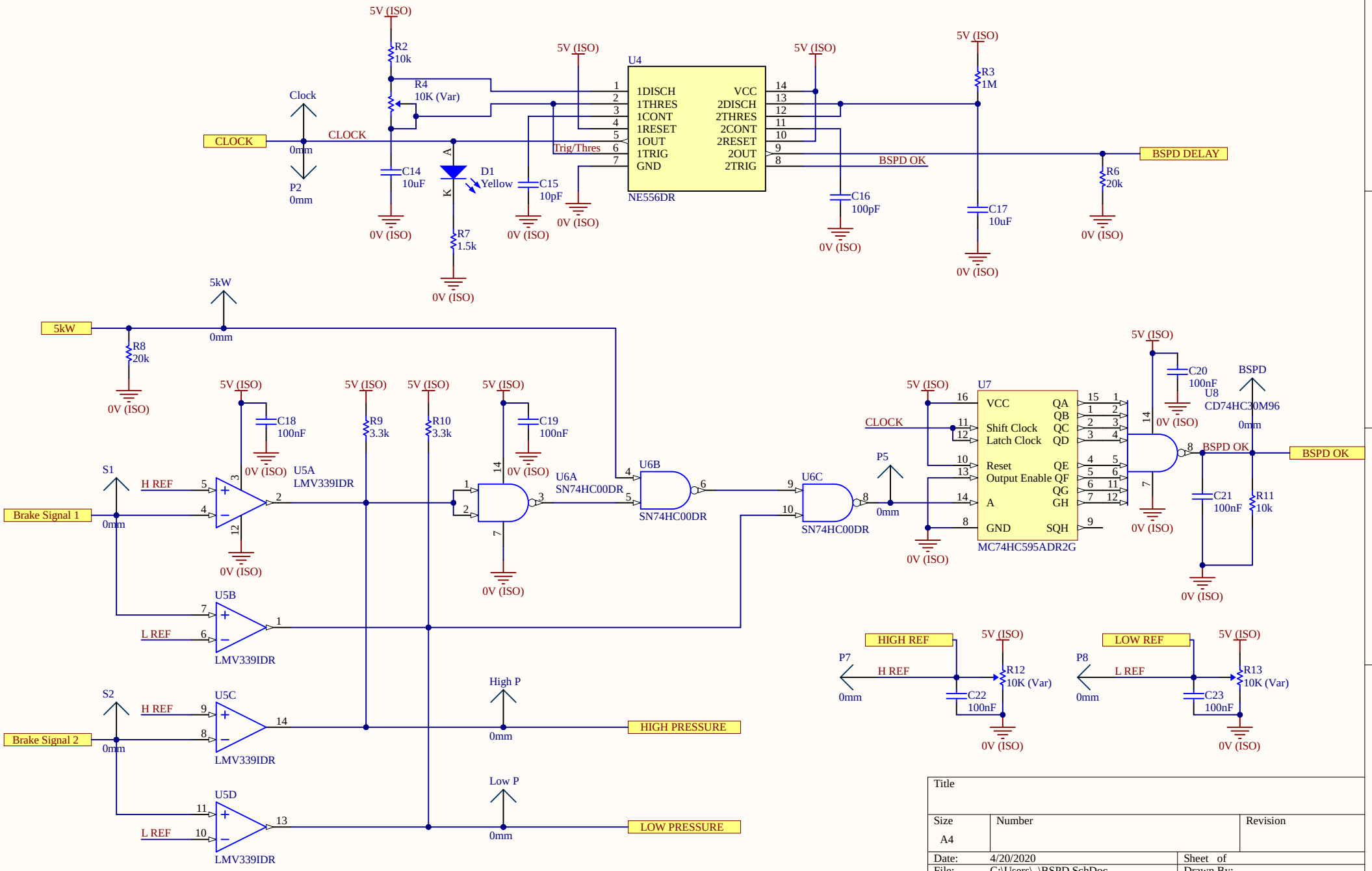

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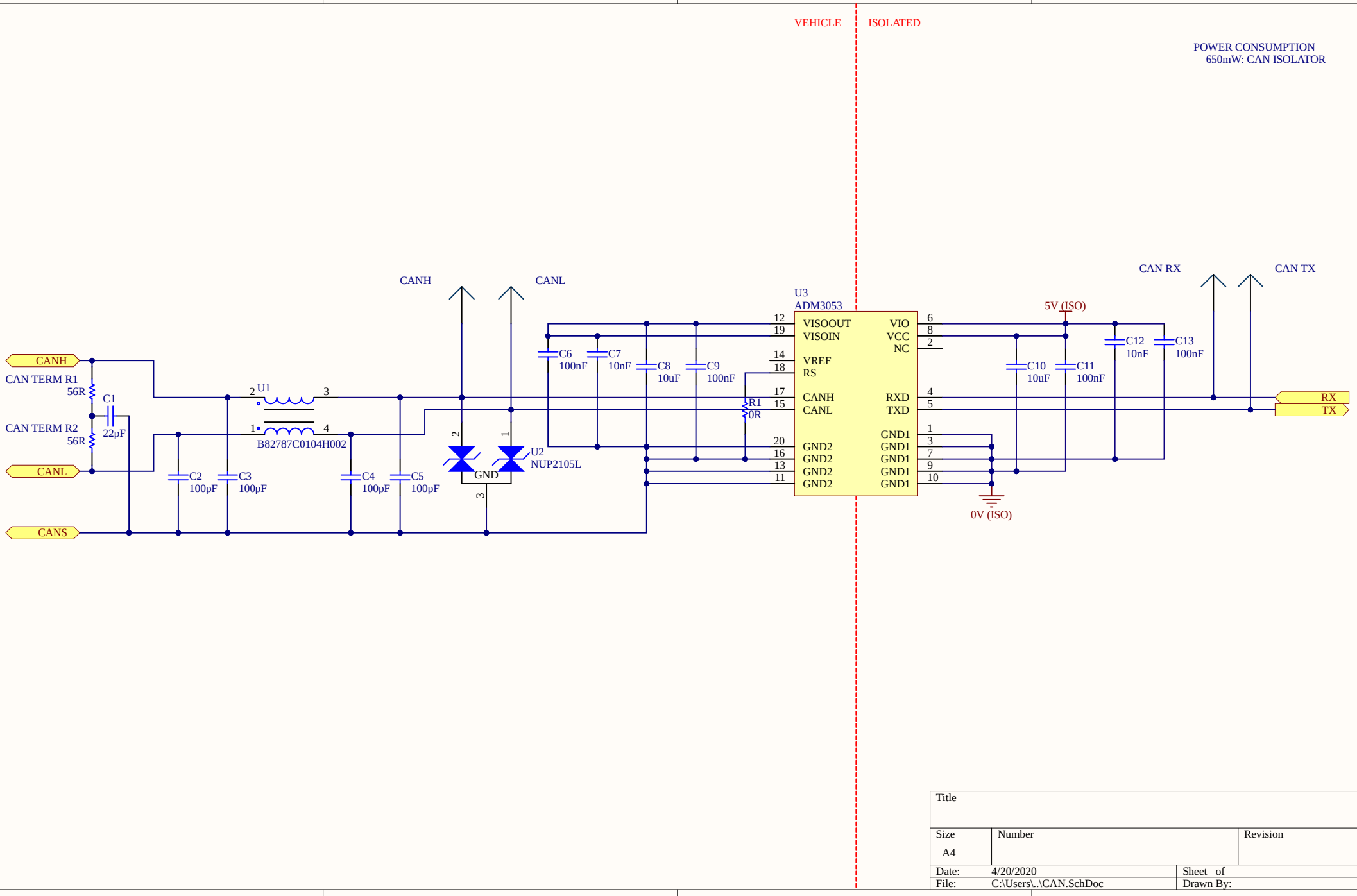

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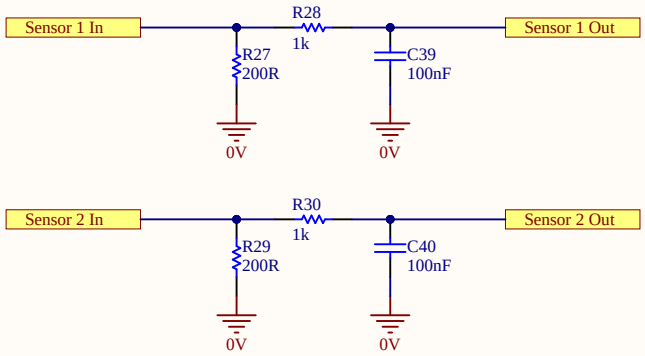

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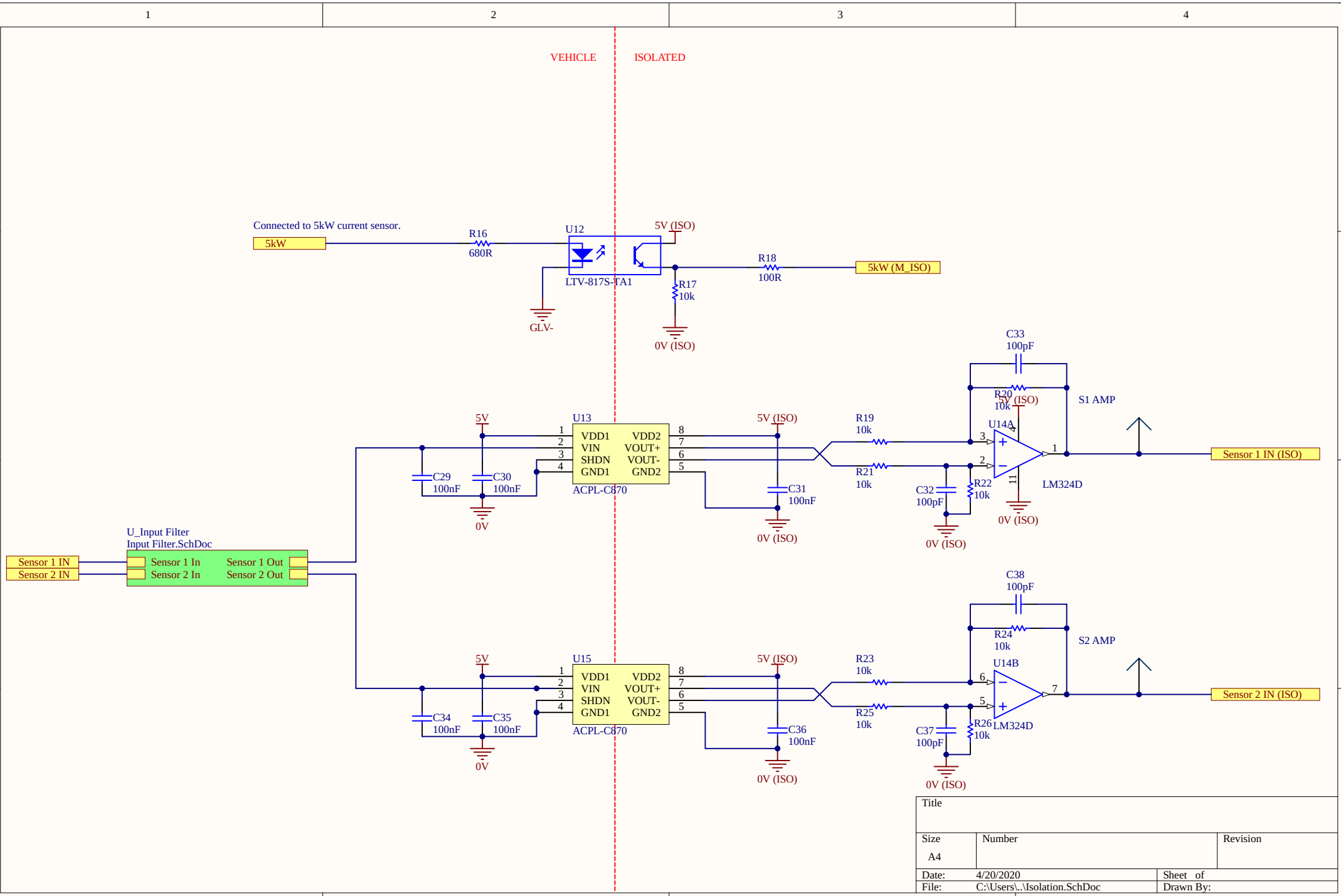
VEHICLE
ISOLATED
Connected to 5kW current sensor.
5kW
R16
680R
U12
LTV-817S-TA1
5V (ISO)
R18
100R
5kW (M_ISO)
R17
10k
GLV-
0V (ISO)
C33
100pF
R20
10k
S1 AMP
U14A
LM324D
R19
10k
R21
10k
C32
100pF
R22
10k
Sensor 1 IN (ISO)
5V
U13
ACPL-C870
VDD1
VIN
SHDN
GND1
VDD2
VOUT+
VOUT-
GND2
C29
100nF
C30
100nF
C31
100nF
0V
U_Input Filter
Input Filter.SchDoc
Sensor 1 IN
Sensor 2 IN
Sensor 1 In
Sensor 2 In
Sensor 1 Out
Sensor 2 Out
C38
100pF
R24
10k
S2 AMP
U14B
LM324D
R23
10k
R25
10k
C37
100pF
R26
10k
Sensor 2 IN (ISO)
U15
ACPL-C870
C34
100nF
C35
100nF
C36
100nF
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4/20/2020
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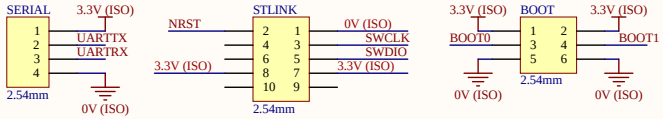
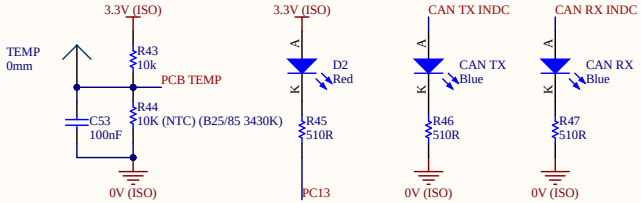




Instructions to Use PLATFORMIO & STLINK

platformio.ini

For use with Arduino Environment

```
[env:genericSTM32F103R8]
platform = ststm32
board = genericSTM32F103C8
framework = arduino
upload_protocol = stlink
```

BOOT JUMPER POSITIONS

	BOOT1	BOOT0
User Flash	X	0
System (Bootloader)	0	1
Embedded SRAM	1	1

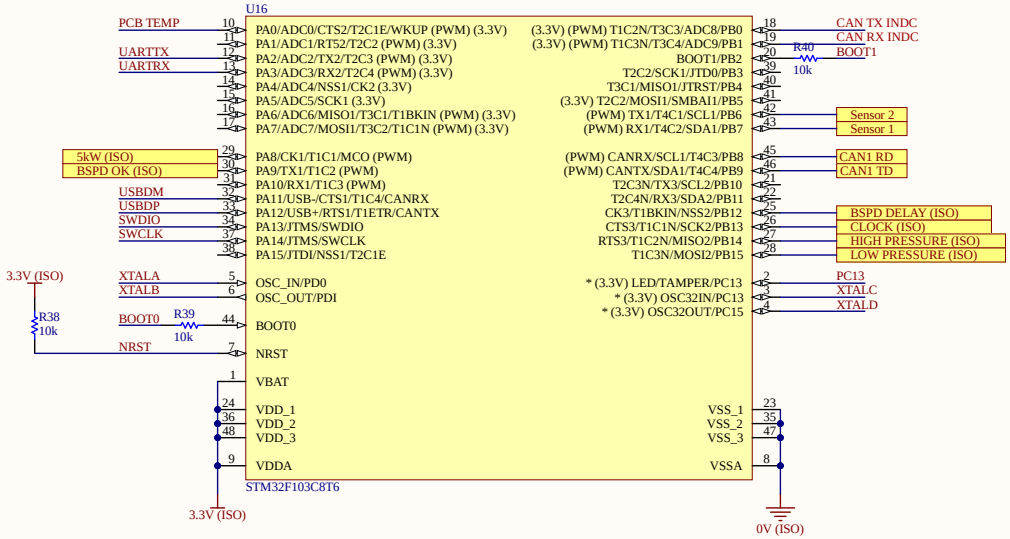
ST-LINK

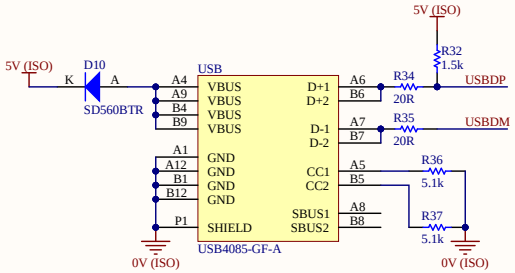
For all operations, use the select the bootloader, then reset the device.

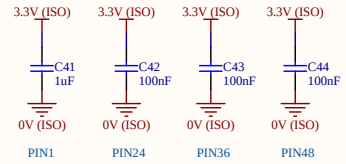
Example Code

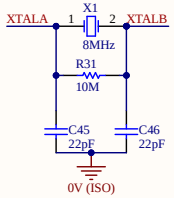
```
#include "Arduino.h"

#define LED_BUILTIN PC13
USBSerial usb;

void setup()
{
  pinMode(LED_BUILTIN, OUTPUT);
  Serial.begin(9600);
  usb.begin(9600);
}

void loop()
{
  digitalWrite(LED_BUILTIN, HIGH);
  Serial.println("Serial LED OFF");
  usb.println("usb LED OFF");

  delay(1000);

  digitalWrite(LED_BUILTIN, LOW);
  Serial.println("Serial LED ON");
  usb.println("usb LED ON");

  delay(1000);
}
```

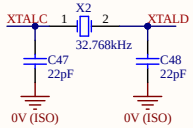
https://www.shortn0tes.com/2017/06/how-to-use-platformio-to-develop-for.html
https://www.onetransistor.eu/2018/09/stm32-bluepill-dev-mbed-platformio-vscode.html

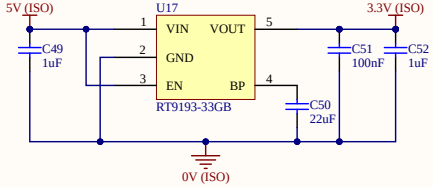












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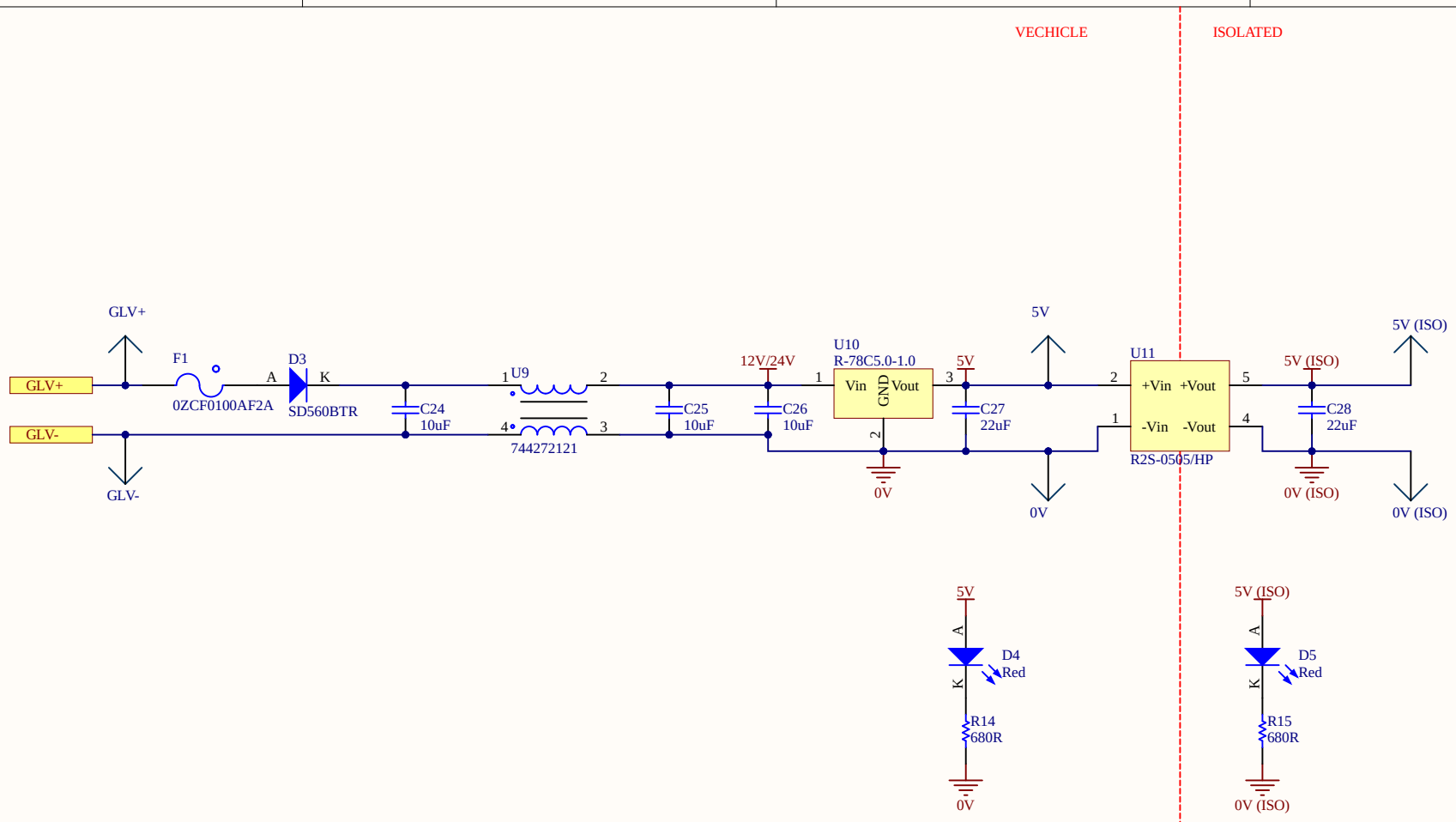
Altium



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Date: 4/20/2020	Sheet of	
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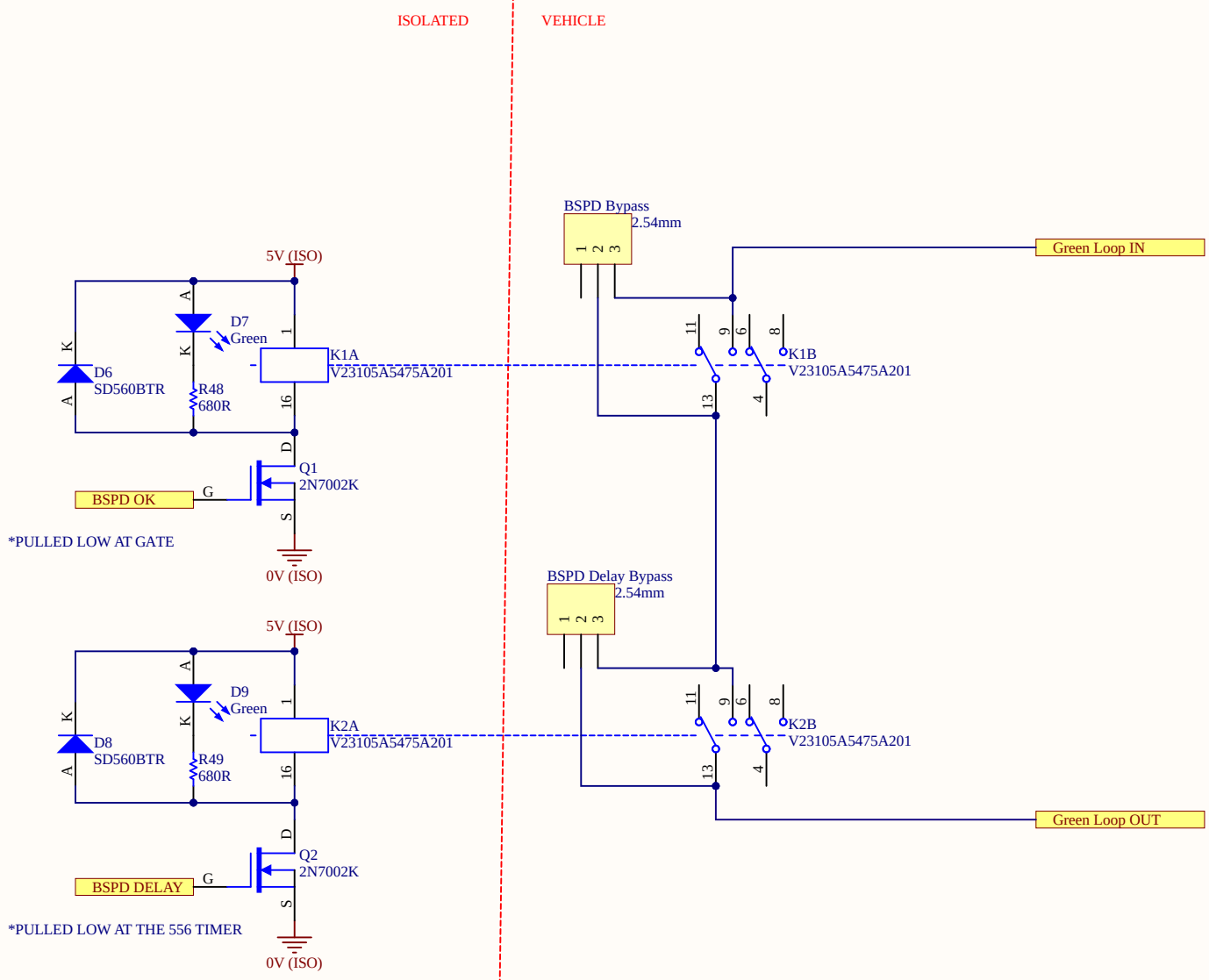

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Date: 4/20/2020		Sheet of
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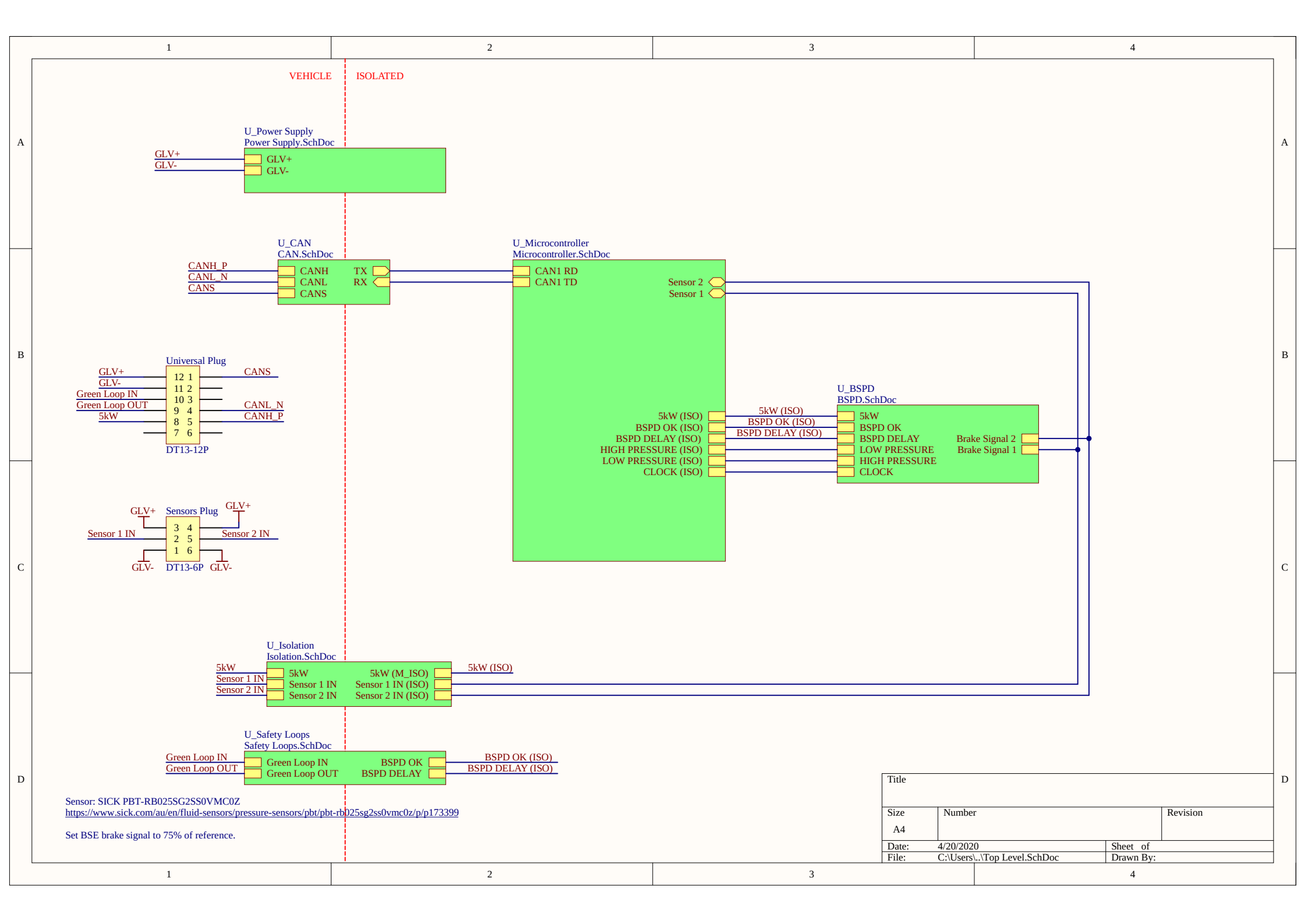

Sensor: SICK PBT-RB025SG2SS0VMC0Z
https://www.sick.com/au/en/fluid-sensors/pressure-sensors/pbt/pbt-rb025sg2ss0vmc0z/p/p173399

Set BSE brake signal to 75% of reference.

Title		
Size A4	Number	Revision
Date: 4/20/2020		Sheet of
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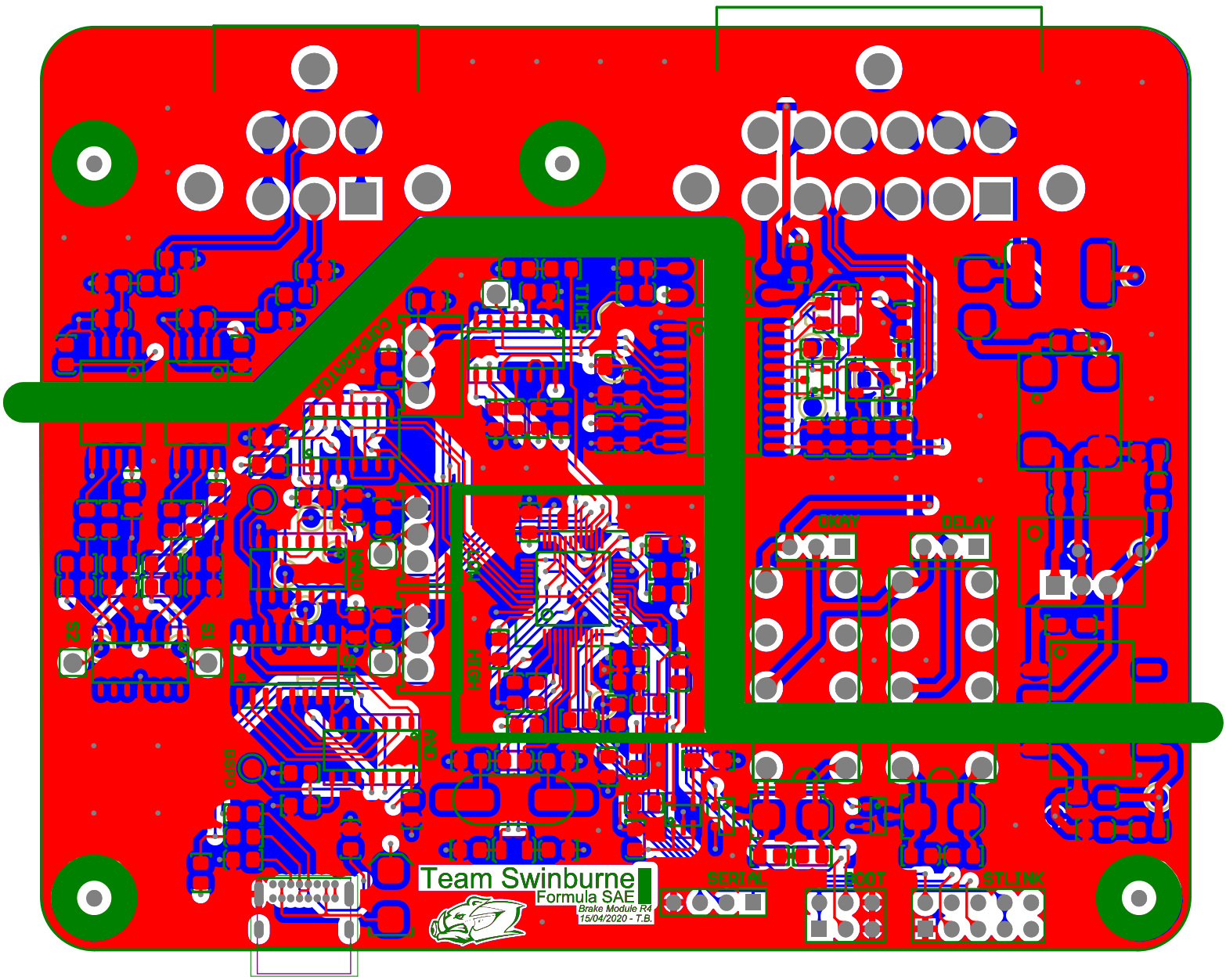
Team Swinburne
Formula SAE
Brake Module R4
15/04/2020 - T.B.
OKAY
DELAY
SERIAL
BOOT
STLINK
HIGH
GND
ESD