

VEHICLE ISOLATED

2.28WU_Power Supply
Power Supply.SchDocGLV+
GLV-U_CAN
CAN.SchDocCANH
CANL
CAN5U_Safety Loops
Safety Loops.SchDocSDN In
SDN Out
HVD On
HVD Off
SDN OKU_Discharge
Discharge.SchDocDischarge Disable
HV MC+
HV MC-U_Flasher
Flasher.SchDocFLASHER OUTPUT
VCC
CLOCK
GND

0V

U_Microcontroller
Microcontroller.SchDocCAN1 RD
CAN1 TD
SDA (ISO)
SCL (ISO)SDN OK (ISO)
HVD OK (ISO)
PDOC Relay Feedback (ISO)
PDOC OK (ISO)U_Sensors
Sensors.SchDocHV MC+
HV MC-
Current Sensor
5kW SignalGreen
Red (Flashing)MC Sense (ISO)
Discharge Temperature
PDOC OKMC Sense (ISO)
Discharge Temperature
PDOC OK

TSAL Feedback

Title

Revision

Number

Size

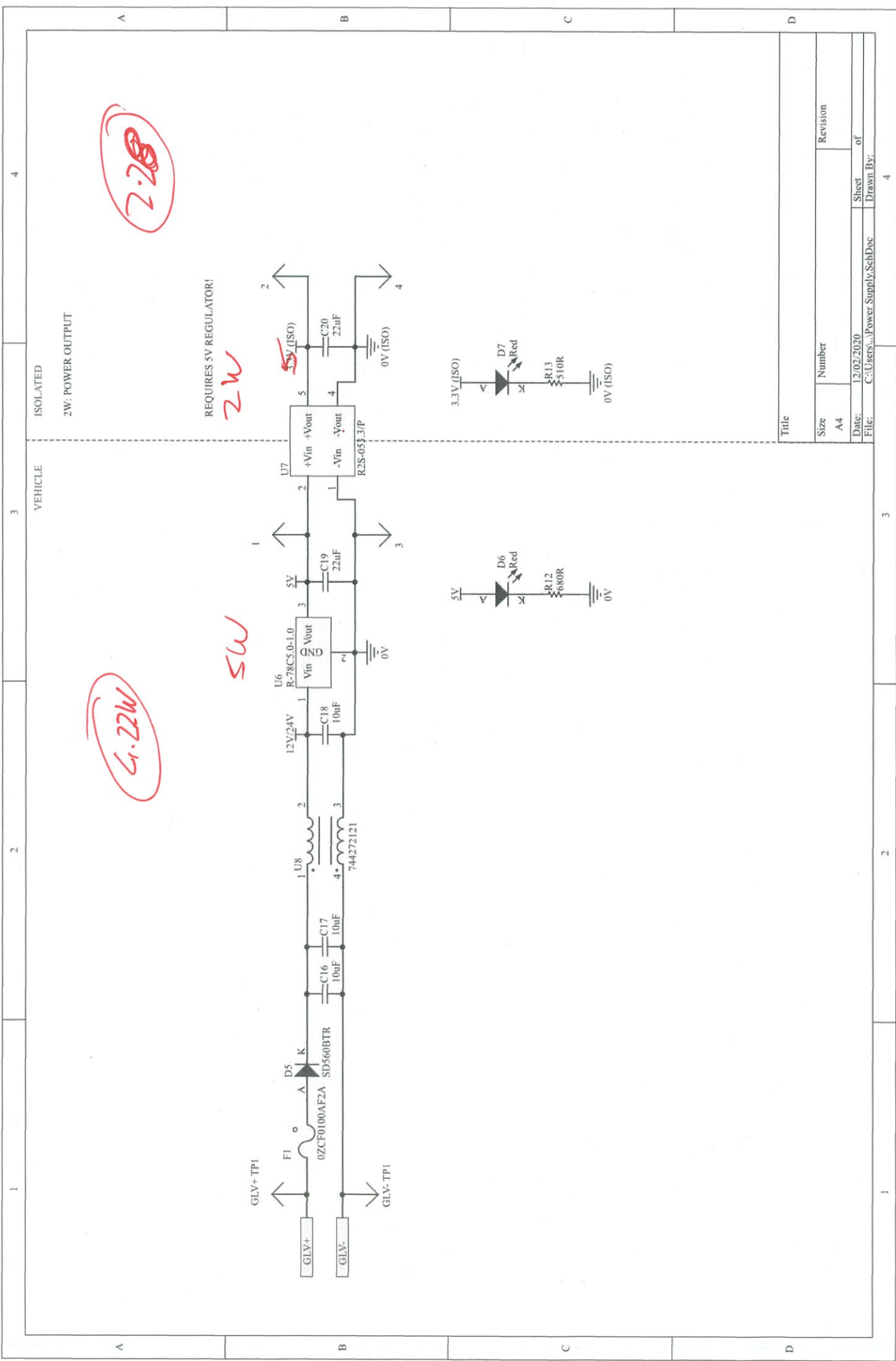
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Date: 12/02/2020

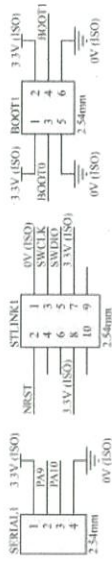
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1W



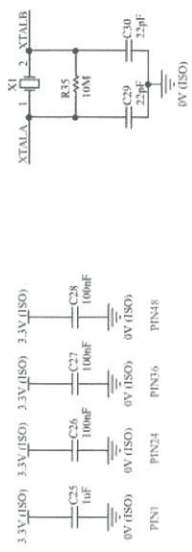
Instructions to Use PLATFORMIO & STLINK
For use with Arduino Environment
[env: genericSTM32F103R4]
platform = ststm32
board = genericSTM32F103C8
framework = arduino
upload_protocol = stlink

BOOT JUMPER POSITIONS
BOOT0 BOOT1 BOOT2
X 0 0
0 1 1
1 1 1

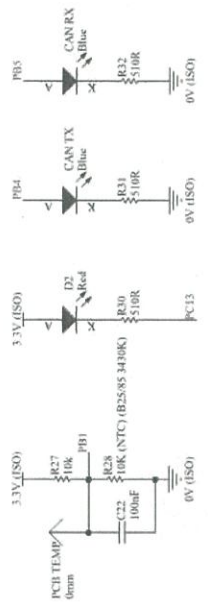
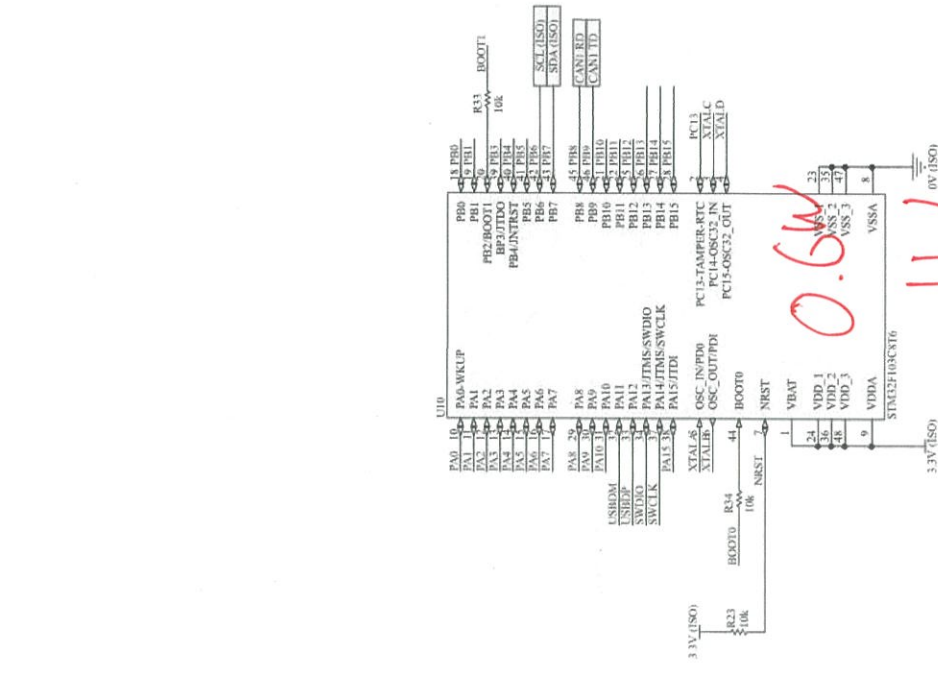
ST-Link
For all operations, use the select the
bootloader, then reset the device

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 ON");
 usb.println("usb LED ON");
 delay(1000);
 digitalWrite(LED_BUILTIN, LOW);
 Serial.println("Serial LED OFF");
 usb.println("usb LED OFF");
 delay(1000);
}

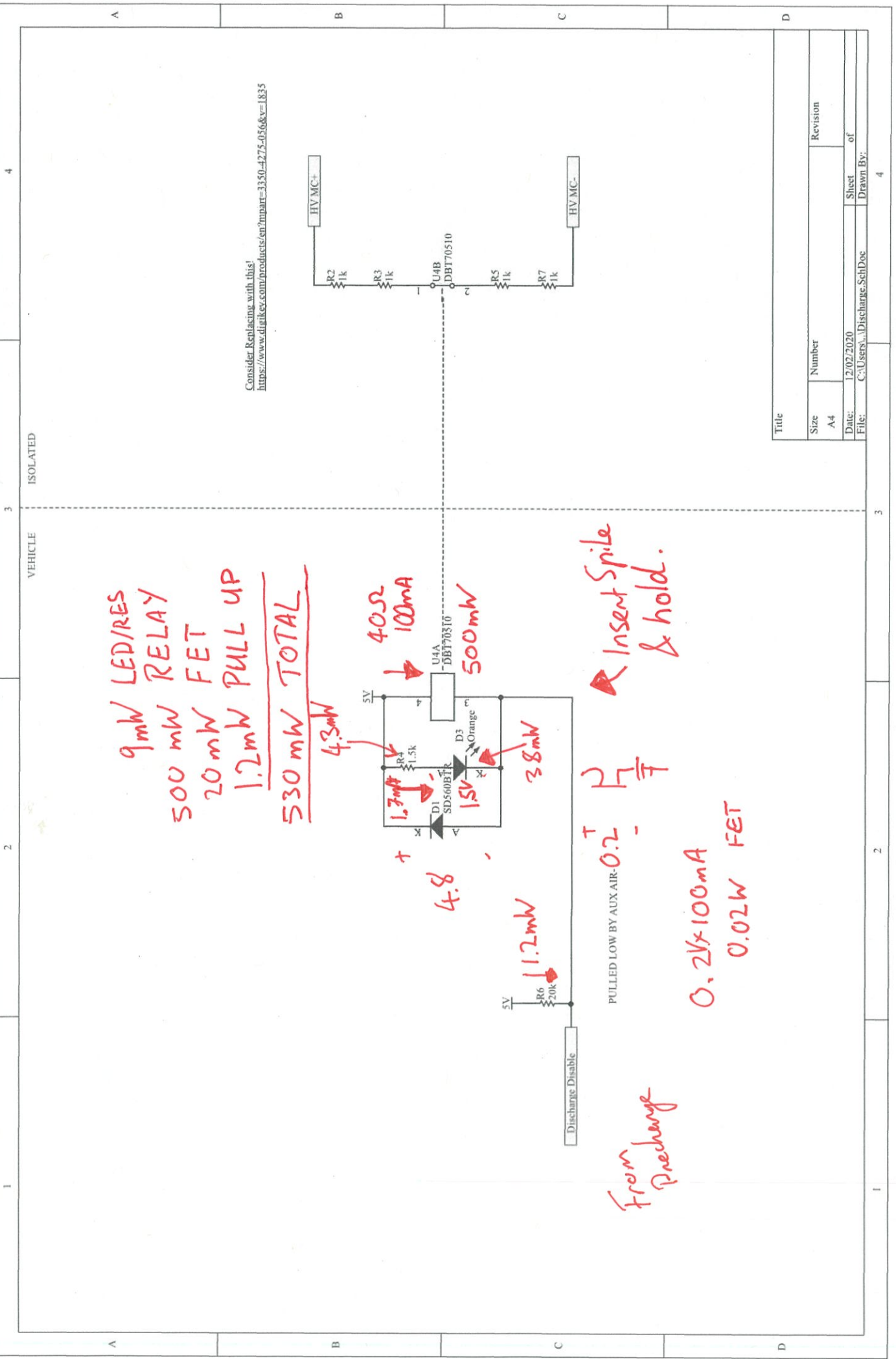
<https://www.st.com/en/development-tools/stsw009.html>
<https://www.st.com/en/development-tools/stsw009.html>



0.6W
1W
3.3V Reg



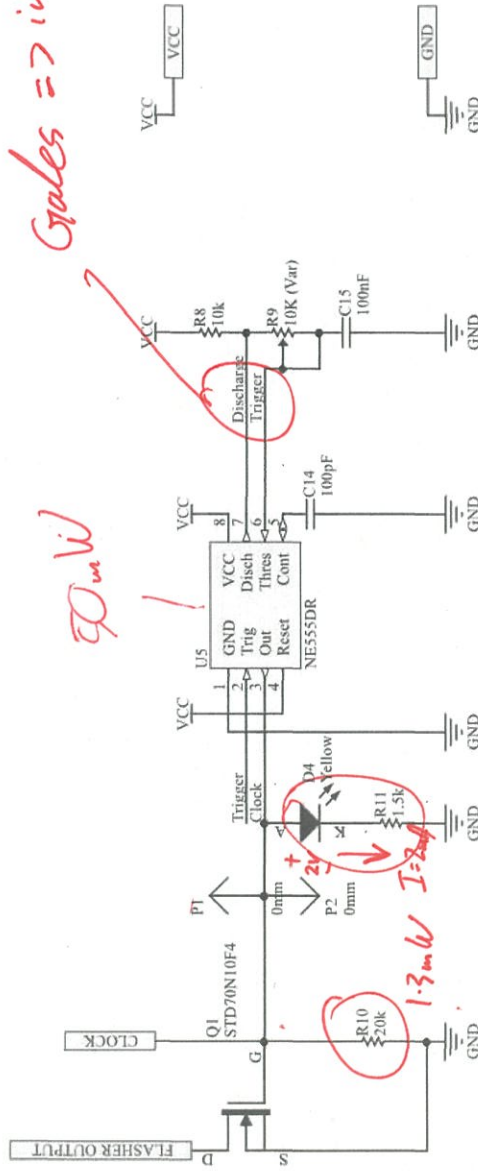
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Date: 12/07/2020	Time: 3:53:35 PM	Sheet: 1 of 1
File: C:\Users\paul\OneDrive\Documents\192\Car 3. P&E\Jante\Schematics\20\DischargeModule\200108 Discharge Module R4.Mxd		



Consider Replacing with this!
<https://www.digikey.com/products/en/mpart=3350-4275-056&v=1835>

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5V logic



30mW

Capacitors \Rightarrow infinite impedance
to assume no power consumed.

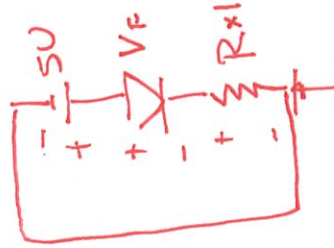
$$V = R I$$

$$S = V_F + R I$$

$$S = 2.1 + R \cdot 0.5 \times 10^{-3}$$

$$S - 2.1 = R$$

$$\frac{S - 2.1}{0.5 \times 10^{-3}}$$



10mW

1.3mW $I = 2.4$

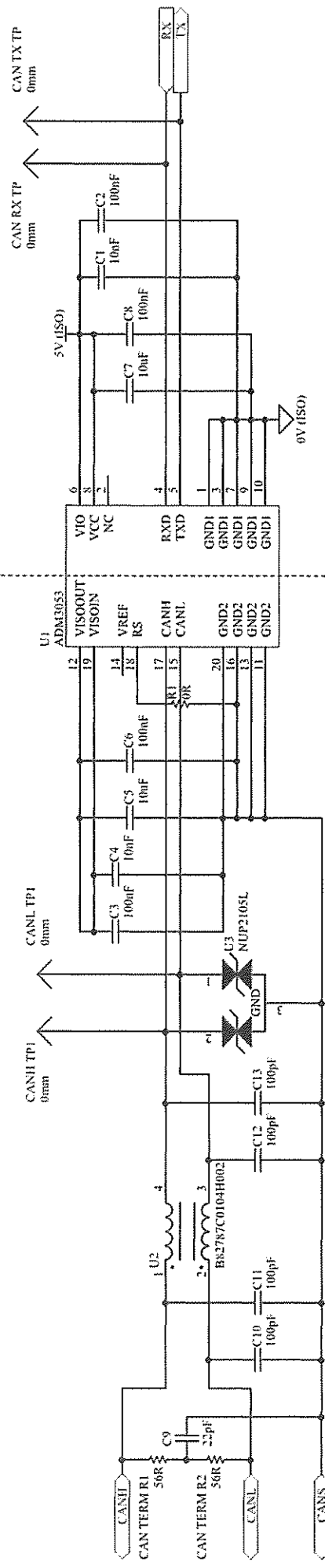
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650mW as per 350mW

ISOLATED
POWER CONSUMPTION
650mW: CAN ISOLATOR

VEHICLE

ISOLATED



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