

STM32H7 MICROCONTROLLER

RESET BUTTON

BOOT SWITCH

USB 2.0 HIGH SPEED PHY

RGB STATUS LED

JTAG/SERIAL WIRE DEBUG

MCU ALTERNATE PIN FUNCTIONS:

- PA0: TIM2_CH1
- PA1: TIM5_CH2
- PA2: TIM15_CH1
- PA4: DAC_OUT1
- PA7: TIM14_CH1
- PA8: I2C1_SCL
- PA9: USART1_TX
- PA10: USART1_RX
- PB7: TIM4_CH2
- PB8: TIM16_CH1
- PB9: TIM17_CH1
- PC6: TIM3_CH1
- PC9: I2C1_SDA

DT18 - I/O MASTER
THE UNIVERSITY OF AKRON
 Sheet: /Microcontroller/
 File: Microcontroller.sch
Title: MICROCONTROLLER SUBSYSTEM
 Size: B Date: 2020-02-04 Rev: A
 KiCad E.D.A. kicad 5.1.5 Id: 2/10

The image displays a PCB layout for a USB 2.0 High Speed PHY subsystem. It includes several key components and their connections:

- Decoupling Capacitors:**
 - VDD3.3:** Four capacitors (C31, C35, C36, C38) of 0.1uF are connected to the 3.3V supply and ground.
 - VDD1.8:** Two capacitors (C29, C30) of 4.7uF and 0.1uF are connected to the 1.8V supply and ground.
 - VDDA1.8:** Two capacitors (C37, C39) of 4.7uF and 0.1uF are connected to the 1.8V supply and ground.
- Crystal:** A 24MHz crystal (Y2) is connected to pins X0 and XI, with 20pF capacitors (C33, C34) and a 1M resistor (R46) to ground.
- Microcontroller (U3):** A USB3300-EZK chip is shown with various pins connected to the power supply, ground, and other components. Key connections include:
 - VBUS (pin 4):** Connected to USB_VBUS through a resistor (R44) and a diode (D12, DDZ5V6ASF) to ground.
 - DM (pin 8) and DP (pin 7):** Connected to USB_D- and USB_D+ respectively.
 - ID (pin 5):** Connected to ground.
 - CPEN (pin 3) and EXT_VBUS (pin 10):** Connected to ground.
 - REG_EN (pin 31):** Connected to the 3.3V supply.
 - RBIAS (pin 32):** Connected to ground through a 12K resistor (R45).
 - RESET (pin 9):** Connected to ground.
 - ULPI Pins:** Data pins (DATA0-DATA7) and control pins (NXT, DIR, STP, CK) are connected to the ULPI interface.

Notes on the layout specify that decoupling capacitors should be placed close to their respective power supply pins and that the crystal should be placed close to its pins.

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Sheet: /Adjustable Regulator/
 File: Adjustable Regulator.sch

Title: 3.3-15V ADJUSTABLE REGULATOR

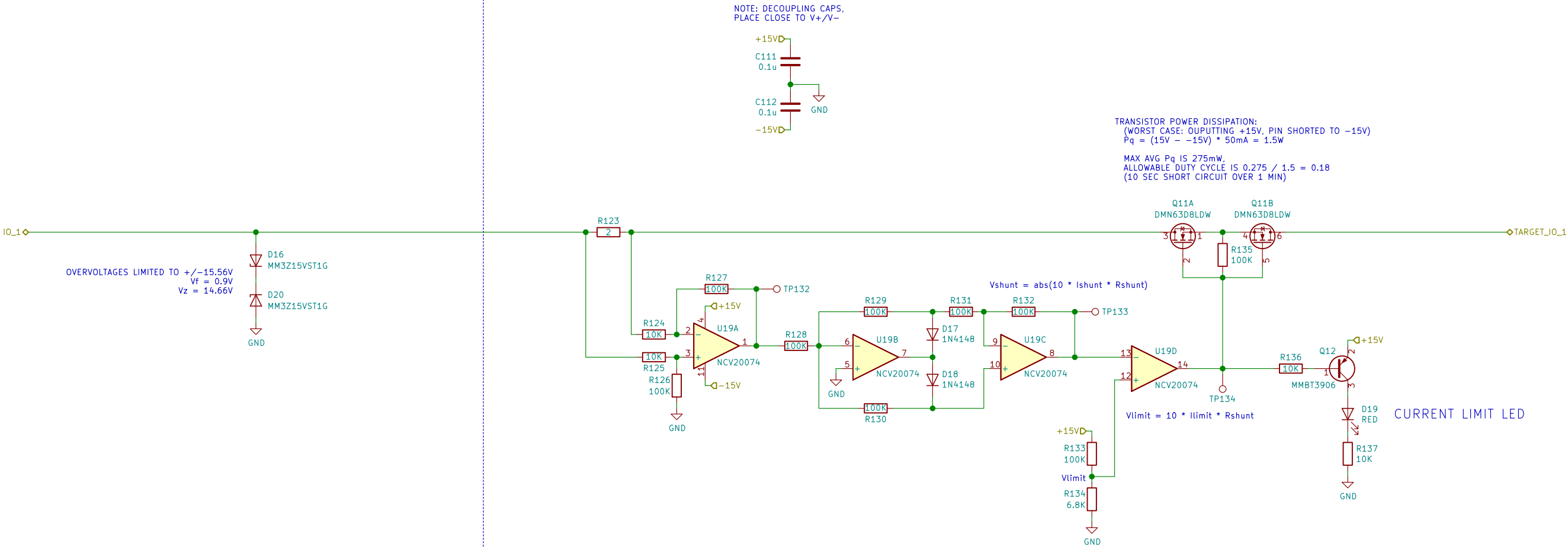
Size: B	Date: 2020-02-04	Rev: A
KiCad E.D.A. kicad 5.1.5		Id: 3/10

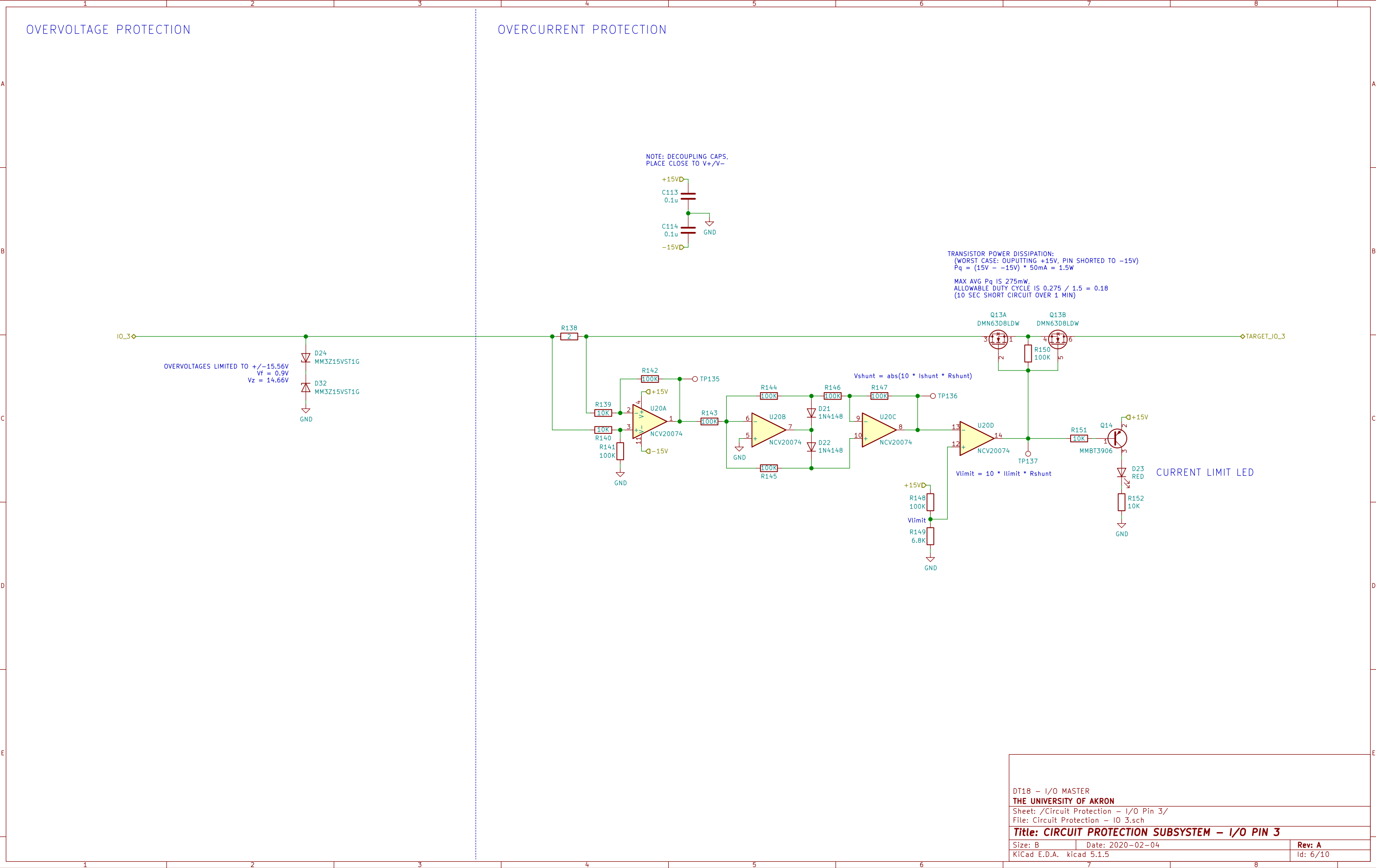
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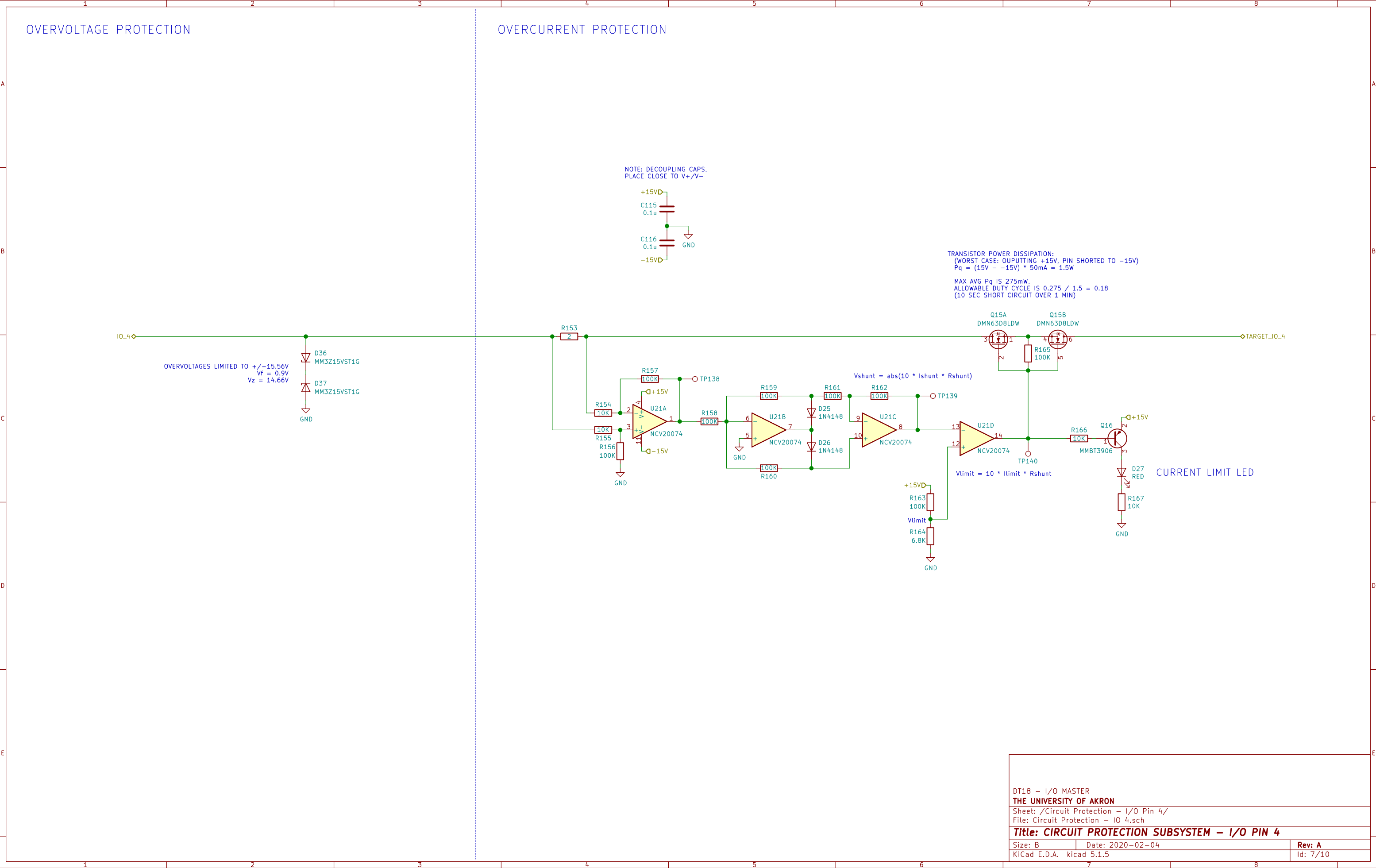
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OVERVOLTAGE PROTECTION

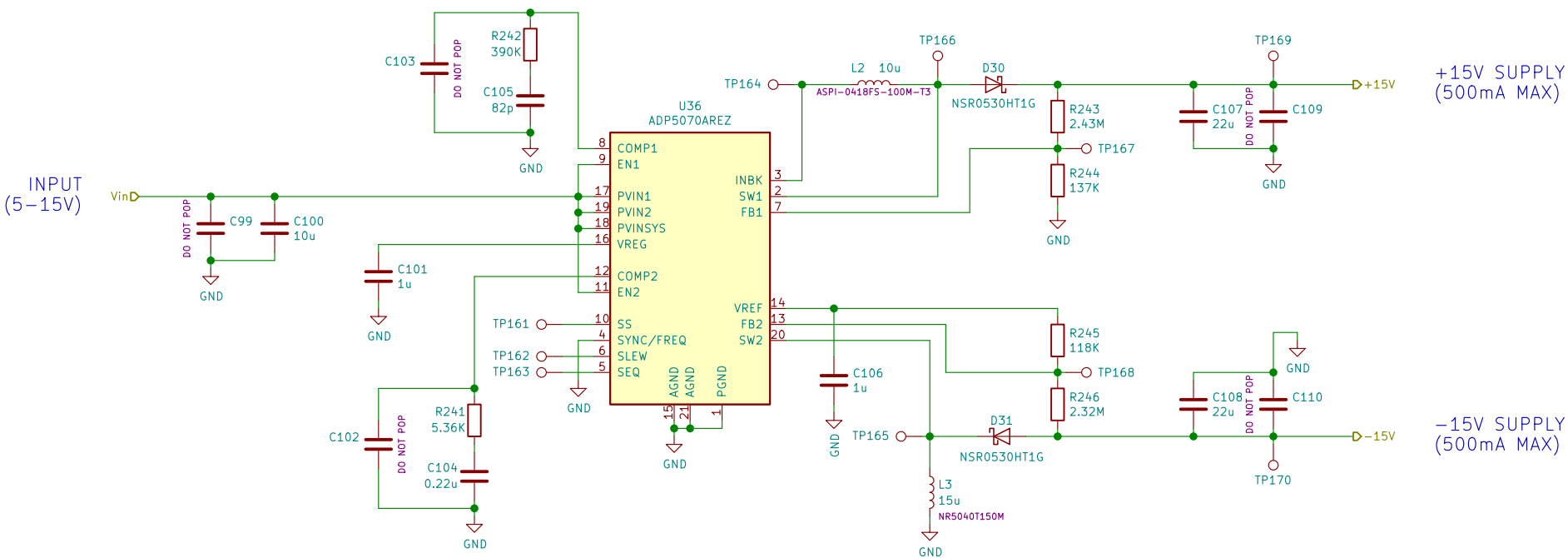
OVERCURRENT PROTECTION



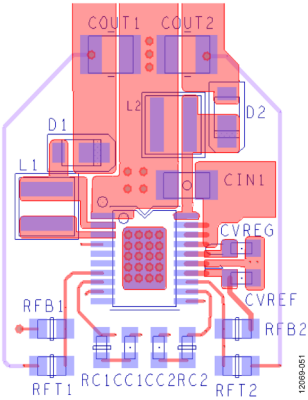




+/-15V REGULATOR



RECOMMENDED PCB LAYOUT



OVERVOLTAGE PROTECTION

OVERCURRENT PROTECTION

