


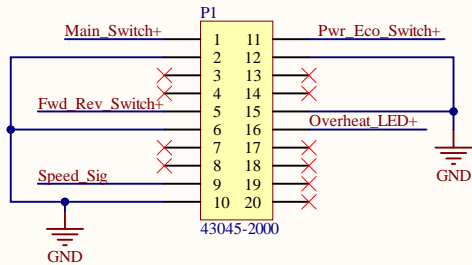
MAIN IO

SOLAR CAR 1

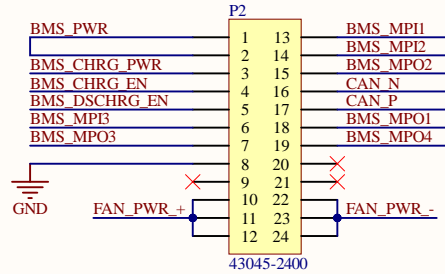
REV A

Title <i>Main IO</i>		Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, WI 53706		
Engineer:		Revision:		
Date: 4/3/2022	Time: 12:11:21 PM	Sheet 1 of 2		
File: main_io.SchDoc				

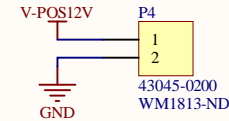
## Motor Controller Interface



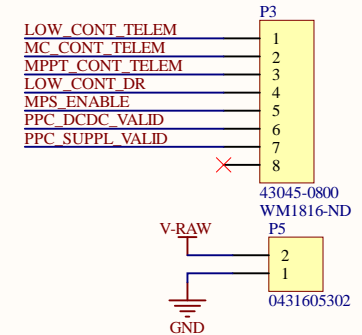
## BMS Interface



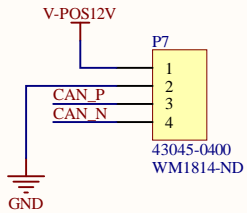
## Radio Power



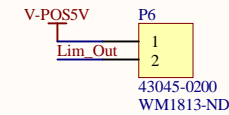
## HV Controller Interface



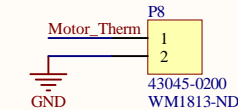
## MPPT Interface



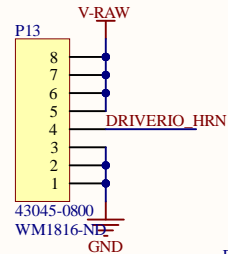
## Limit Switch



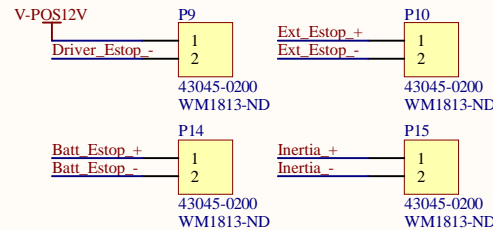
## Thermistor



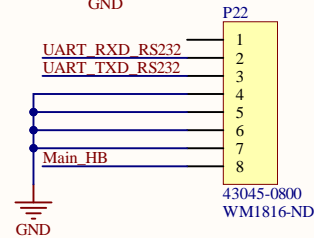
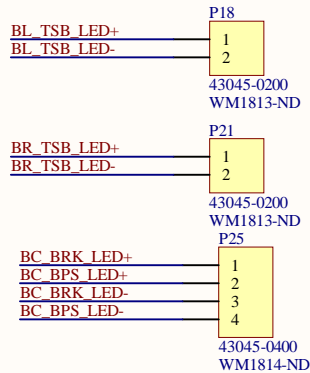
## Driver IO Interface



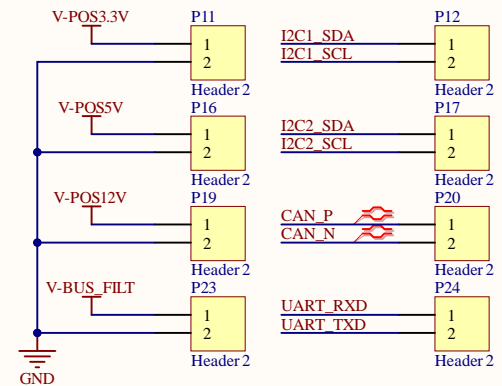
## Shutdown Inputs



## Lighting Interface



## Debug Headers



Title: **Connectors**

Engineer: **McGregor Farah**

Date: 4/3/2022

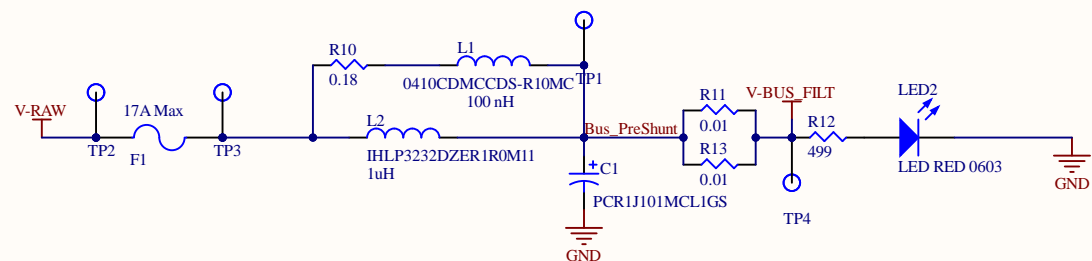
File: connectors.SchDoc


Revision: **A**

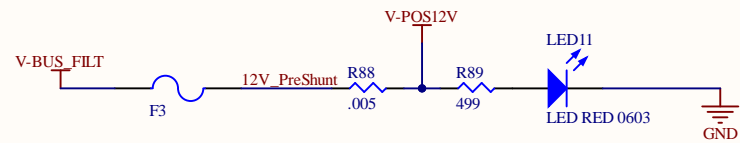
Time: 12:11:06 PM Sheet 1 of 1

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133 Engineering Research Building  
1500 Engineering Drive  
Madison, WI 53706


**BADGER  
LOOP**

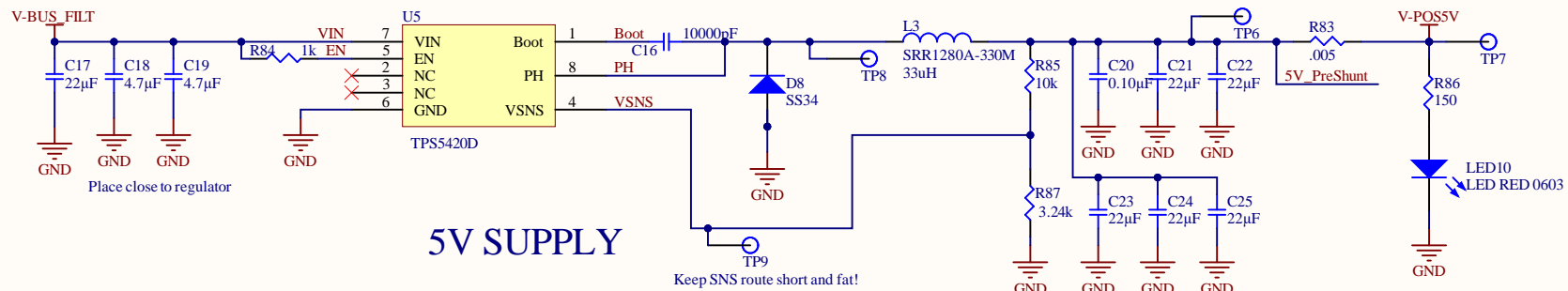



Title <b>Bus Filter</b>		Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, WI 53706	
Engineer: Marton Bocsi, McGregor Farah	Revision: A		
Date: 4/3/2022	Time: 12:11:05 PM		
File: bus_filter.SchDoc		Sheet 1 of 1	



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

Title <b>12V Power</b>			Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, Wi 53706	
Engineer: <b>McGregor Farah</b>		Revision: <b>A</b>		
Date: <b>4/3/2022</b>	Time: <b>12:11:27 PM</b>	Sheet <b>1</b> of <b>1</b>		
File: <b>power_12V.SchDoc</b>				



Title <b>5V Power</b>		Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, WI 53706	
Engineer: <b>McGregor Farah</b>	Revision: <b>A</b>		
Date: <b>4/3/2022</b>	Time: <b>12:11:28 PM</b>		
File: <b>power_5V.SchDoc</b>	Sheet <b>1</b> of <b>1</b>		

1

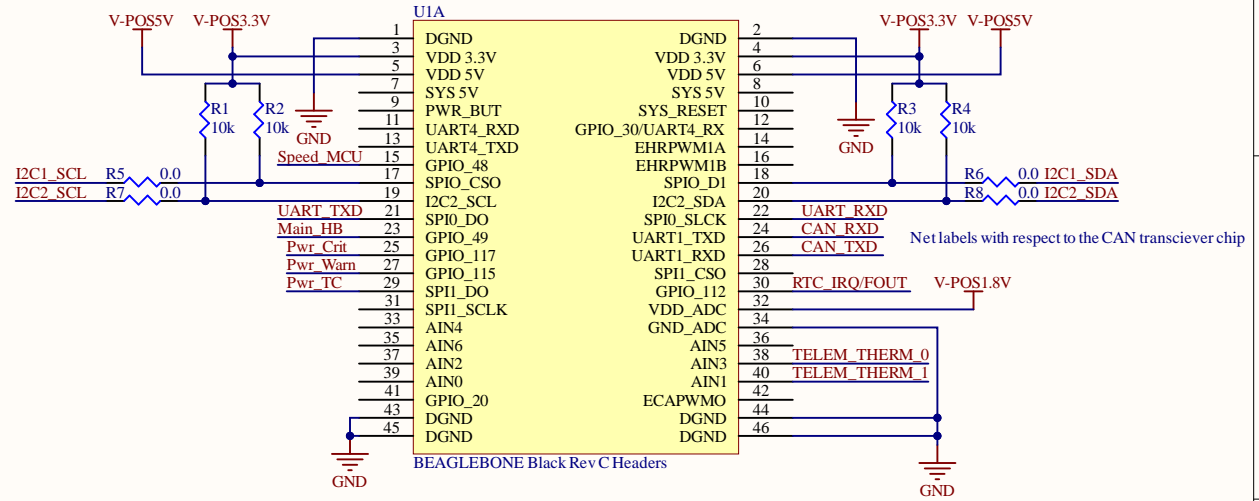
2

3

4

A

A

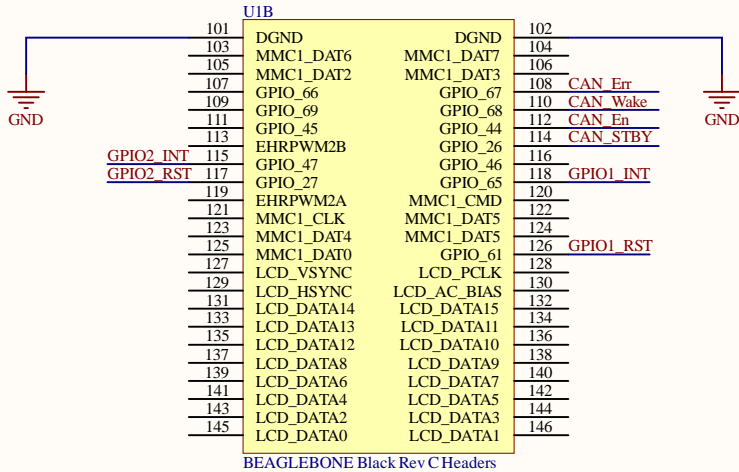


B

B


C

C



D

D

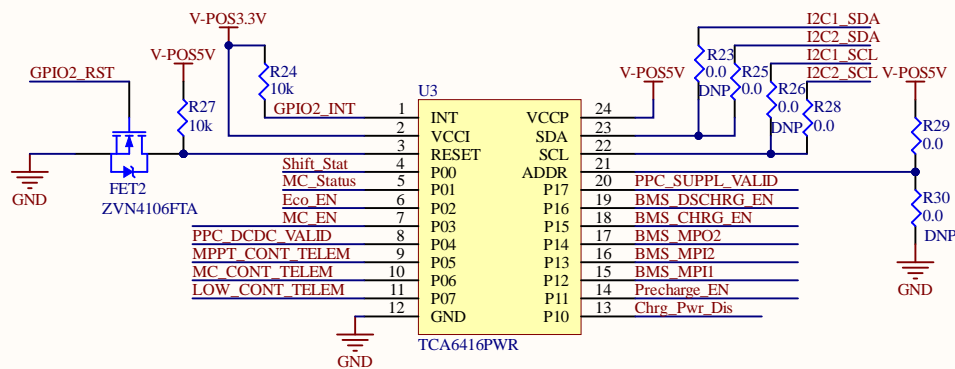
Title <b>Beaglebone Black Interface</b>		Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, WI 53706	
Engineer: <b>McGregor Farah</b>	Revision: <b>A</b>		
Date: <b>4/3/2022</b>	Time: <b>12:11:03 PM</b>		
File: <b>beaglebone.SchDoc</b>			

1

2

3

4

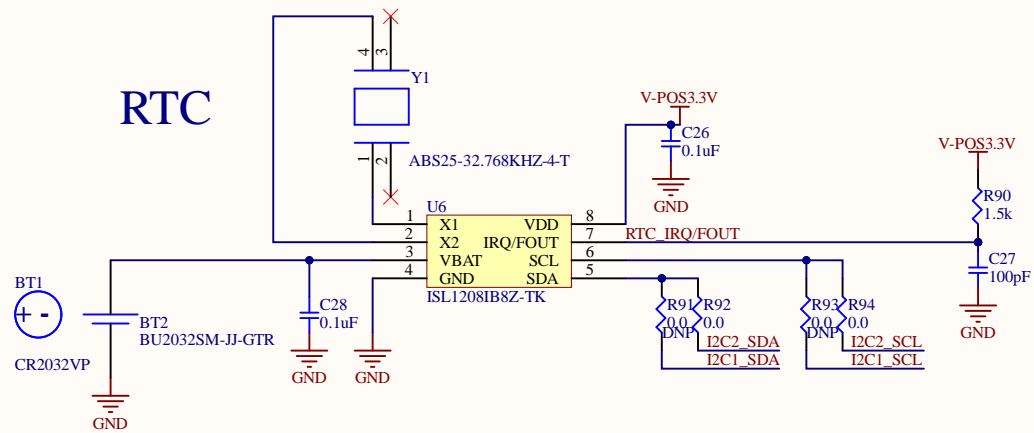



Title <b><i>GPIO</i></b>		Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, WI 53706 
Engineer: <b>McGregor Farah</b>	Revision: <b>A</b>	
Date: <b>4/3/2022</b>	Time: <b>12:11:12 PM</b>	
File: <b>gpio.SchDoc</b>		

4

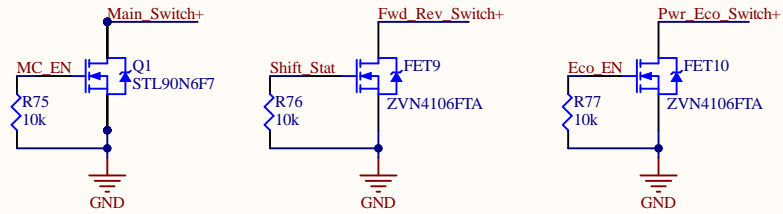
4



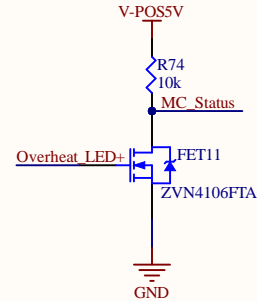
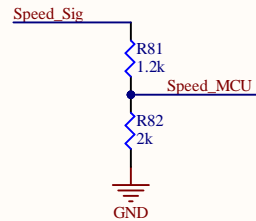


Title <b>RTC</b>		Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, WI 53706	
Engineer: Zach Gunderson, McGregor Farah	Revision: A		
Date: 4/3/2022	Time: 12:11:30 PM		
File: RTC.SchDoc	Sheet 1 of 1		

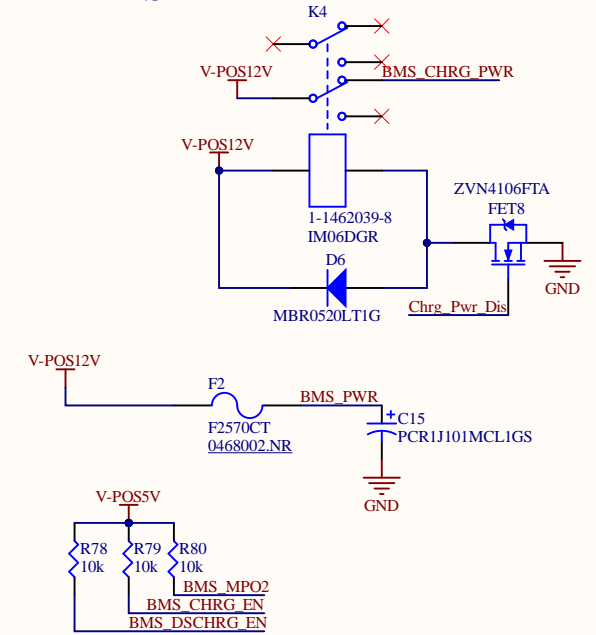
## Motor Controller



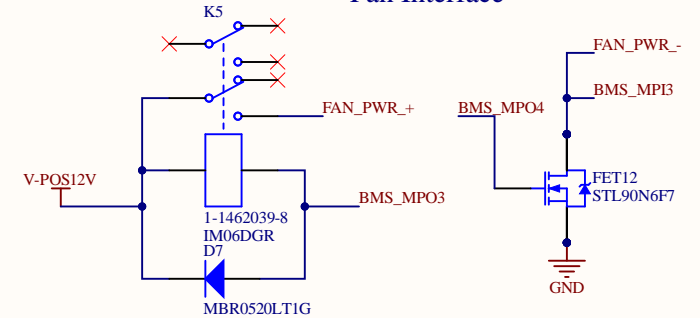
We Currently do not know the connection interface for the indicator LED, speed reading, or the main power switch. This is based on our current best guess




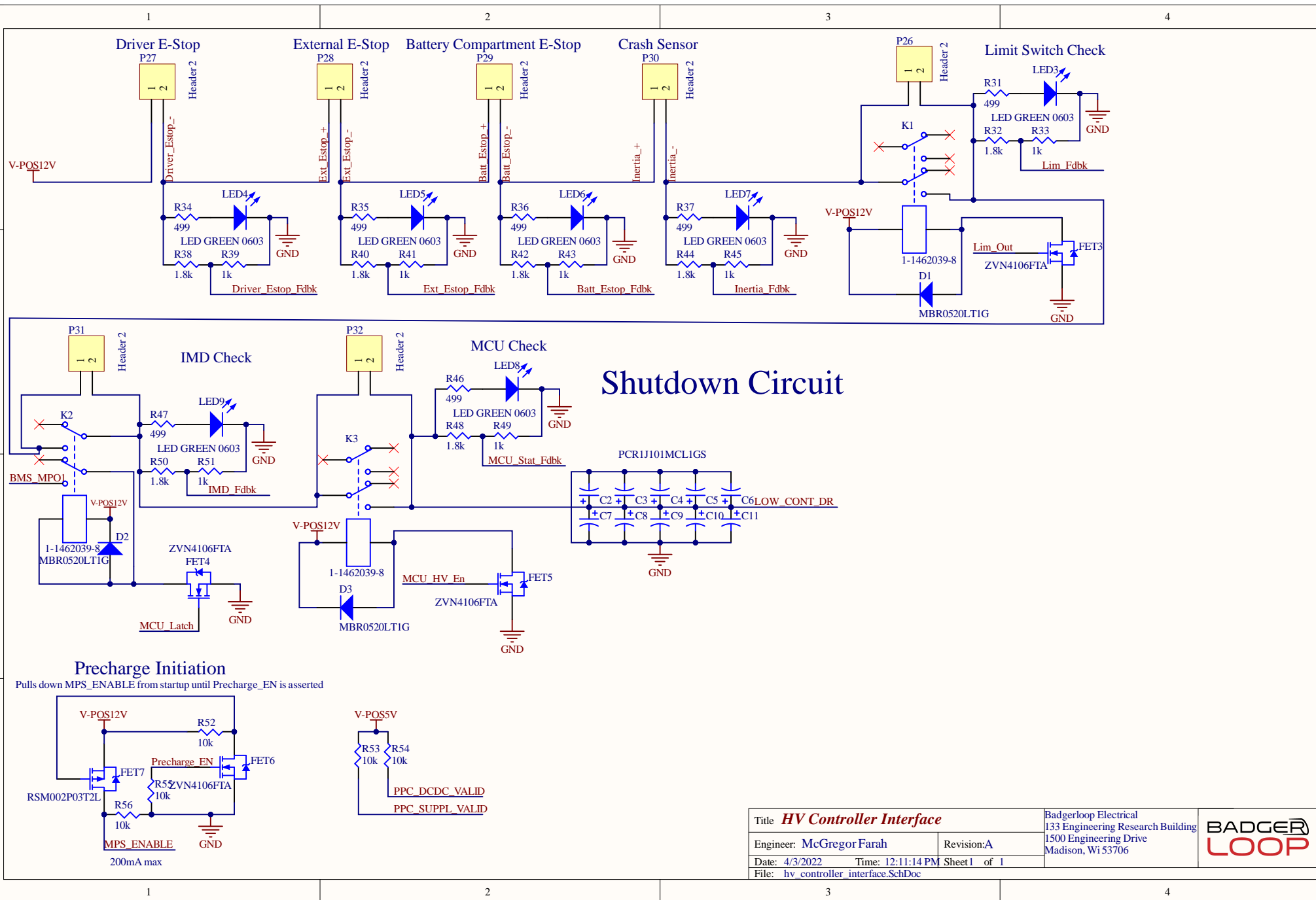
## BMS



## Fan Interface

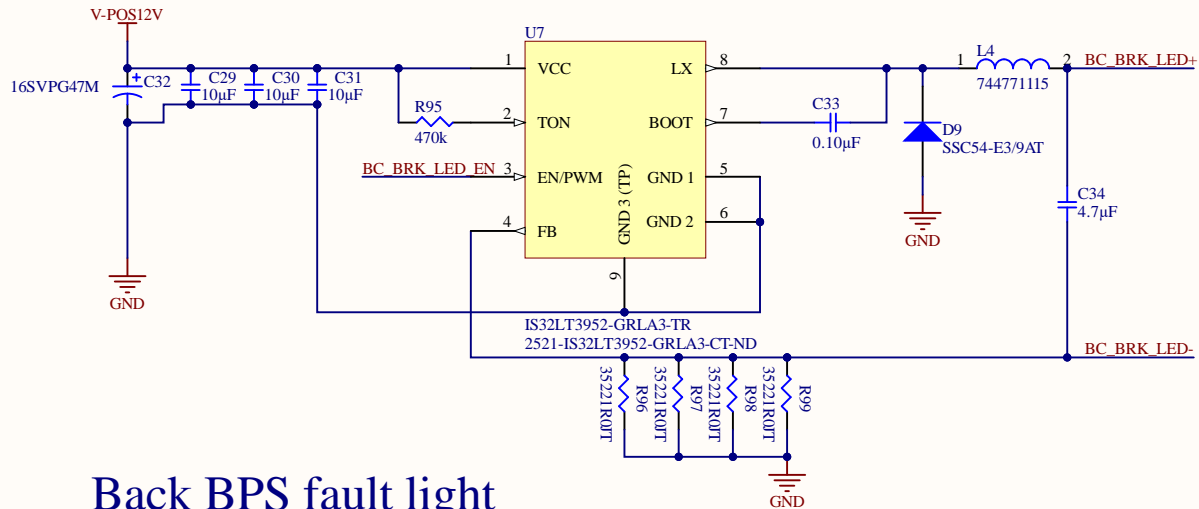


Title <b>Motor Controller/BMS Interface</b>		Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, WI 53706	
Engineer: M. Farah, A. Marshall, O. D'Souza	Revision: A		
Date: 4/3/2022	Time: 12:11:23 PM		
File: mc_bms_interface.SchDoc		Sheet 1 of 1	

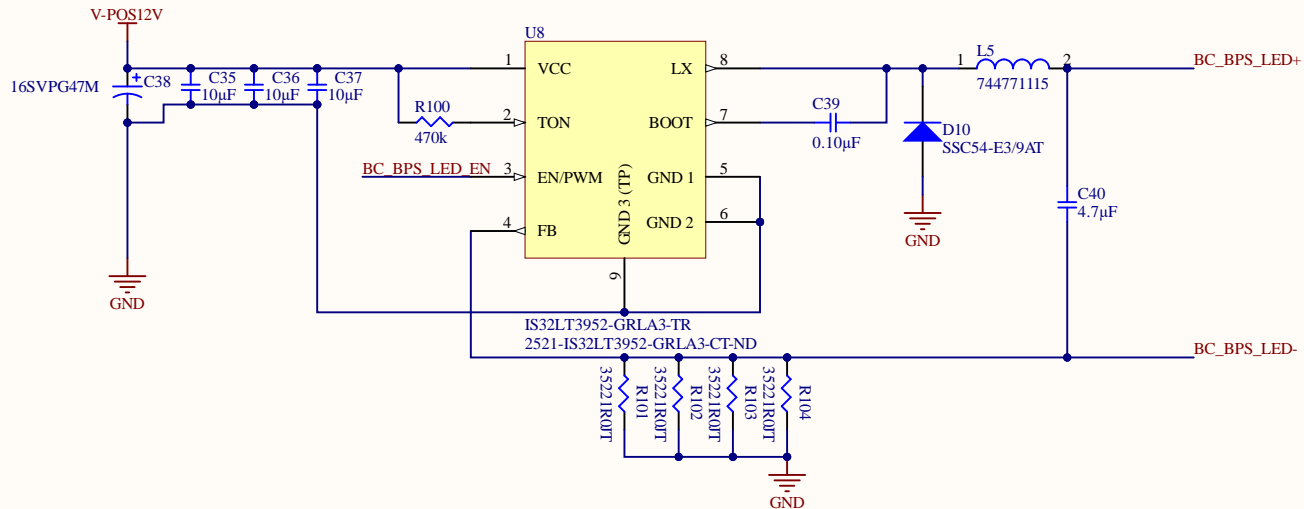


Title <i><b>HV Controller Interface</b></i>		Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, WI 53706 
Engineer: <b>McGregor Farah</b>	Revision: <b>A</b>	
Date: <b>4/3/2022</b>	Time: <b>12:11:14 PM</b>	
File: <b>hv_controller_interface.SchDoc</b>		

## Back center brake light



## Back BPS fault light



Title **Rear Center Indicator Drivers**

Engineer: Alec Marshall

Revision: A

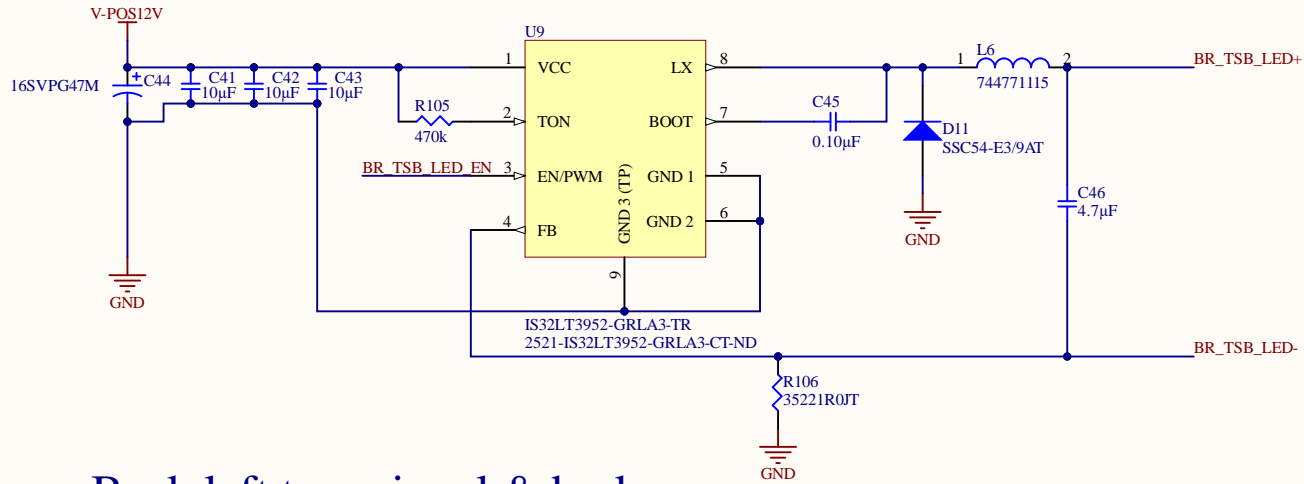
Date: 4/3/2022 Time: 12:11:08 PM Sheet 1 of 1

File: ext\_light\_interface\_backbrakebps.SchDoc

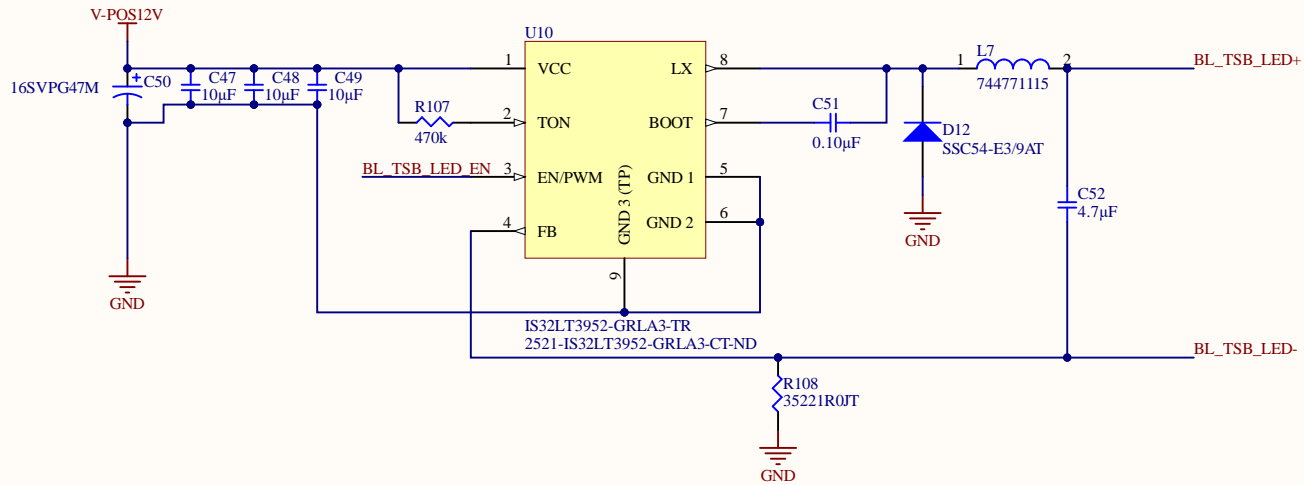
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Madison, WI 53706

**BADGER  
LOOP**

## Back right turn signal & brake



## Back left turn signal & brake



Title **Rear Blinker Interface**

Engineer: Alec Marshall

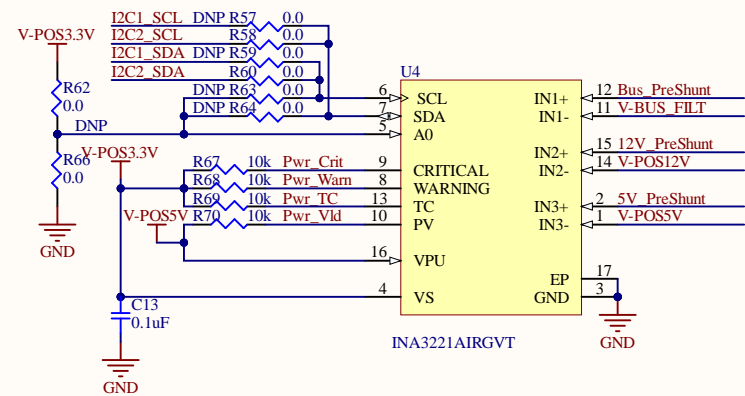
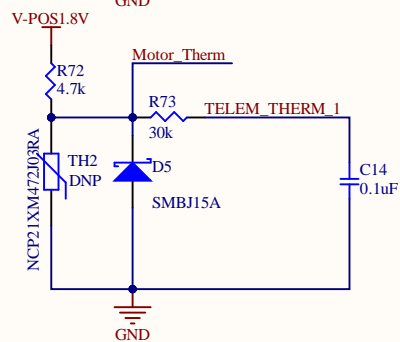
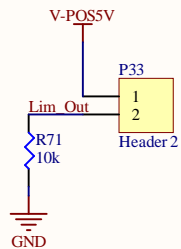
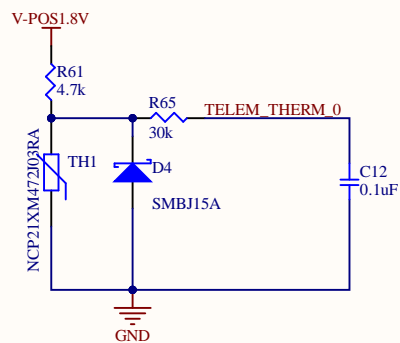
Revision: A

Date: 4/3/2022 Time: 12:11:10 PM Sheet 1 of 1

File: ext\_light\_interface\_backturn.SchDoc

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**BADGER  
LOOP**



MH2  
4-40 Mount Hole

MH1  
4-40 Mount Hole

MH3  
4-40 Mount Hole

MH4  
4-40 Mount Hole

Title <b>Miscellaneous Sensors</b>		Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, WI 53706	
Engineer: Marton Bocsi, McGregor Farah	Revision: A		
Date: 4/3/2022	Time: 12:11:25 PM		
File: misc_sensors.SchDoc		Sheet 1 of 1	



