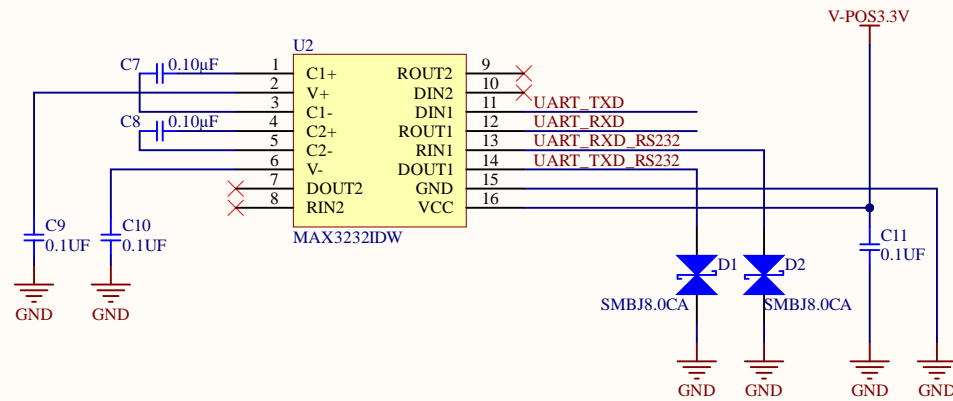

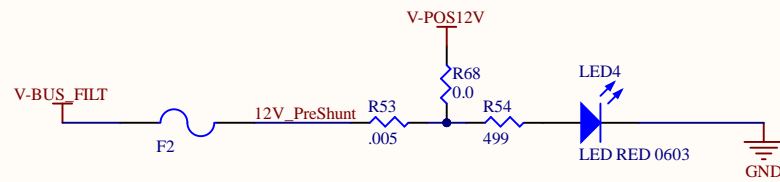


UART Interface




Title Serial Interface		Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, WI 53706	
Engineer: Zach Gunderson	Revision: A		
Date: 2023/5/24	Time: 23:26:01		
File: UART.SchDoc	Sheet 1 of 16		

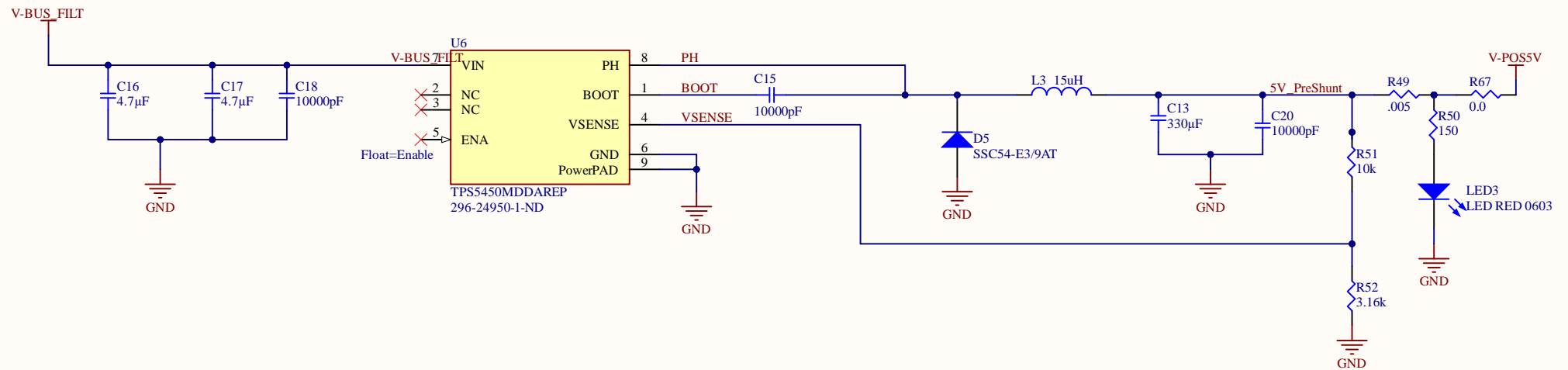
12V Power




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

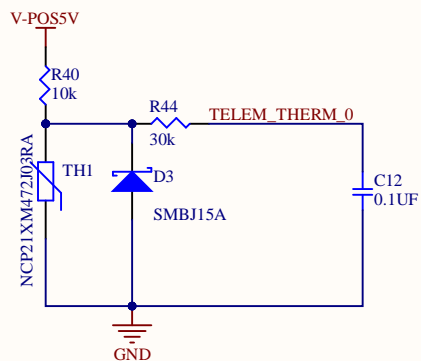
Title 12V Power		Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, WI 53706	
Engineer: McGregor Farah	Revision: A		
Date: 2023/5/24 Time: 23:26:02	Sheet 1 of 16		
File: power_12v.SchDoc			

5V Power

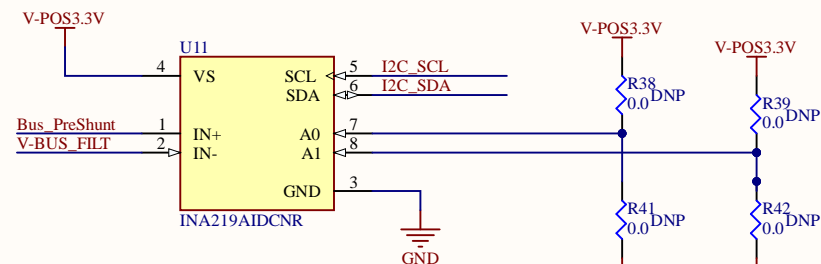


Title <i>5V Power</i>			Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, WI 53706 
Engineer: Olivia D'Souza	Revision: A		
Date: 2023/5/24 Time: 23:26:02	Sheet 1 of 16		

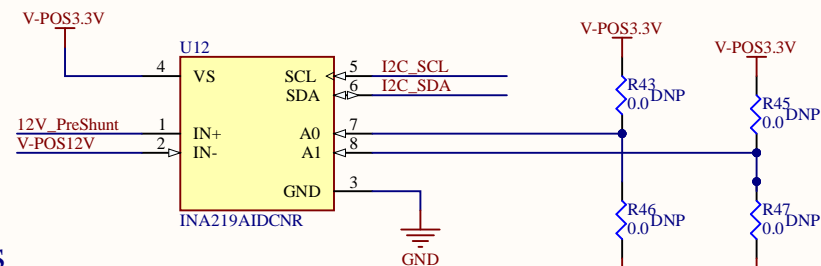
Board Temperature Sensor



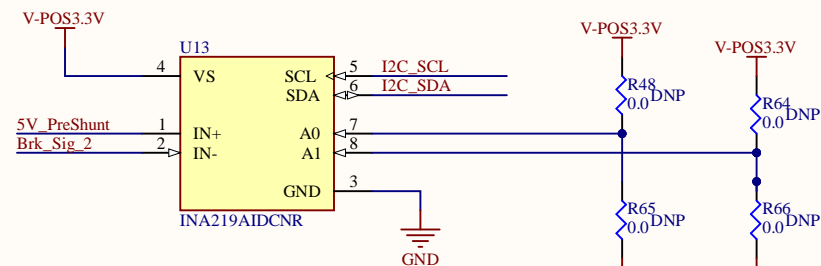
Current Sensors




Can determine addressing w/ firmware and populate resistors accordingly



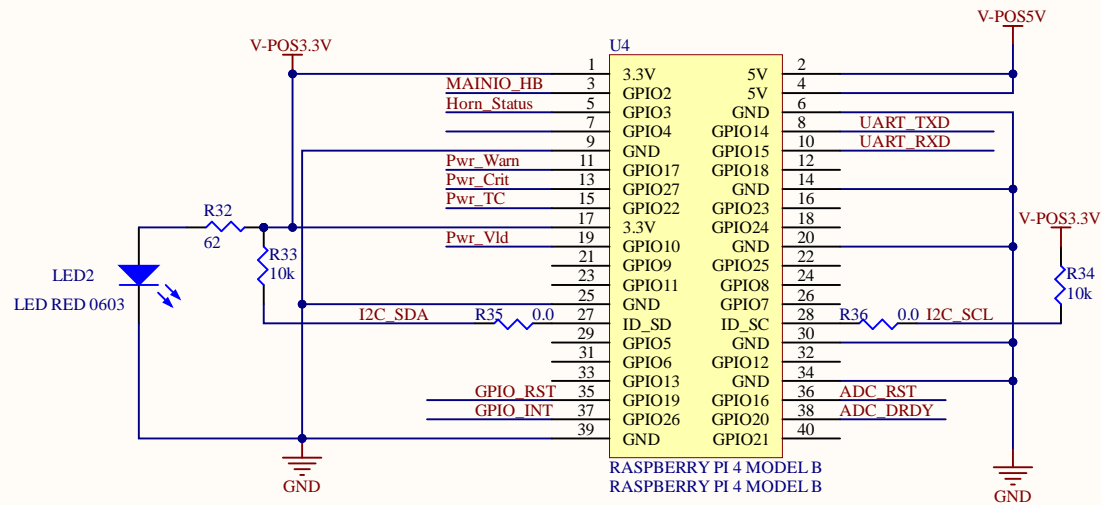
Can determine addressing w/ firmware and populate resistors accordingly



Can determine addressing w/ firmware and populate resistors accordingly

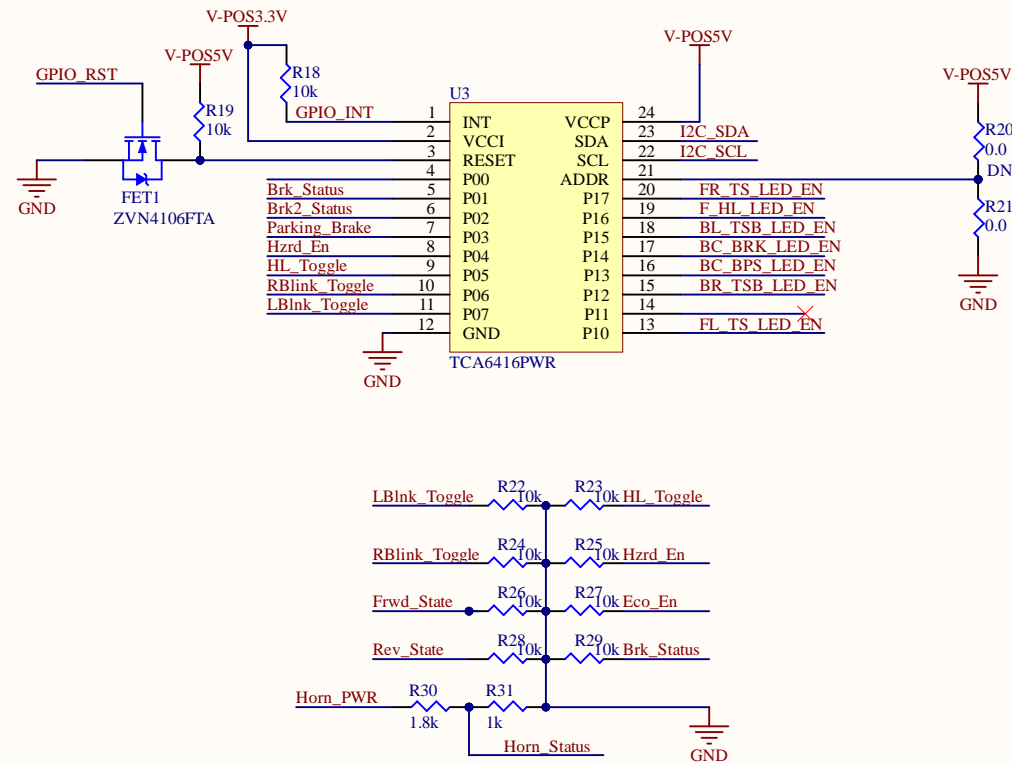
Title Miscellaneous Sensors		Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, WI 53706	
Engineer: Marton Bocsi, McGregor Farah	Revision: A		
Date: 2023/5/24 Time: 23:26:03	Sheet 1 of 16		
File: misc_sensors.SchDoc			

Raspberry Pi



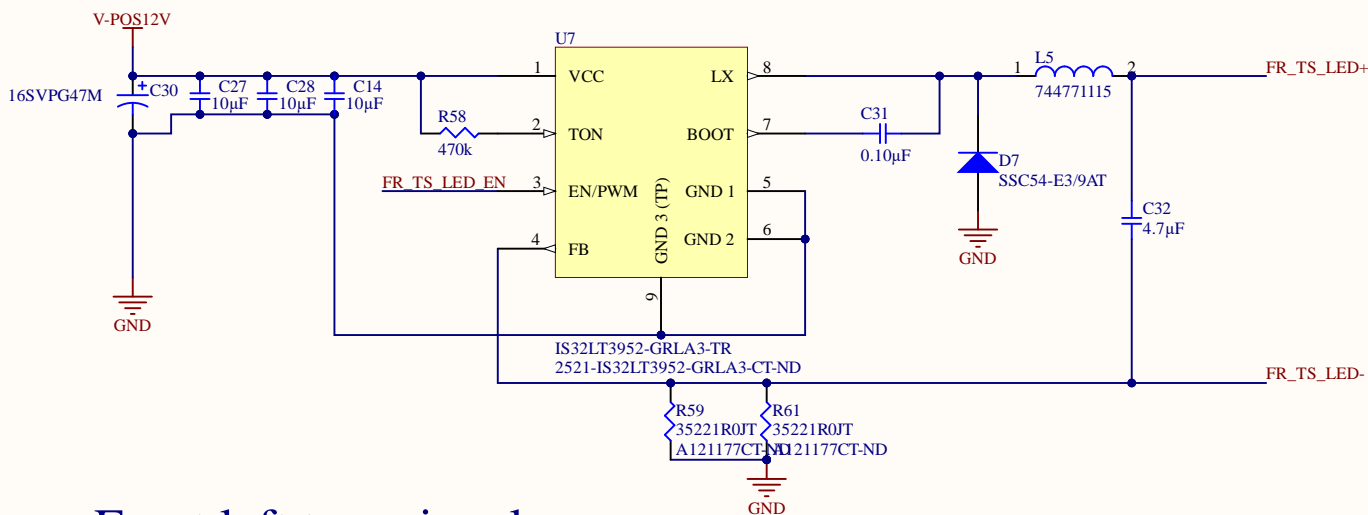
Title MCU		Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, WI 53706	
Engineer: McGregor Farah	Revision: A		
Date: 2023/5/24	Time: 23:26:03		
File: MCU.SchDoc	Sheet 1 of 16		

GPIO Expander Interface

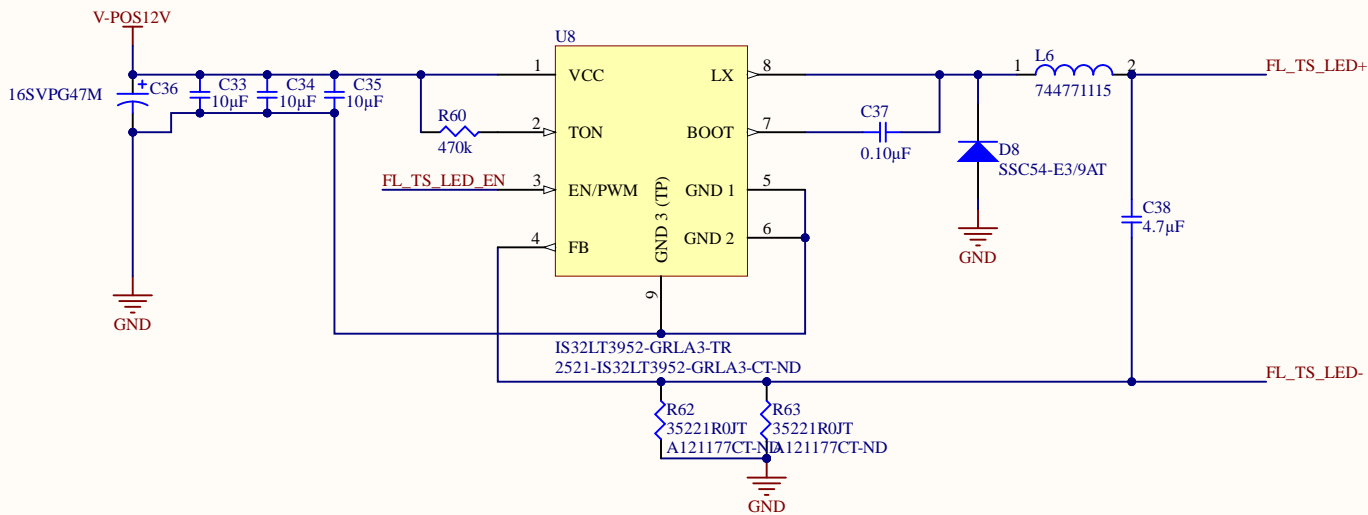


Title GPIO		Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, WI 53706	
Engineer: McGregor Farah	Revision: A		
Date: 2023/5/24	Time: 23:26:03		
File: gpio.SchDoc	Sheet 1 of 16		


Front right turn signal



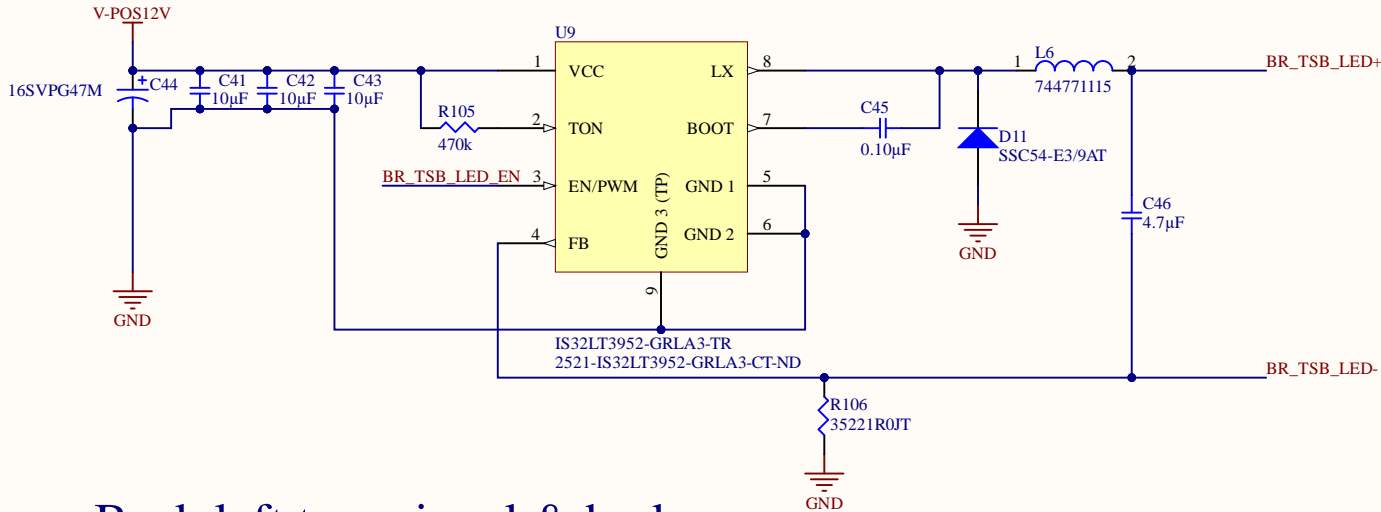
Front left turn signal



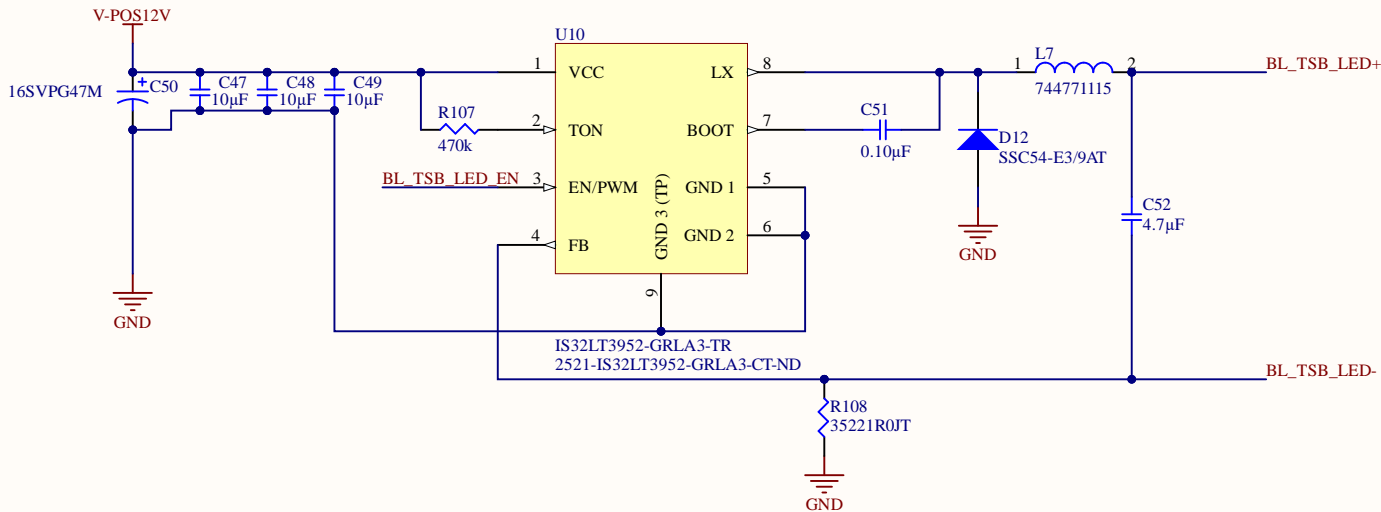
Title Front Blinker Drivers		Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, WI 53706	
Engineer: Alec Marshall		Revision: A	BADGER LOOP
Date: 2023/5/24	Time: 23:26:04	Sheet 1 of 16	
File: ext_light_interface_frontturn.SchDoc			


Title <i>Headlight Driver</i>		Badgerloop Electrical		
Engineer: Alec Marshall		133 Engineering Research Building		
Revision: A		1500 Engineering Drive		
Date: 2023/5/24 Time: 23:26:04 Sheet 1 of 16		Madison, WI 53706		
File: ext_light_interface_frontheadlight.SchDoc				

Back right turn signal & brake

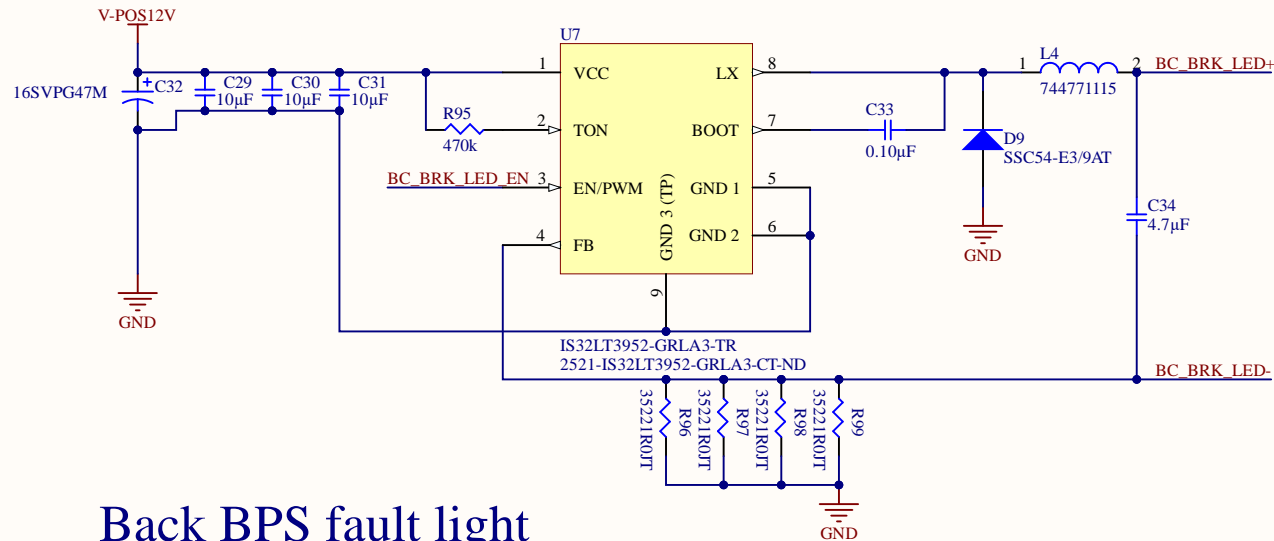


Back left turn signal & brake

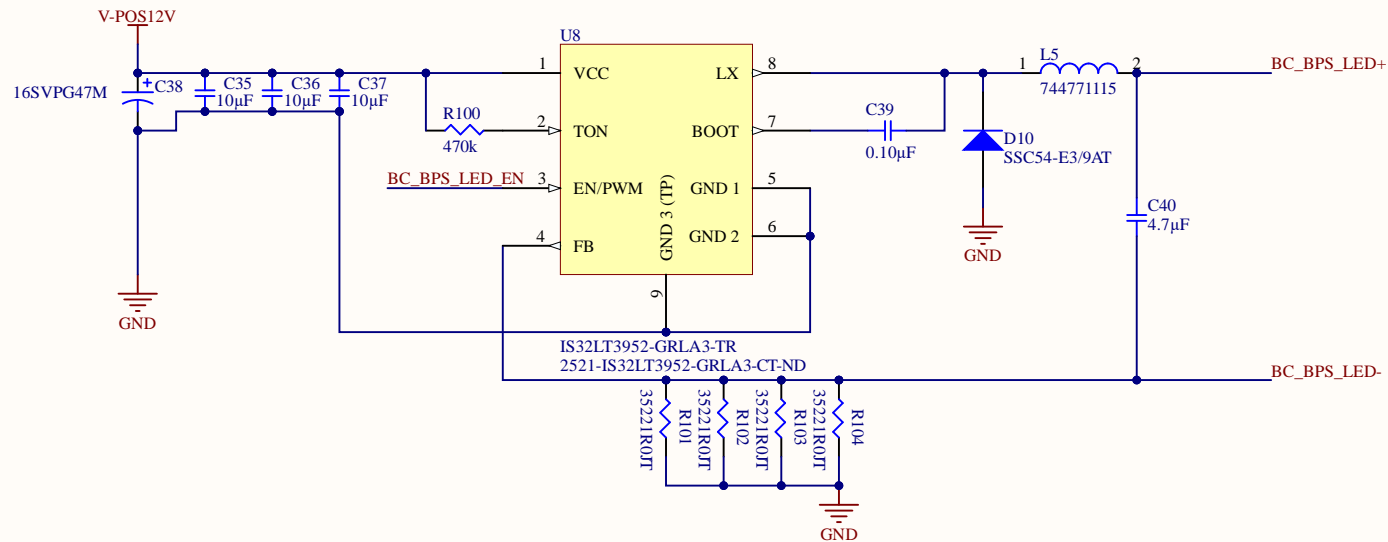


Title <i>Rear Blinker Interface</i>		Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, Wi 53706		
Engineer: Alec Marshall		Revision: A		
Date: 2023/5/24	Time: 23:26:04	Sheet 1 of 16		
File: ext_light_interface_backturn.SchDoc				

Back center brake light



Back BPS fault light



Title **Rear Center Indicator Drivers**

Engineer: Alec Marshall

Date: 2023/5/24

Time: 23:26:05

Revision: A

Sheet 1 of 16

File: ext_light_interface_backbrakebps.SchDoc


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

BADGER
LOOP

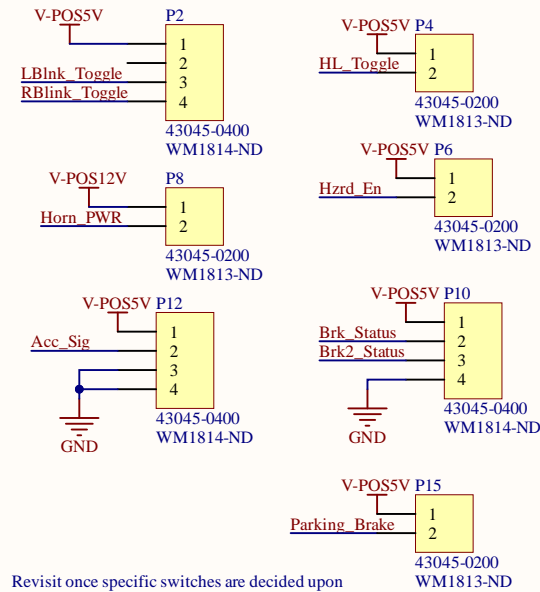
DRIVER IO

SOLAR CAR 1

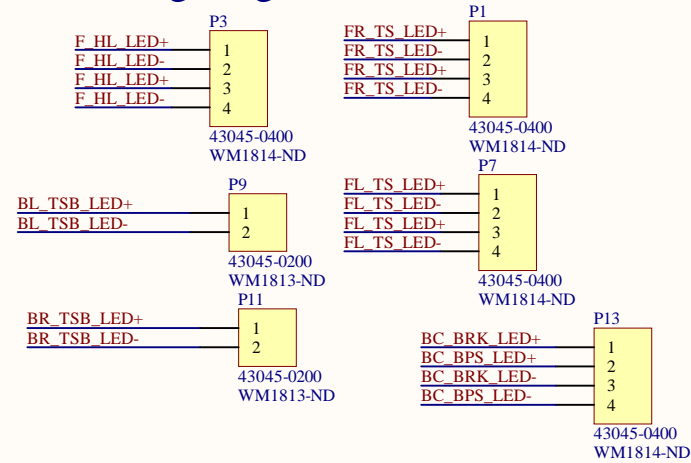
REV C

Title <i>Driver IO</i>		Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, Wi 53706		
Engineer:		Revision:		
Date: 2023/5/24	Time: 23:26:05	Sheet 1 of 16		
File: driver_io.SchDoc				

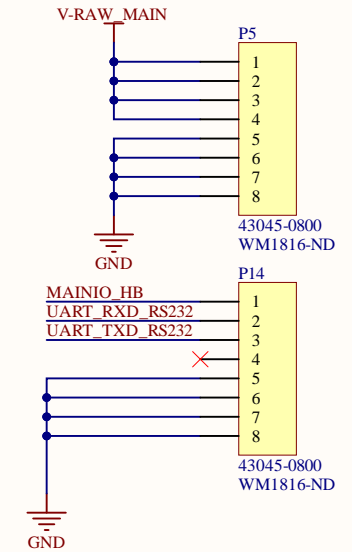
Driver Input Interface



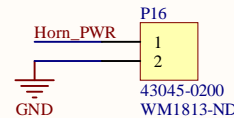
Lighting Interface



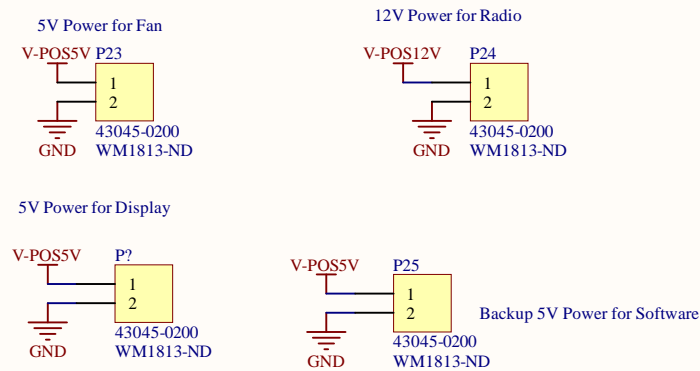
Main IO Interface



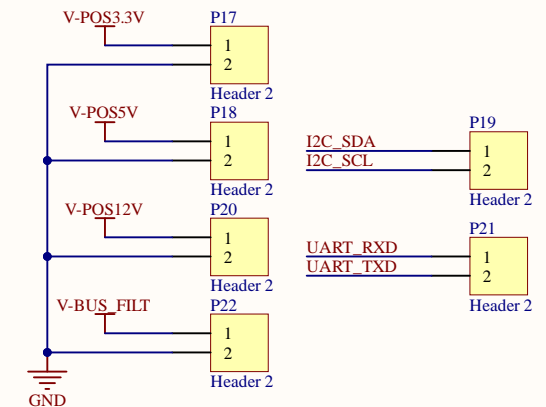
Horn Interface




Software Interface

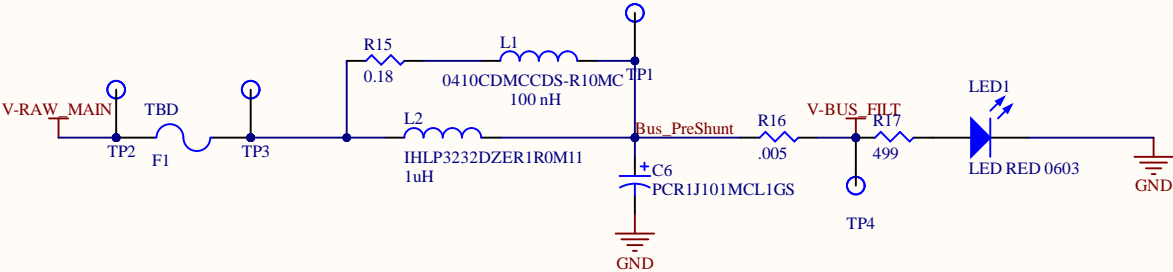



Debug Headers



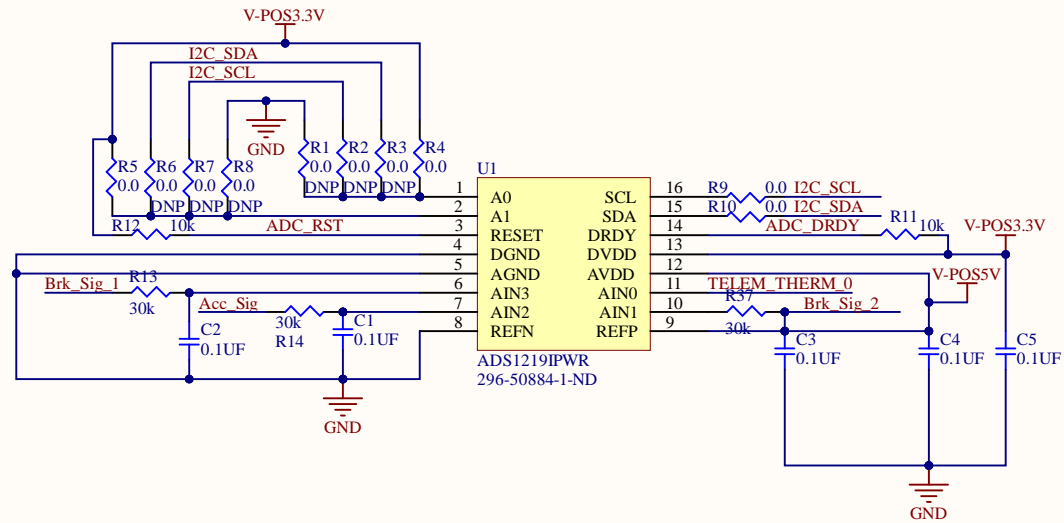
Title Connectors		Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, WI 53706	
Engineer: McGregor Farah, Olivia D'Souza	Revision: A		
Date: 2023/5/24	Time: 23:26:06		
File: connectors.SchDoc	Sheet 1 of 16		


Bus Filter



Title Bus Filter		Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, WI 53706	
Engineer: Marton Bocsi, McGregor Farah	Revision: A		
Date: 2023/5/24	Time: 23:26:06		
File: bus_filter.SchDoc		Sheet 1 of 16	

Analog to Digital Converter



Title ADC		Badgerloop Electrical 133 Engineering Research Building 1500 Engineering Drive Madison, WI 53706	
Engineer: McGregor Farah	Revision: A		
Date: 2023/5/24	Time: 23:26:06		
File: adc.SchDoc	Sheet 1 of 16		

1	2	3	4
A			A
B			B
C			C
D			D
1	2	3	4

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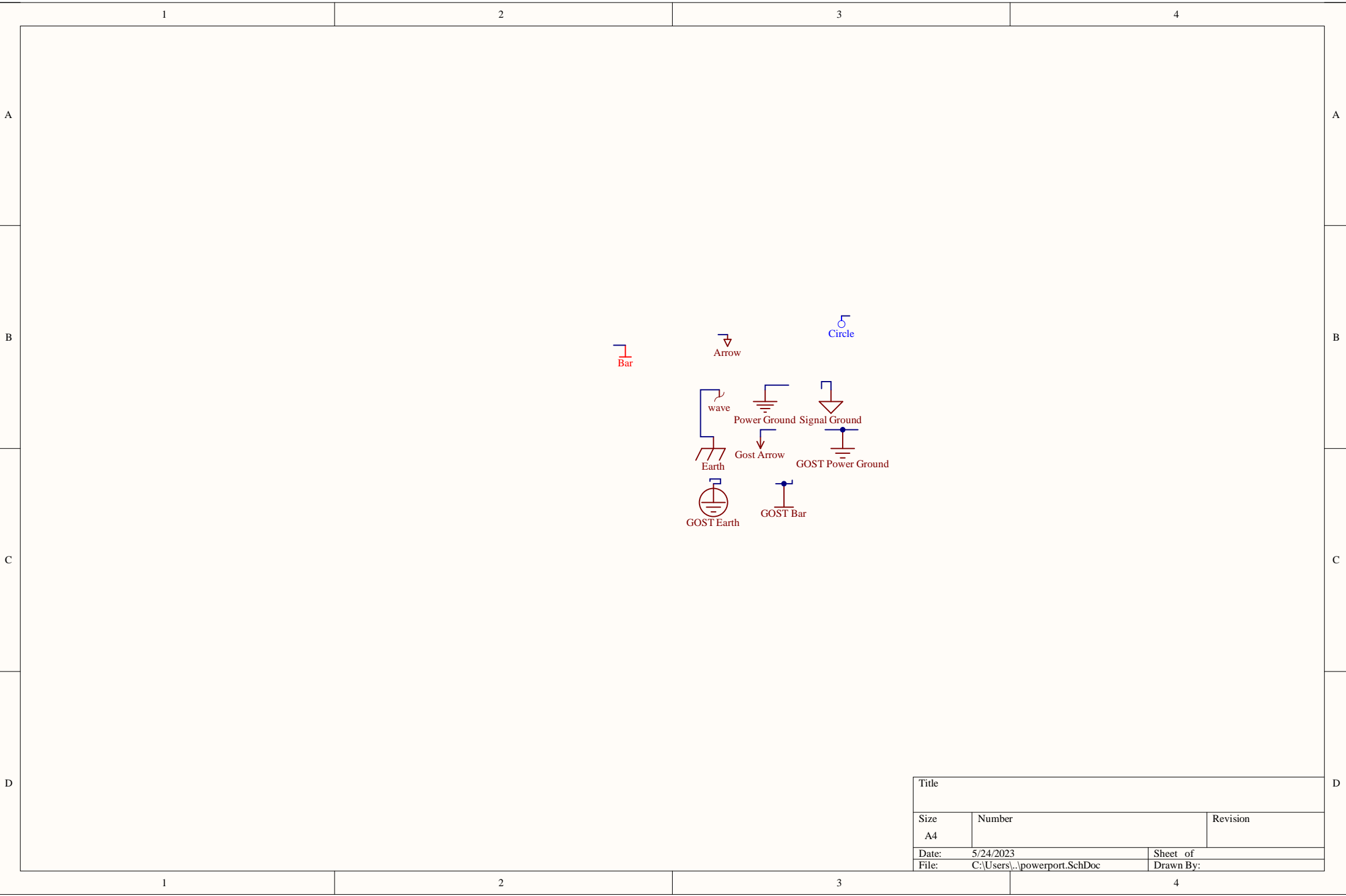
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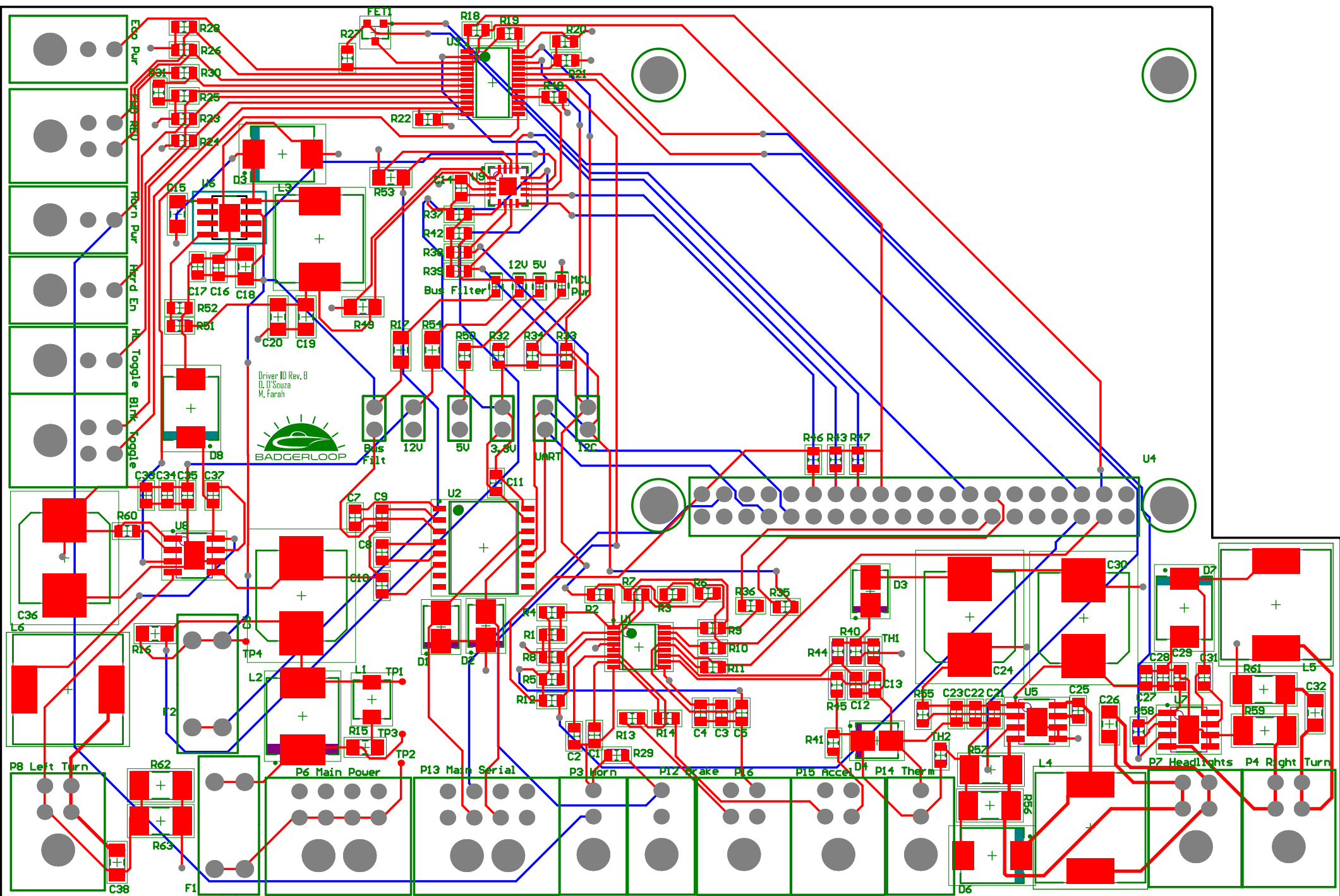
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Title		
Size	Number	Revision
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Date:	5/24/2023	Sheet of
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Title		
Size	Number	Revision
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Date:	5/24/2023	Sheet of
File:	C:\Users\...\powerport.SchDoc	Drawn By:



Board Stack Report