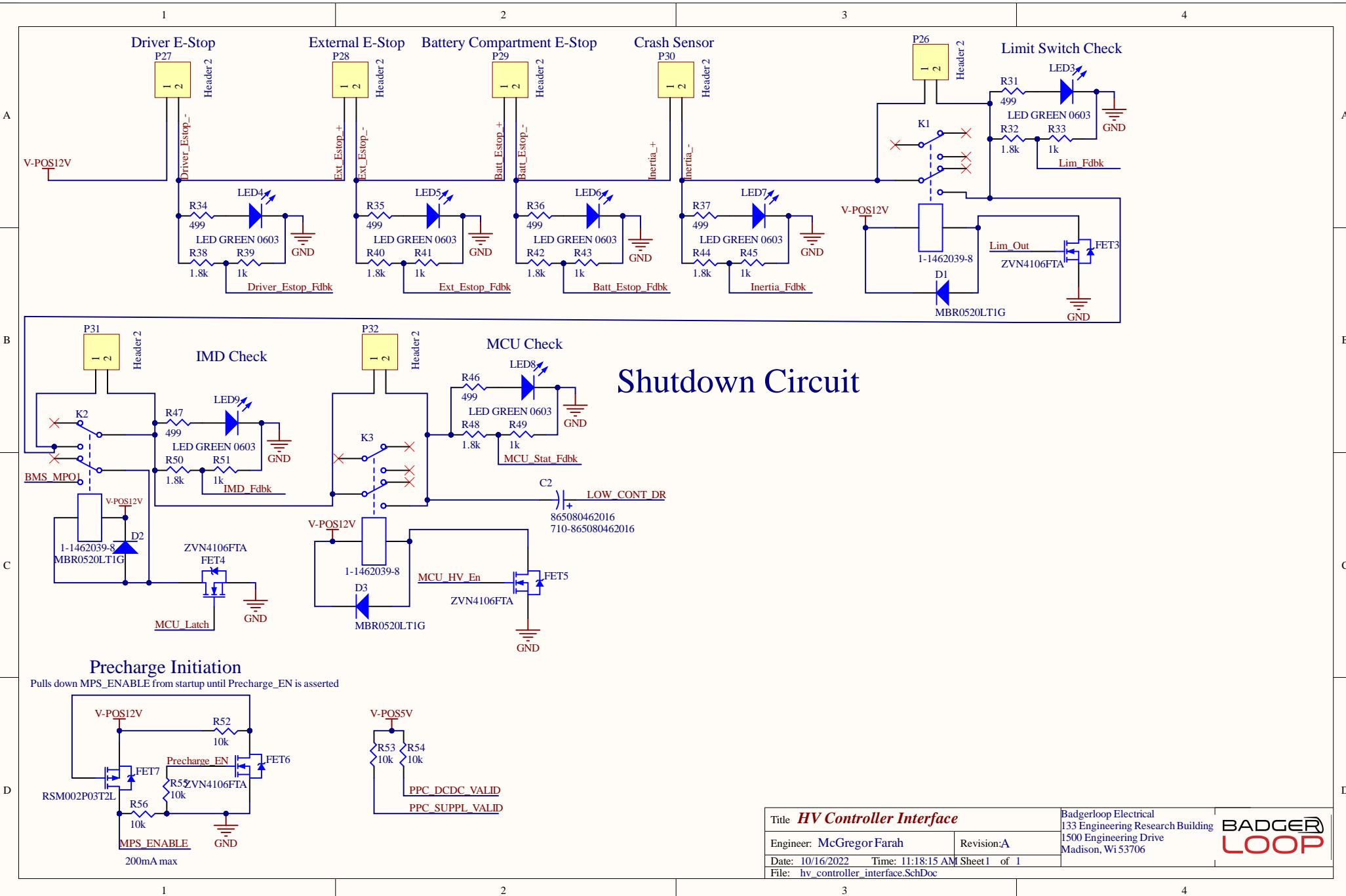
D

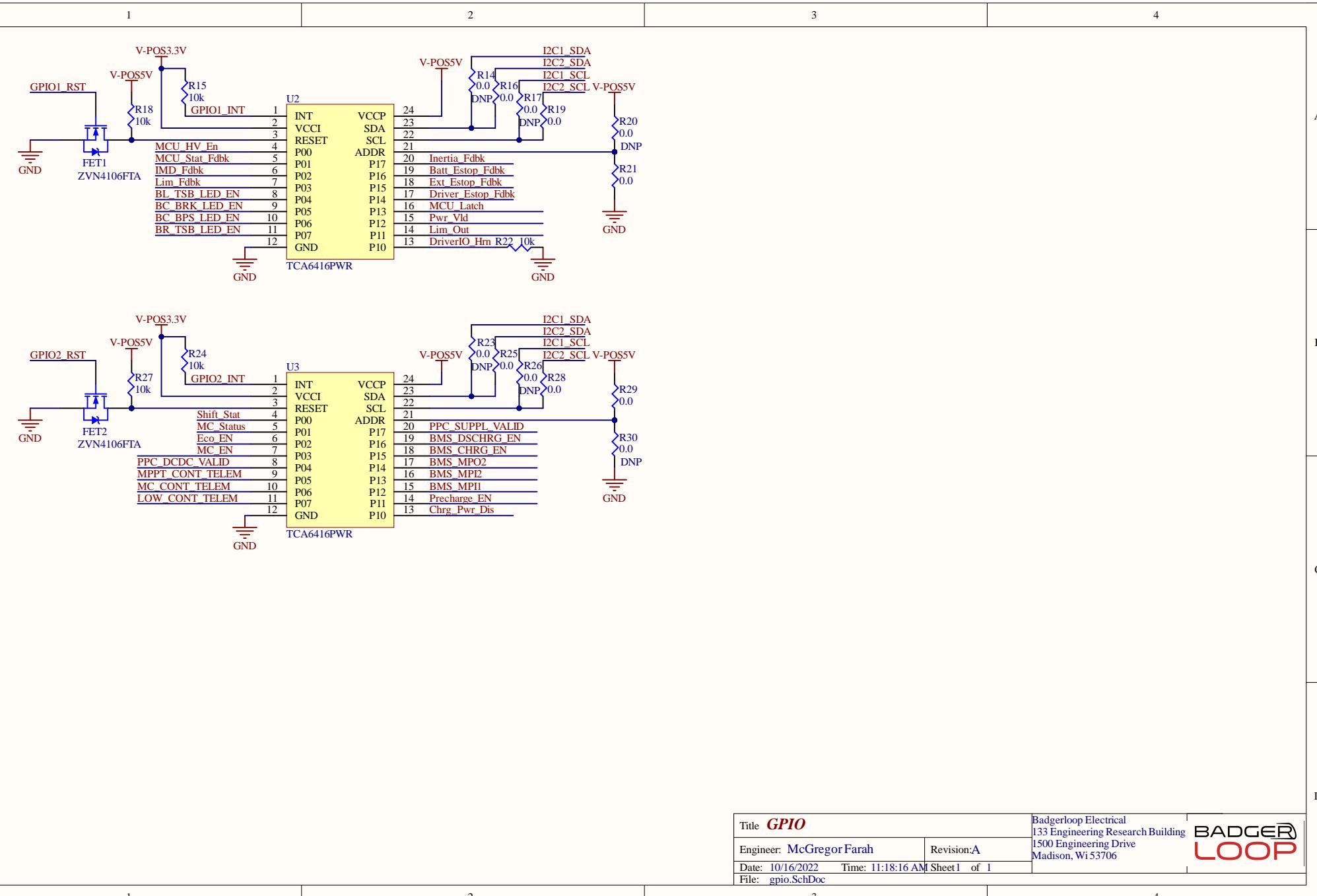
# MAIN IO

## SOLAR CAR 1

### REV A

Title <b>Main IO</b>		Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, WI 53706
Engineer:	Revision:	
Date: 10/16/2022	Time: 11:18:15 AM	Sheet 1 of 2
File: main_io.SchDoc		<b>BADGER</b> <b>LOOP</b>

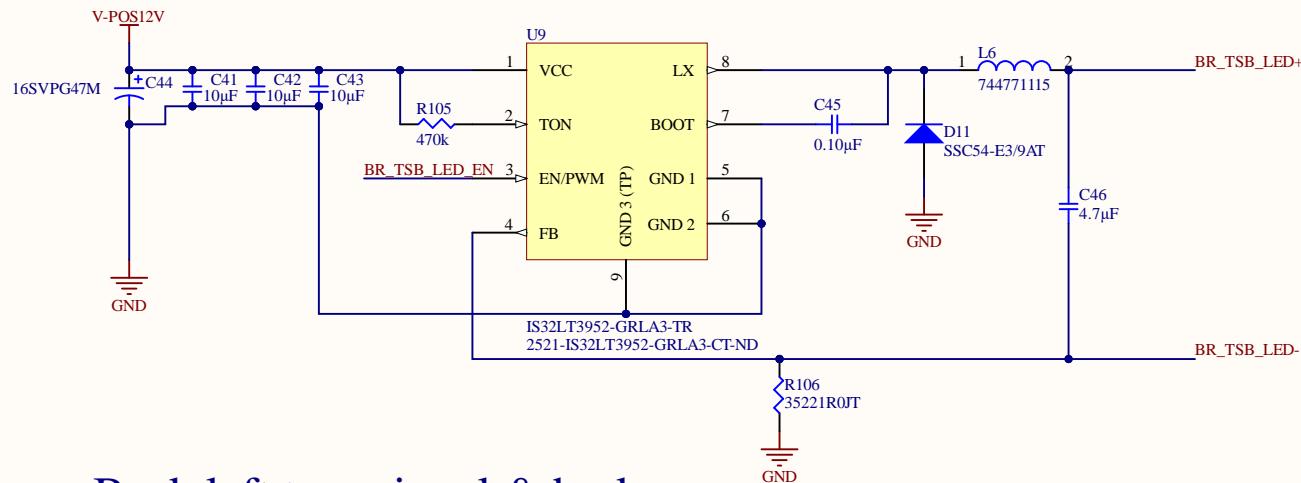




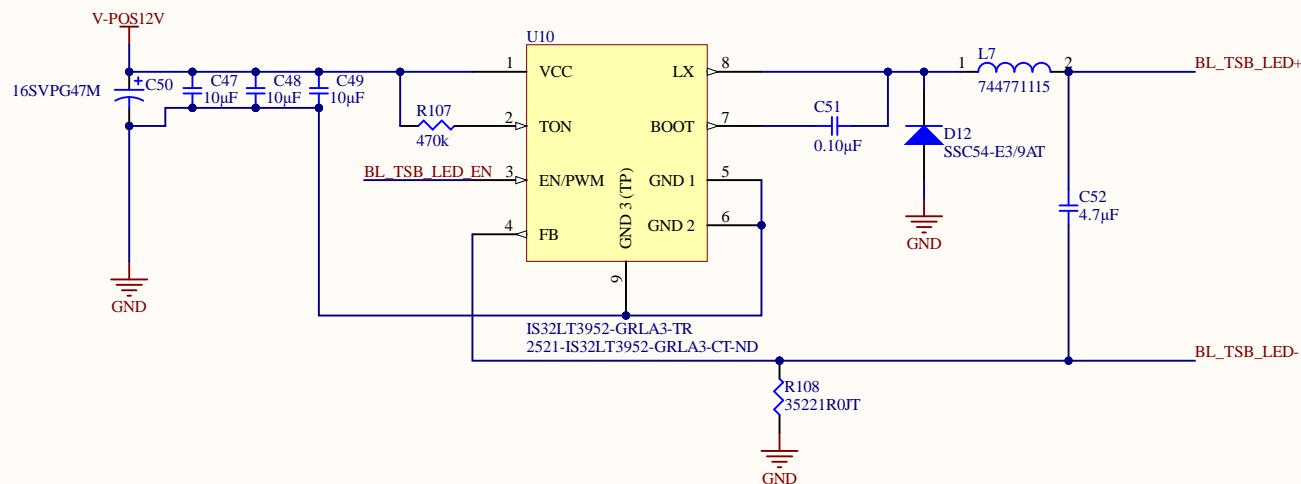
Title <b>GPIO</b>		Badgerloop Electrical
Engineer: McGregor Farah		133 Engineering Research Building
Date: 10/16/2022 Time: 11:18:16 AM	Revision: A	1500 Engineering Drive
File: gpio.SchDoc		Madison, WI 53706

**BADGER  
LOOP**

## Back right turn signal & brake



## Back left turn signal & brake



Title **Rear Blinker Interface**

Engineer: Alec Marshall Revision:A

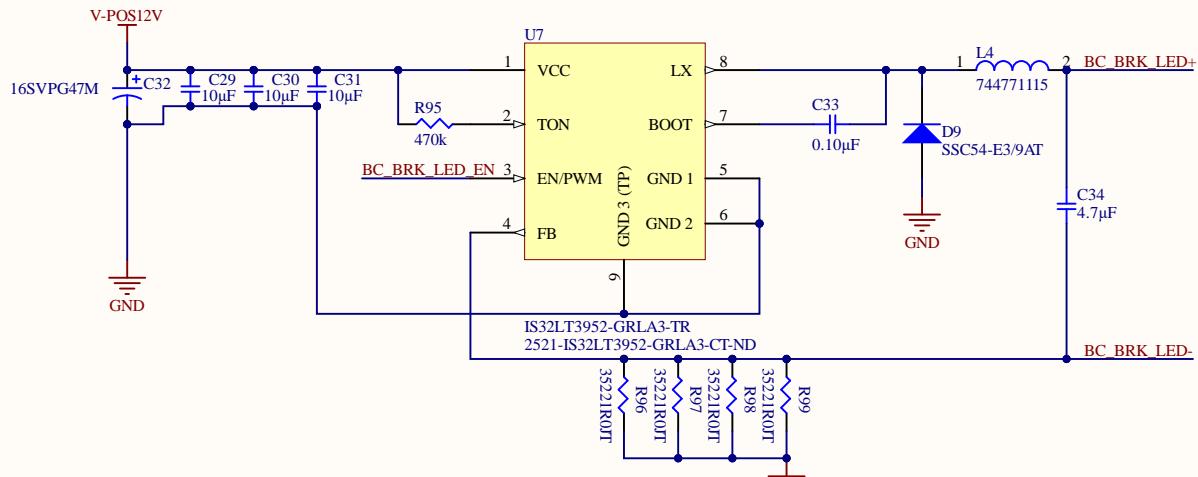
Date: 10/16/2022 Time: 11:18:16 AM Sheet1 of 1

File: ext\_light\_interface\_backturn.SchDoc

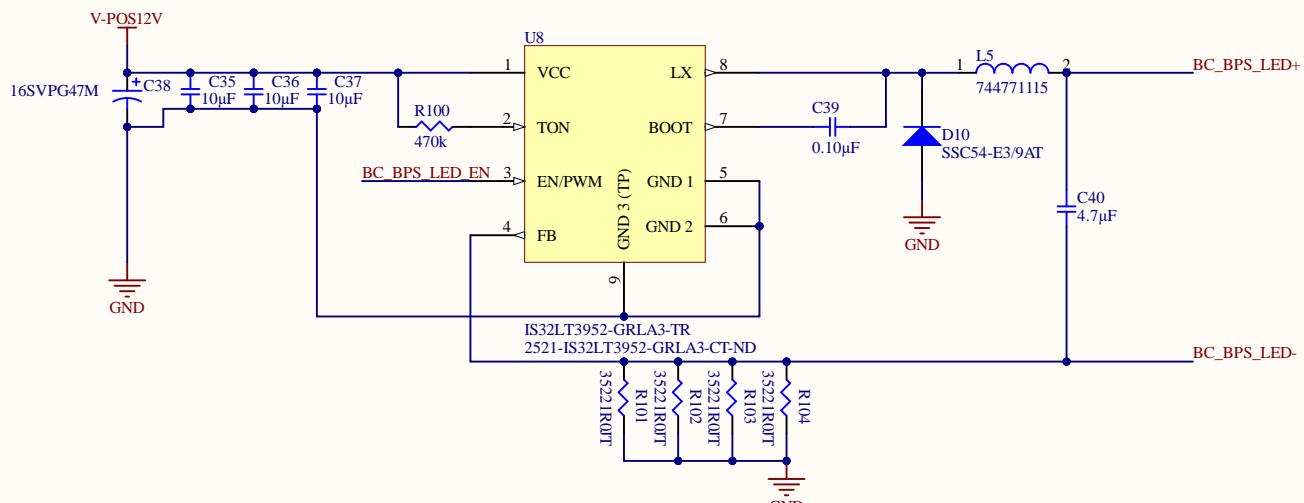
Badgerloop Electrical  
133 Engineering Research Building  
1500 Engineering Drive  
Madison, WI 53706

**BADGER**  
**LOOP**

## Back center brake light



## Back BPS fault light



Title **Rear Center Indicator Drivers**

Engineer: Alec Marshall

Badgerloop Electrical  
133 Engineering Research Building  
1500 Engineering Drive  
Madison, Wi 53706

Revision:A

Date: 10/16/2022 Time: 11:18:16 AM Sheet 1 of 1

File: ext\_light\_interface\_backbrakebps.SchDoc

**BADGER**  
**LOOP**

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# MAIN IO

## SOLAR CAR 1

### REV A

Title <b>Main IO</b>		Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, Wi53706	
Engineer:	Revision:	Date: 10/16/2022 Time: 11:18:17 AM Sheet1 of 2	

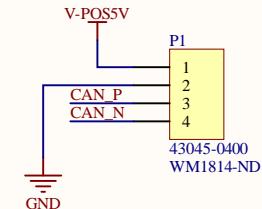
1

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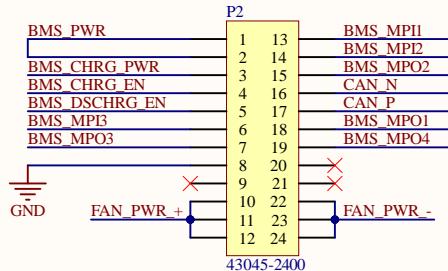
3

4

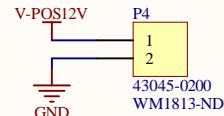
### MCC Interface



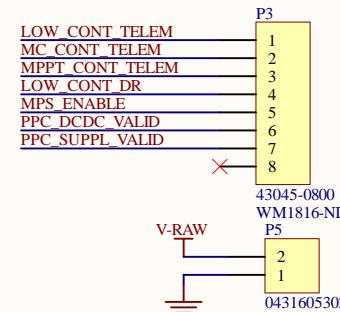
### BMS Interface



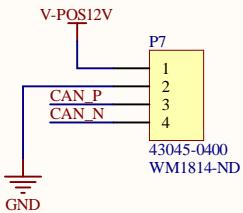
### Radio Power



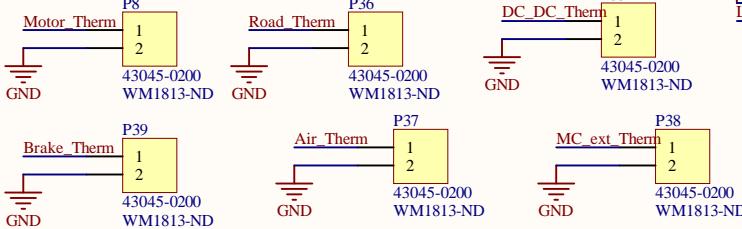
### HV Controller Interface



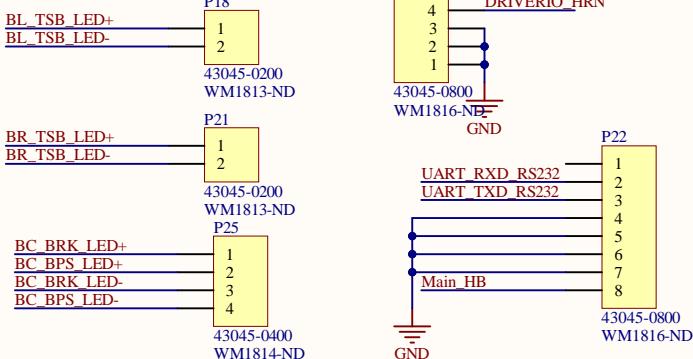
### MPPT Interface



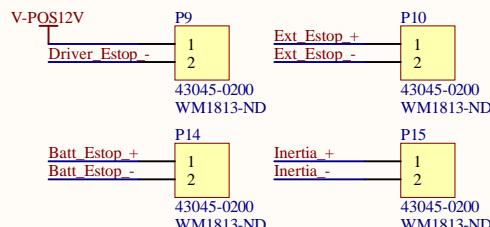
### Thermistor



### Lighting Interface



### Driver IO Interface



### Shutdown Inputs

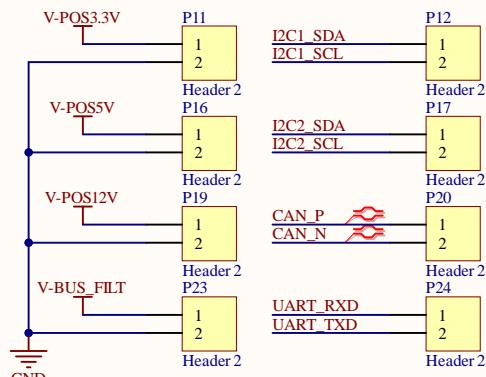
#### Connectors

Engineer: McGregor Farah

Date: 10/16/2022

File: connectors.SchDoc

### Debug Headers



**BADGER**  
**LOOP**

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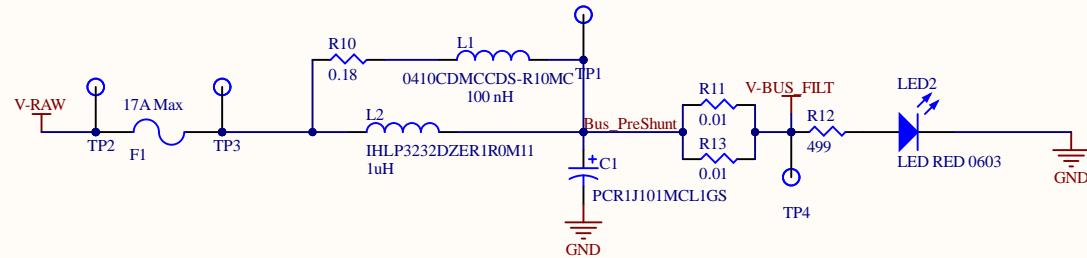
B

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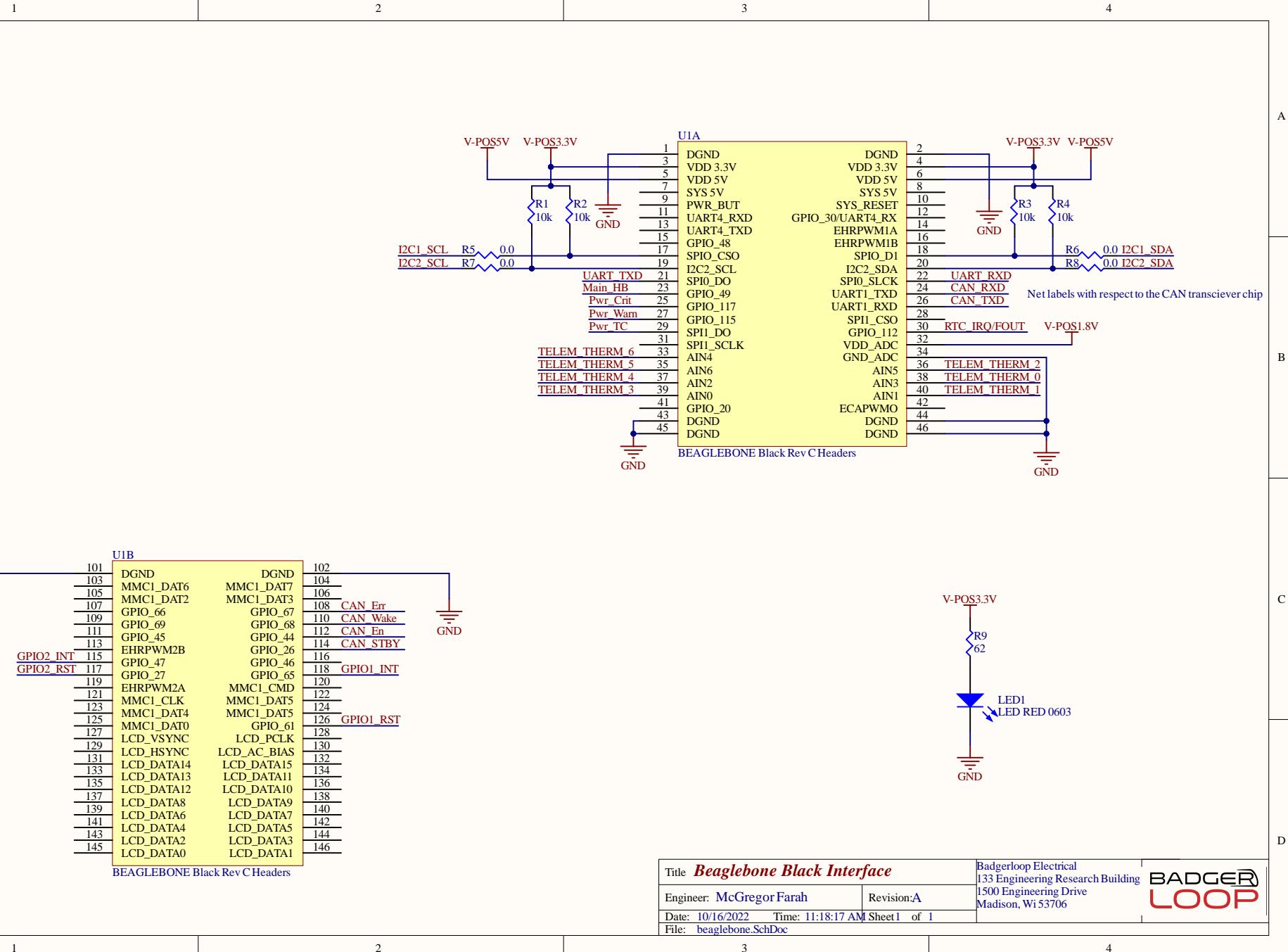
C

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**Title Bus Filter**

Engineer: Marton Bocsi, McGregor Farah	Revision: A	BADGER LOOP
Date: 10/16/2022	Time: 11:18:17 AM	Sheet 1 of 1
File: bus_filter.SchDoc		



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Title *	
Engineer: *	Revision:*
Date: 10/16/2022 Time: 11:18:18 AM Sheet2 of 2	
File: Sheet1.SchDoc	



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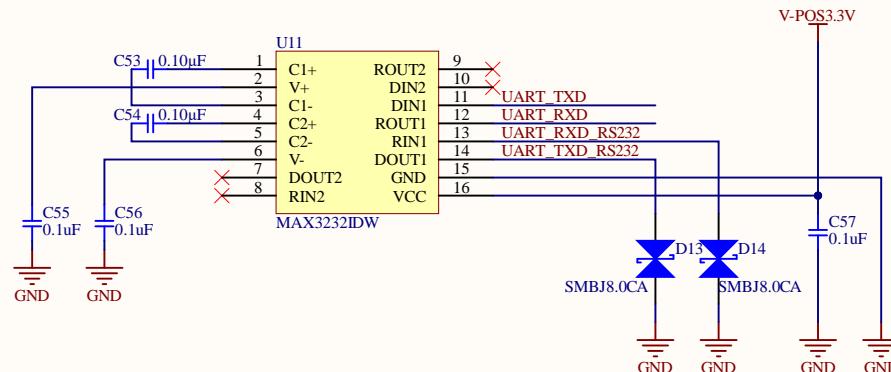
3

4

Clamping Diode Selection Reference :: [https://e2e.ti.com/blogs/\\_b/industrial\\_strength/posts/how-to-choose-a-tvs-diode-for-rs-232-rs-485-and-can-based-on-voltage-ratings](https://e2e.ti.com/blogs/_b/industrial_strength/posts/how-to-choose-a-tvs-diode-for-rs-232-rs-485-and-can-based-on-voltage-ratings)

A

A



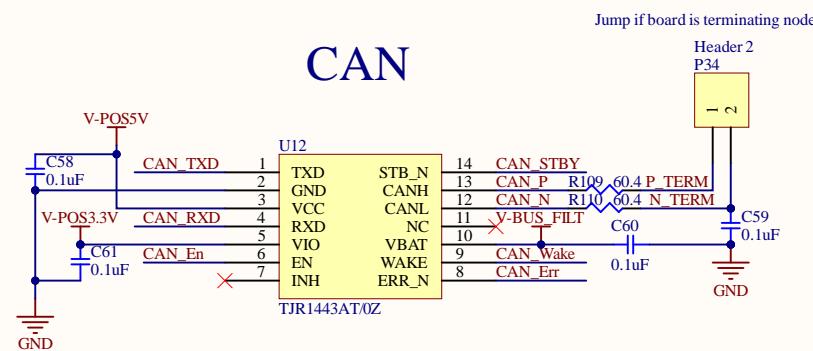
B

B

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## CAN



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D

Title: *	Badgerloop Electrical	
Engineer: *	Revision: *	133 Engineering Research Building
Date: 10/16/2022	Time: 11:18:18 AM	1500 Engineering Drive
File: Serial_Interface.SchDoc		Madison, WI 53706

**BADGER**  
**LOOP**

