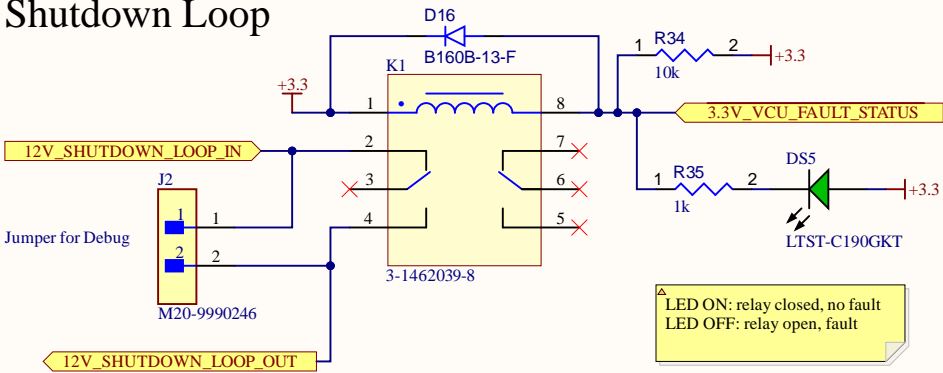
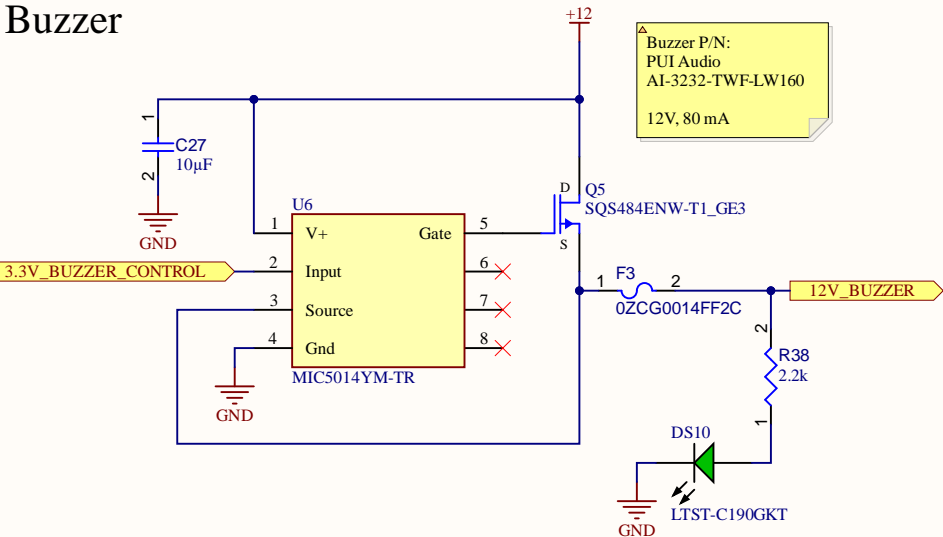


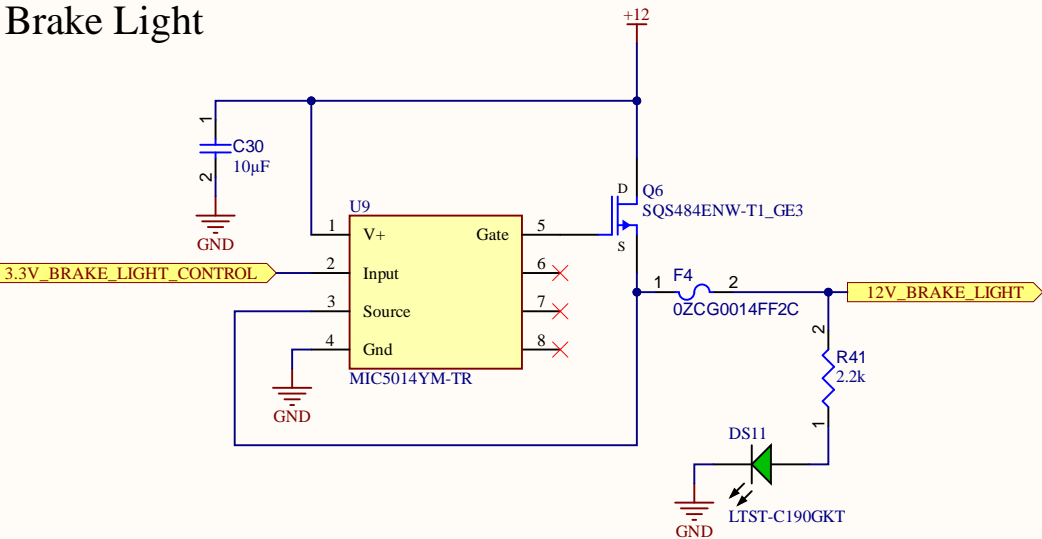
Shutdown Loop



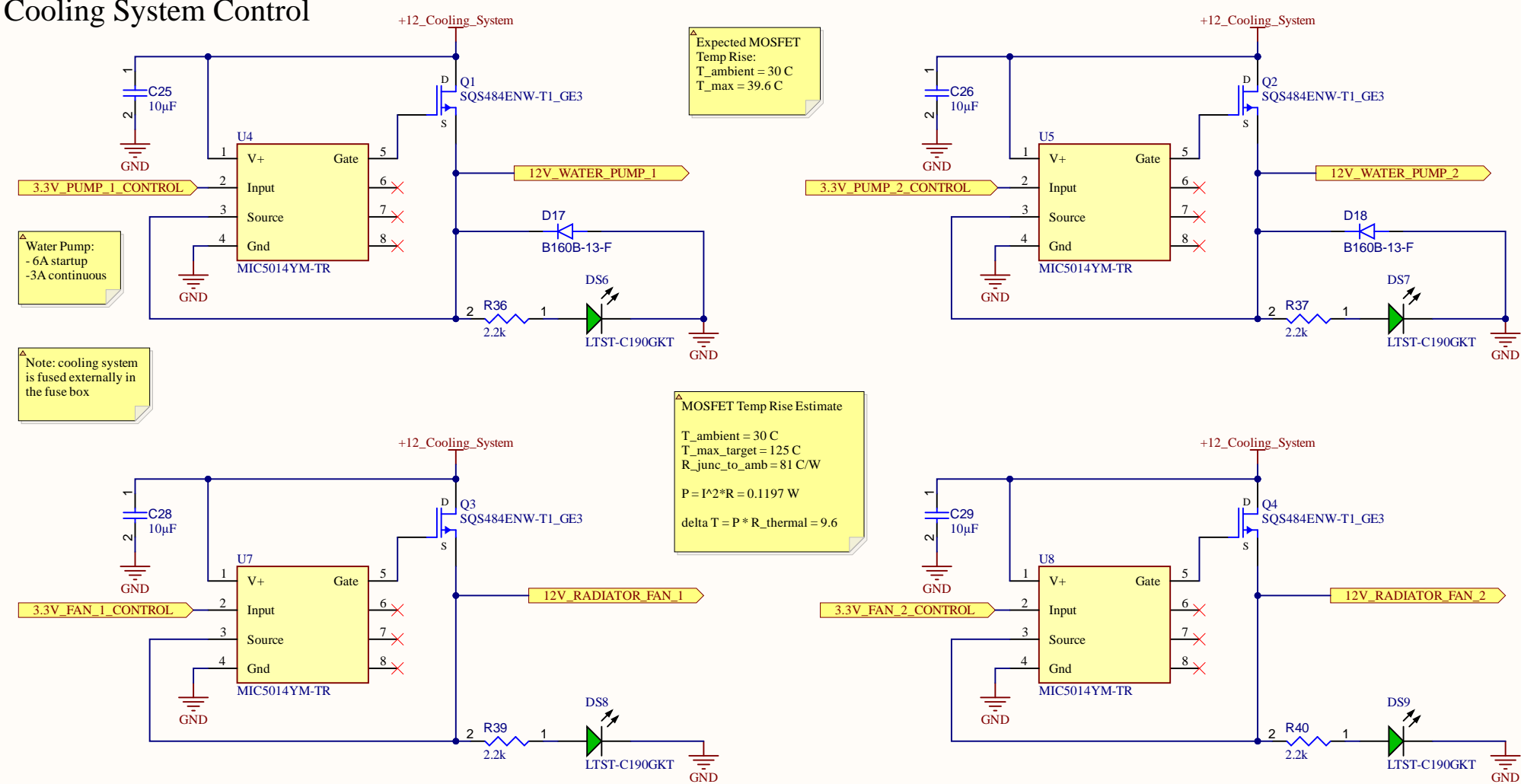
Buzzer



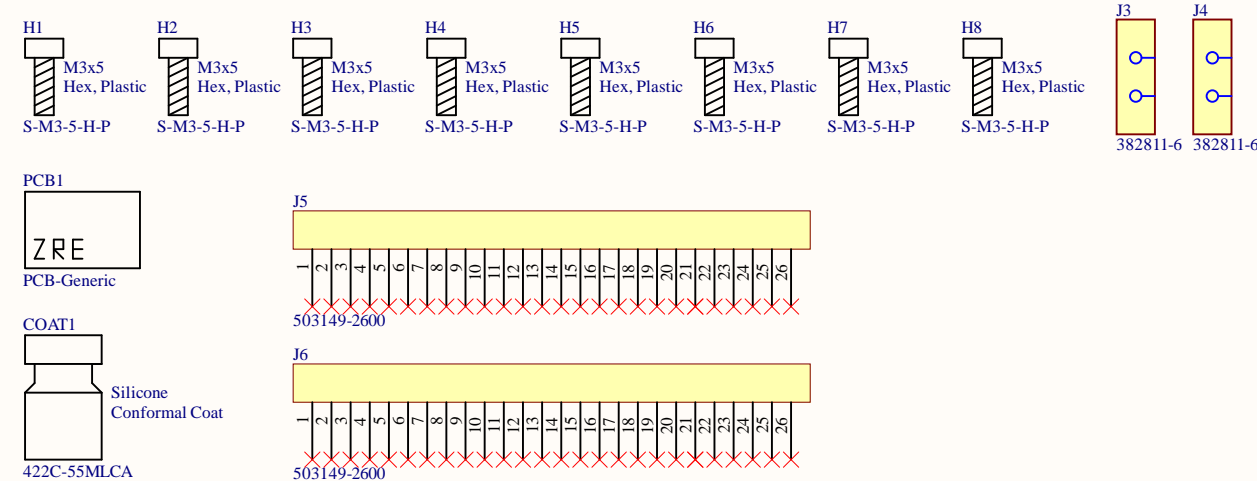
Brake Light



Cooling System Control



Non-PCB BOM Components



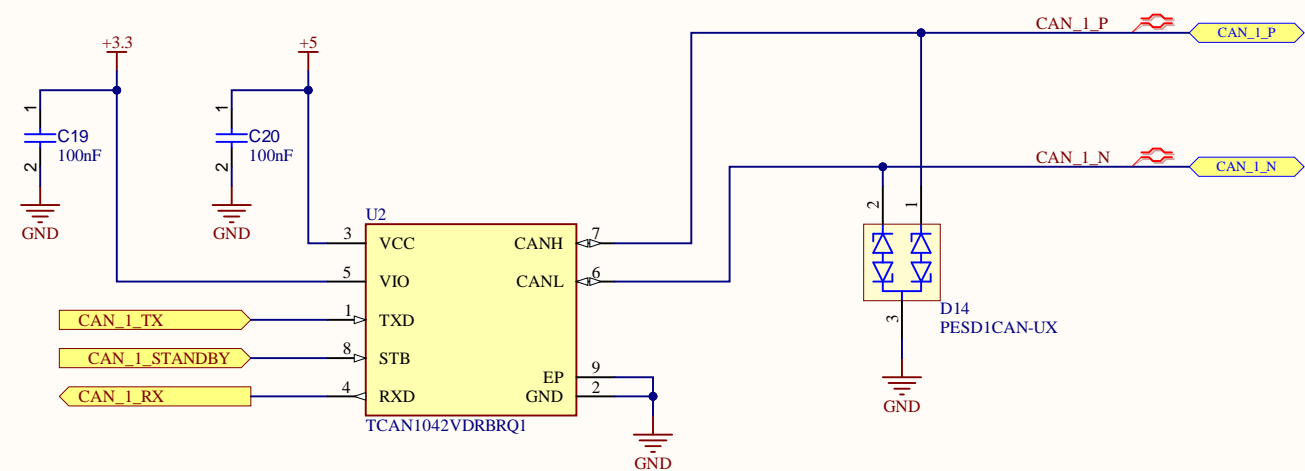
THE UNIVERSITY OF AKRON



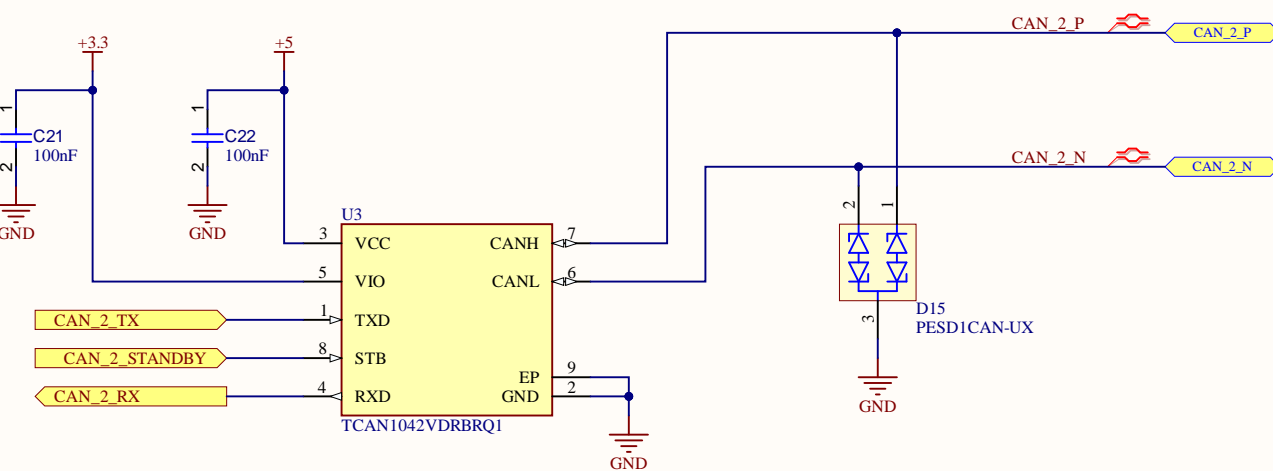
SHEET SIZE	TITLE		PART NUMBER	REVISION
	ANSI B	Vehicle Control Unit	ZR25-VCU	2
LAST UPDATE	2/12/2025 4:23:00 AM	SHEET	* of *	

CAN Transceiver - Bus 1

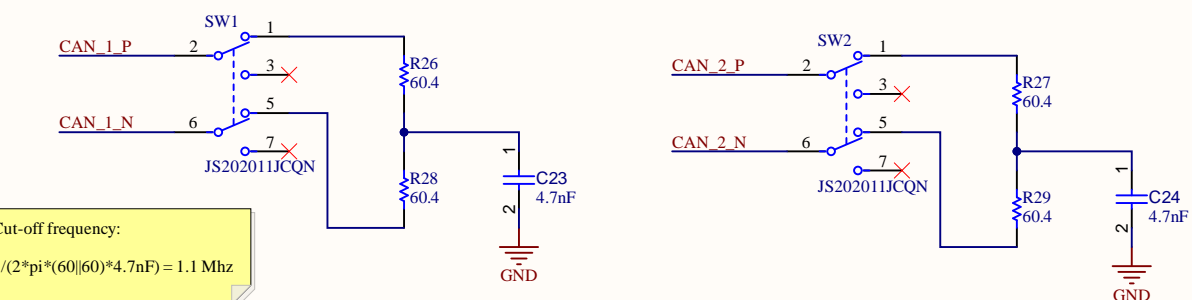
[CAN Bus Physical Layer Specifications Doc](#)



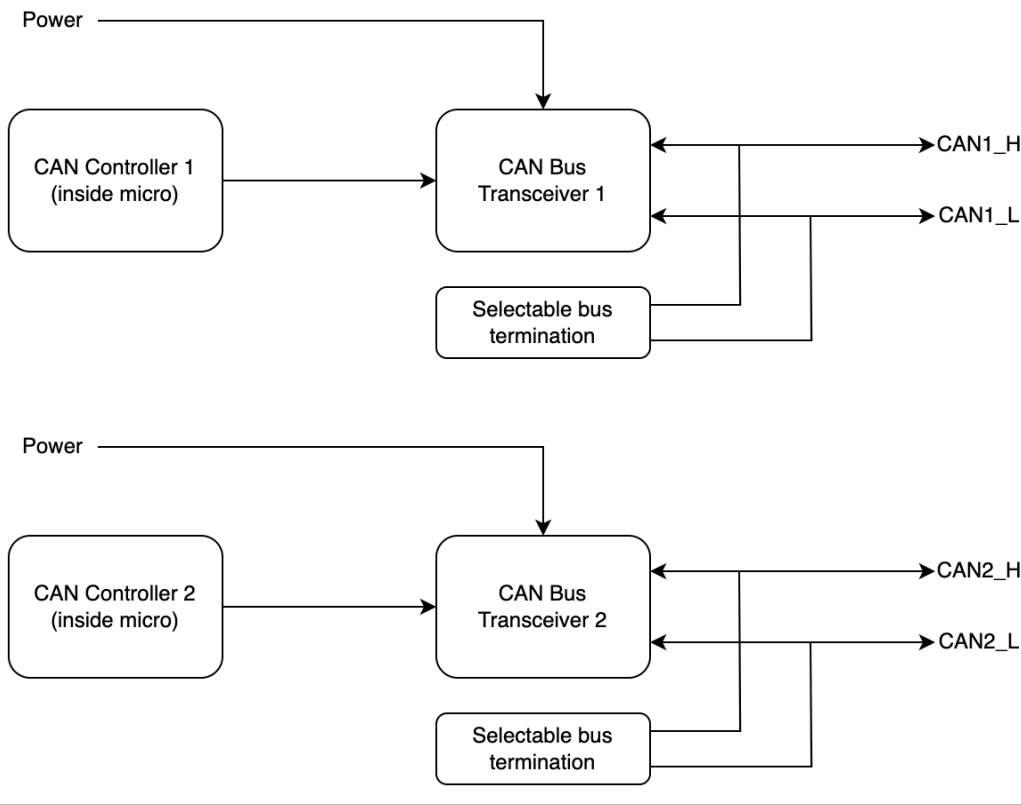
CAN Transceiver - Bus 2



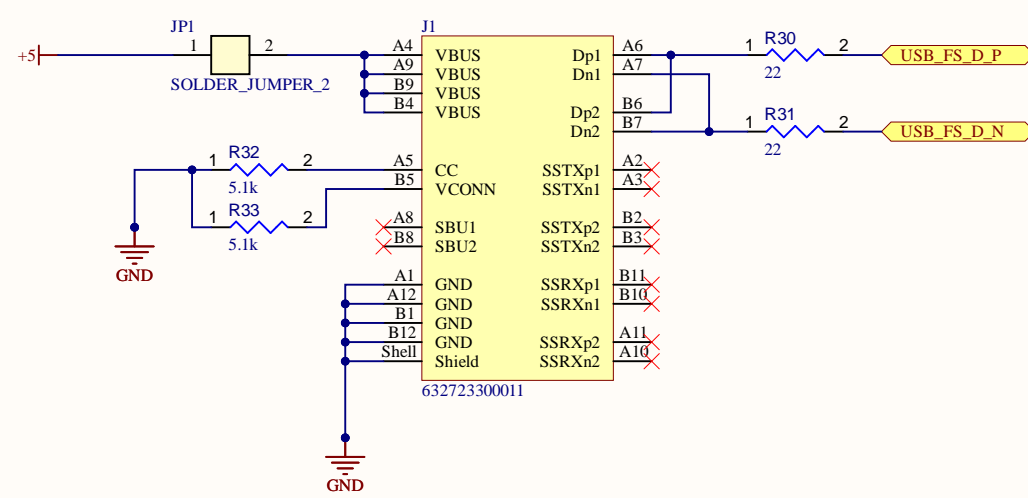
Split Termination



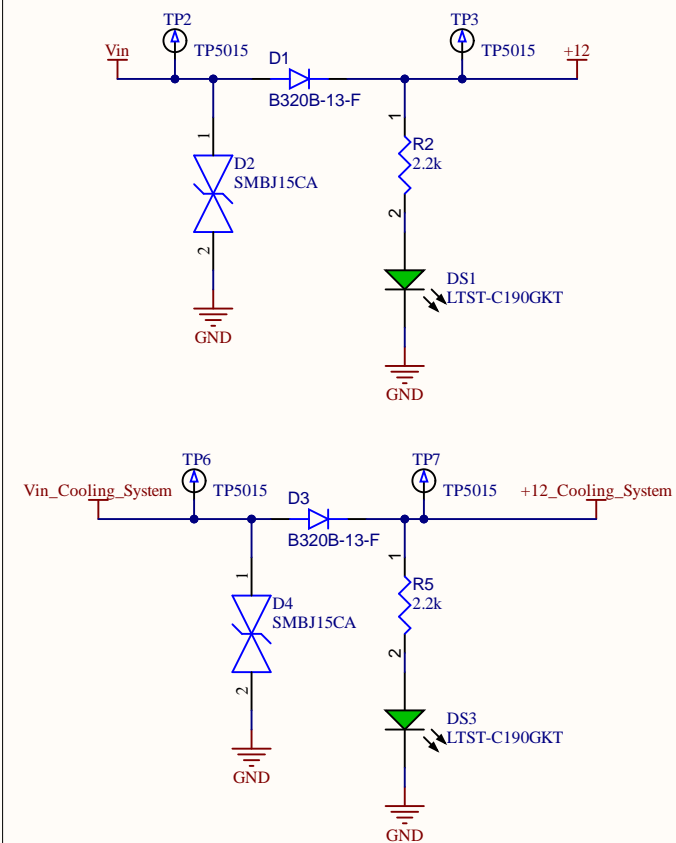
Level 2 CAN Bus Interface Block Diagram



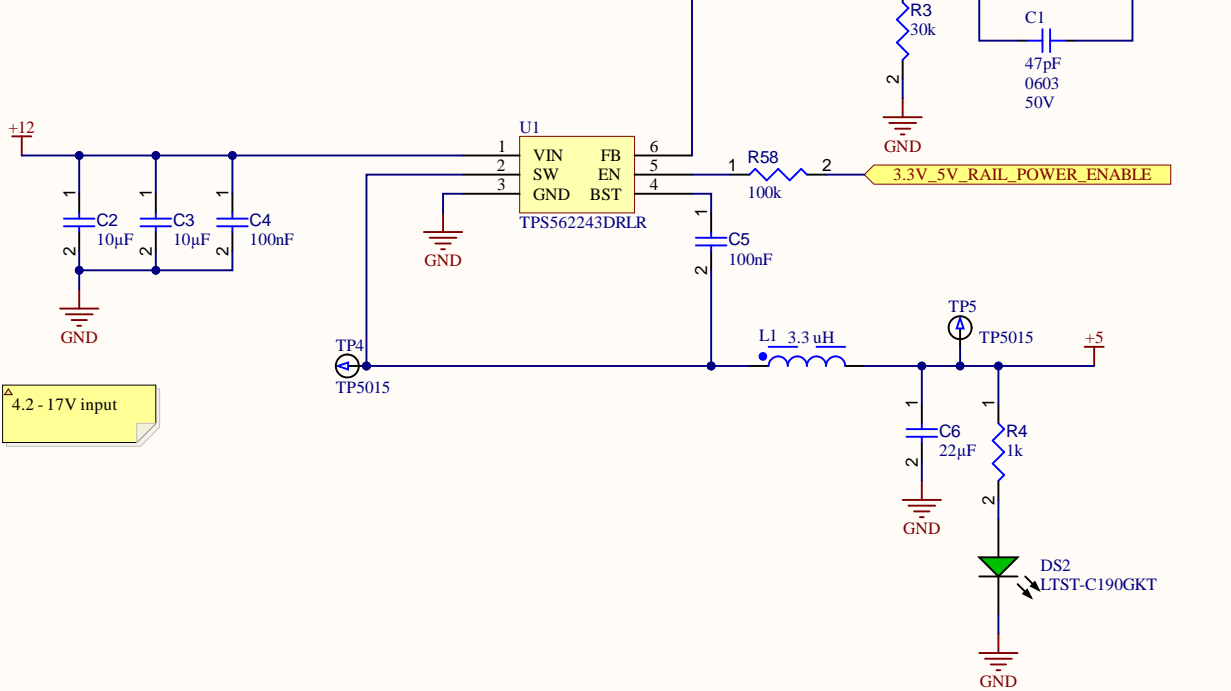
USB-C FS 2.0 Communication Device



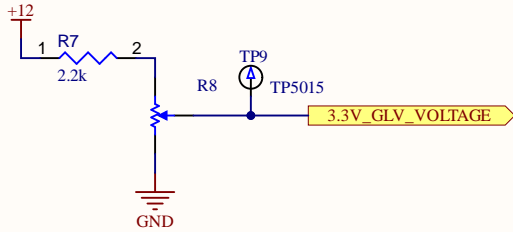
Input Protection



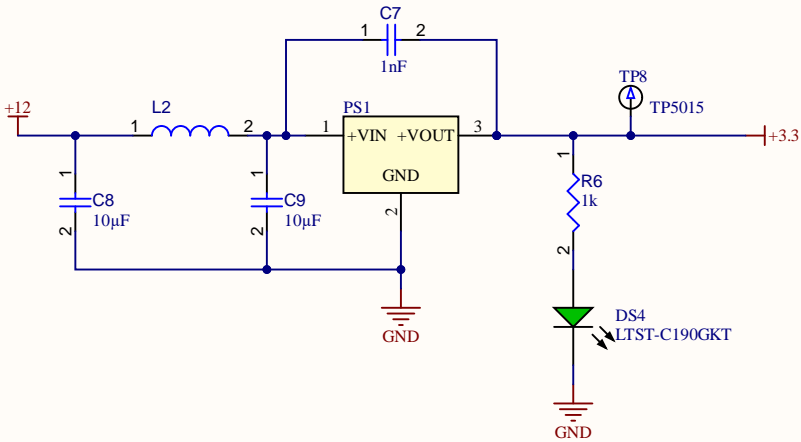
5V @ 1A Switching Regulator



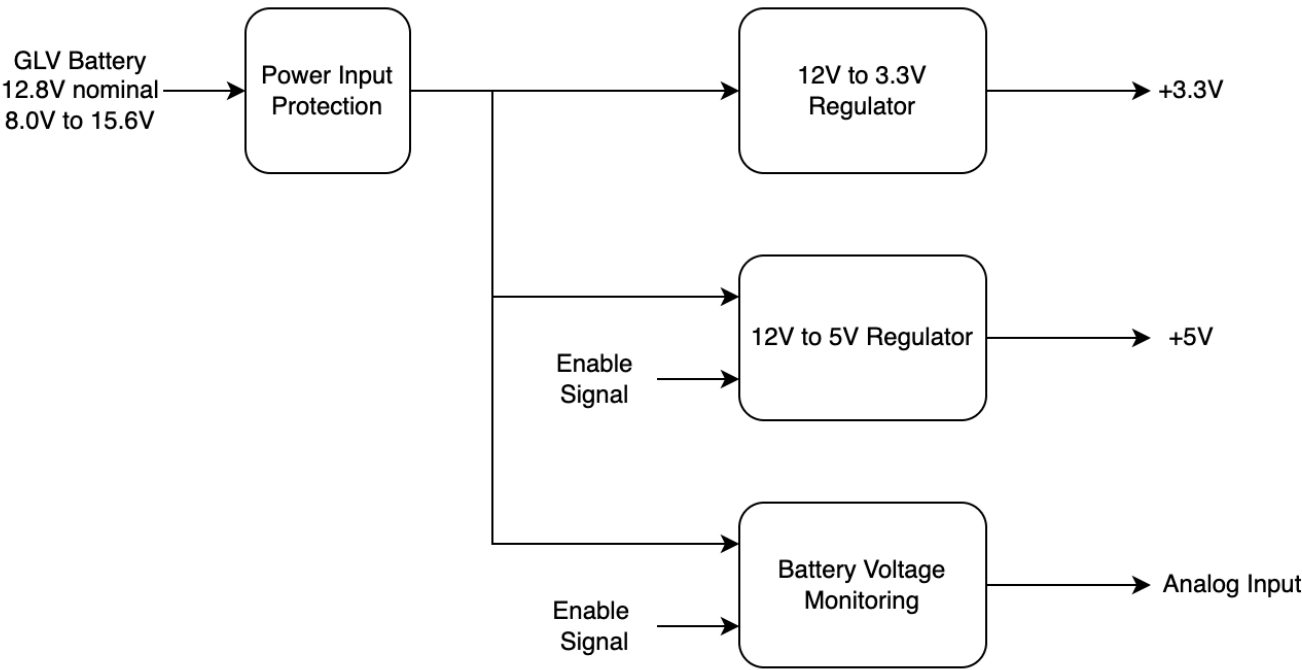
GLV Voltage Measurement



3.3V @ 1A Switching Regulator

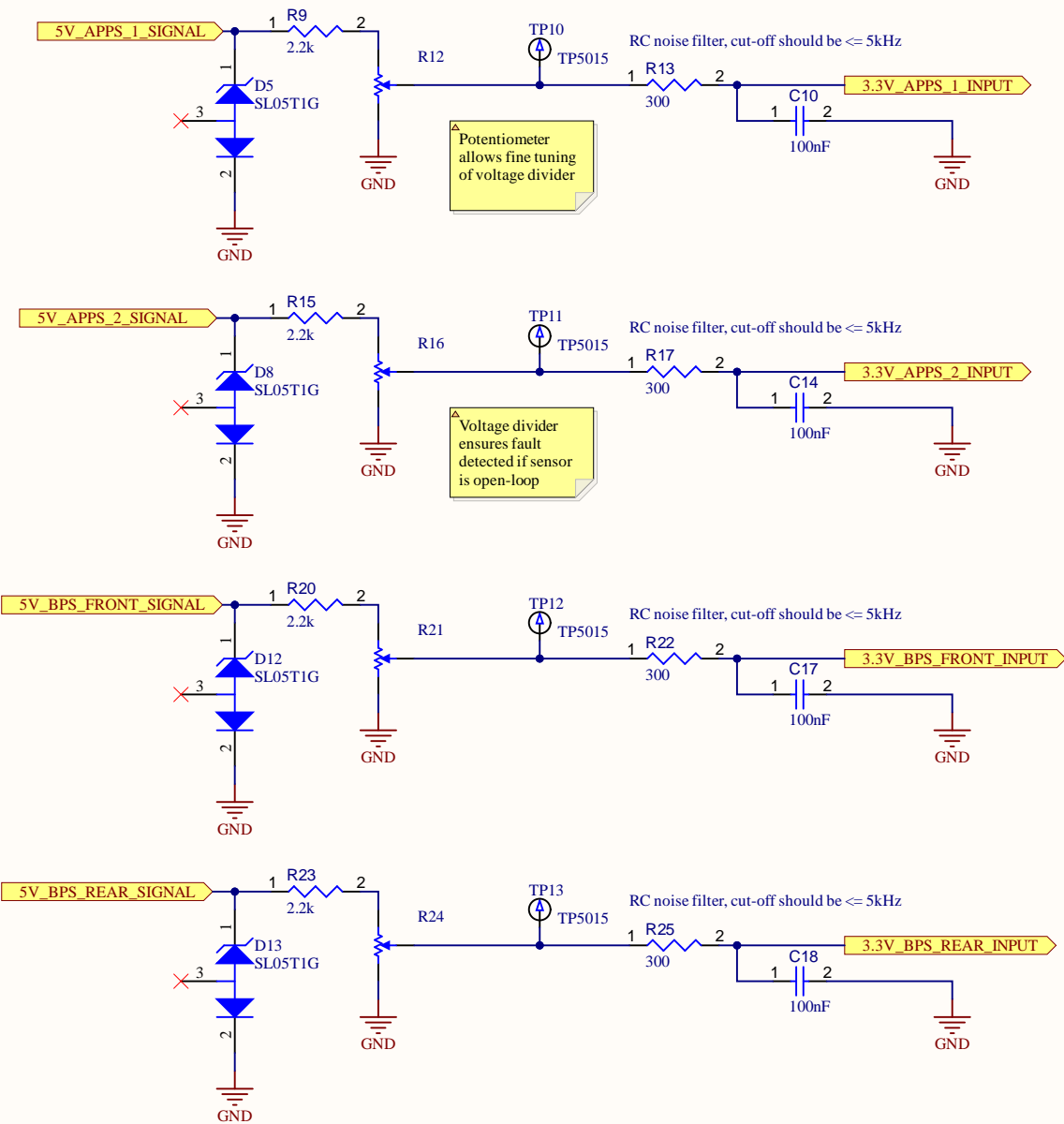


Level 2 Power Supply Regulation Block Diagram



Power Supply Requirements:
Vin = 9 - 15.6V, 12V nominal
- ESD protection
- over voltage protection
- over current protection
- measurement of the GLV battery voltage

Analog Inputs



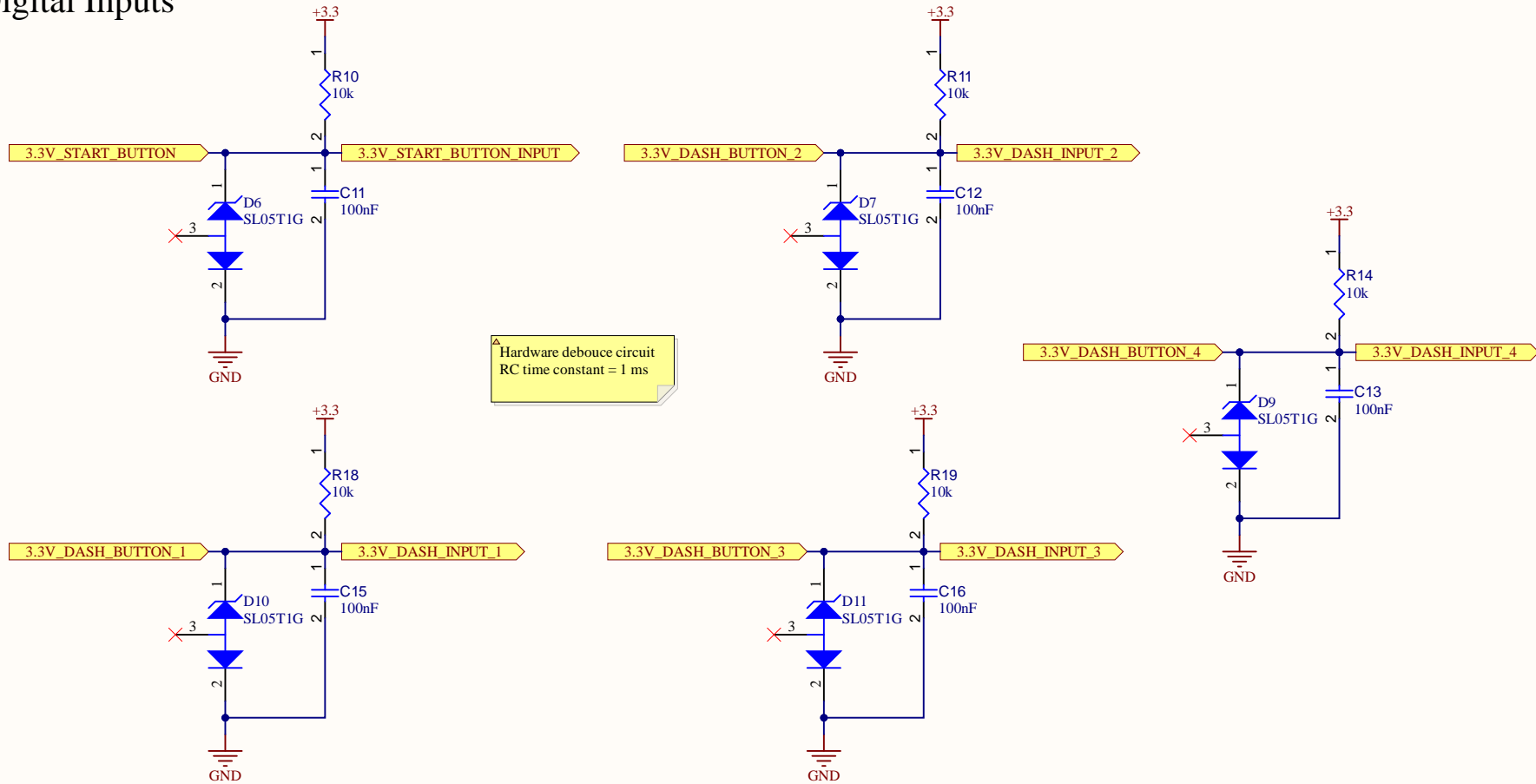
△ Analog Input Protection Scheme:

- TVS for ESD protection
- RC filter reduces noise in signal to relevant frequencies only. Also high impedance R acts as current limiting

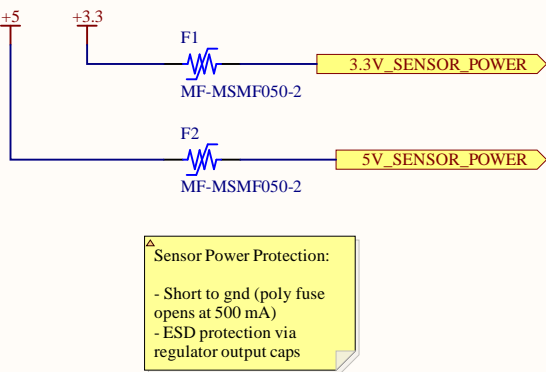
△ Brake Pedal Force Sensor
5V, 50 mA each

△ APPS Sensor: Reventec CC-205-01
5V, ~50 mA

Digital Inputs



Sensor Power



Level 2 Sensor Interface Hardware Block Diagram

