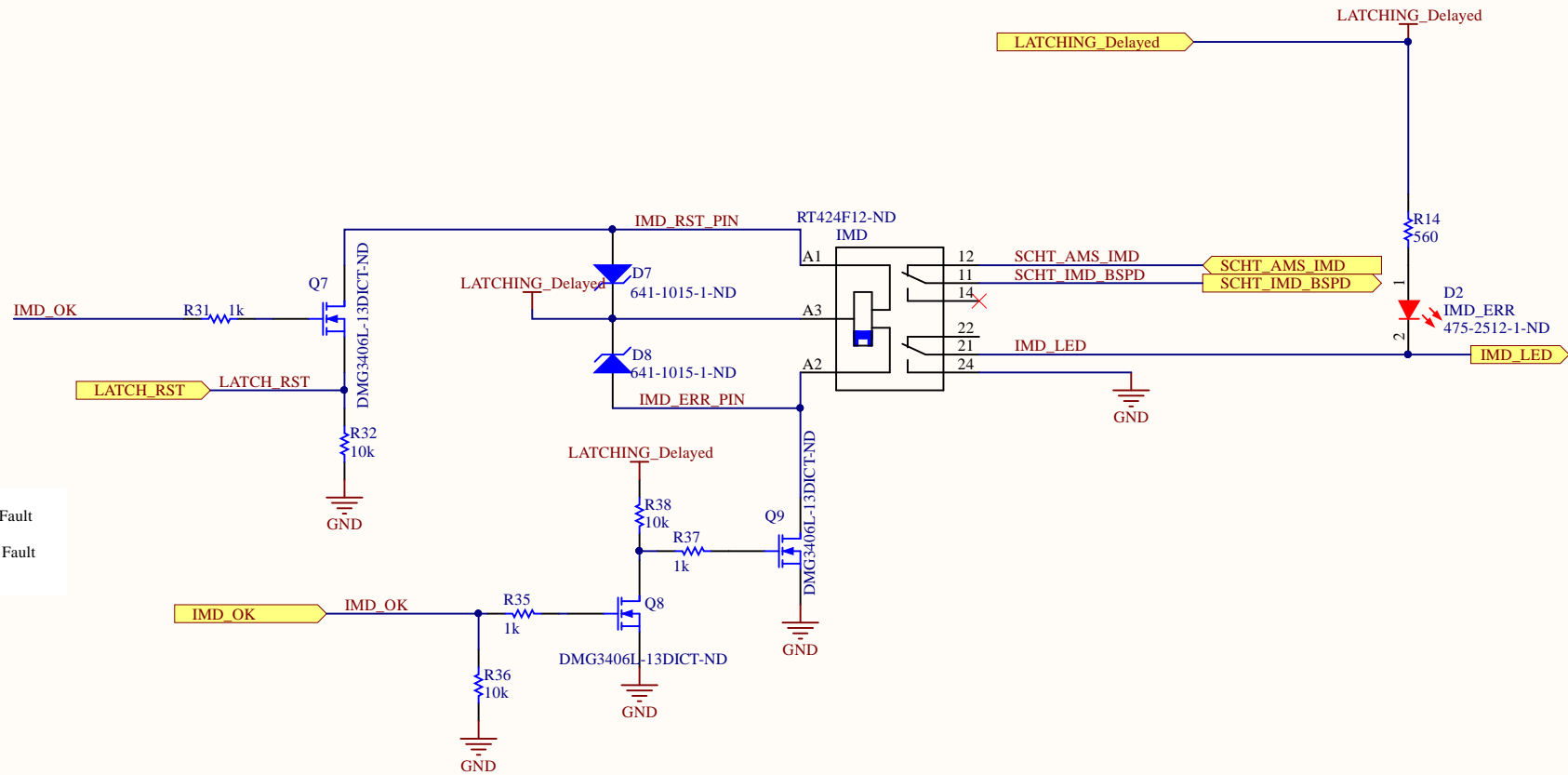






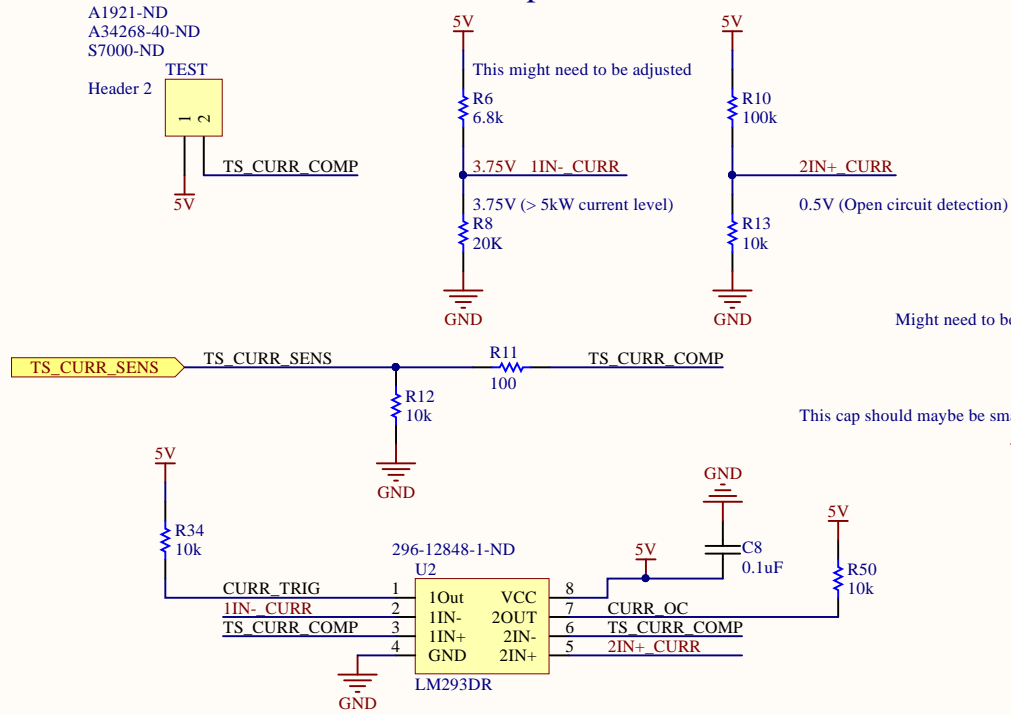
IMD\_OK  
12V -> No Fault  
0V -> Fault  
Floating -> Fault



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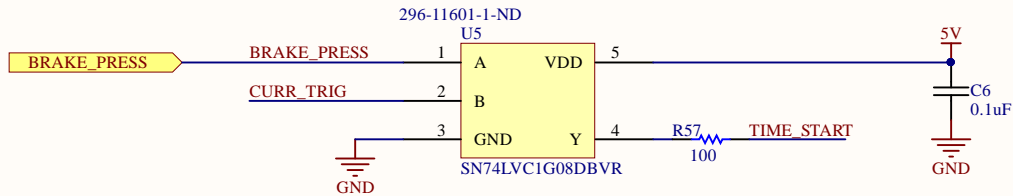
## Current Sensor Comparator



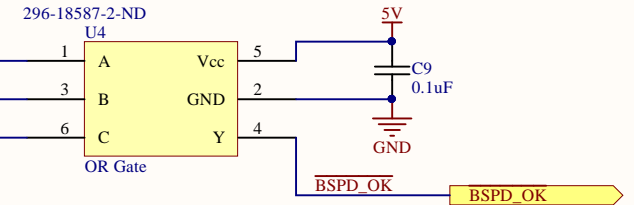
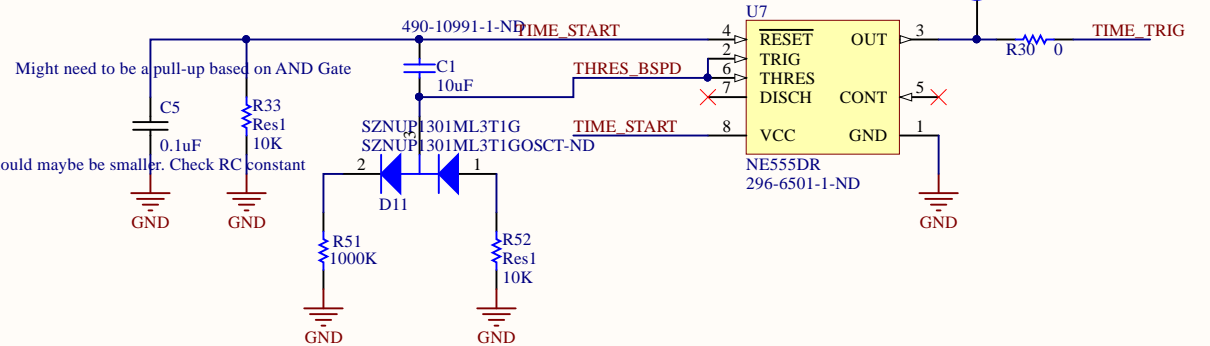
CURR\_TRIG:  
5V if TS\_CURR\_COMP > 1IN-\_CURR (3.75V)  
0V if TS\_CURR\_COMP < 1IN-\_CURR (3.75V)

CURR\_OC:  
0V if TS\_CURR\_COMP > 2IN+\_CURR (0.5V)  
5V if TS\_CURR\_COMP < 2IN+\_CURR(0.5V)

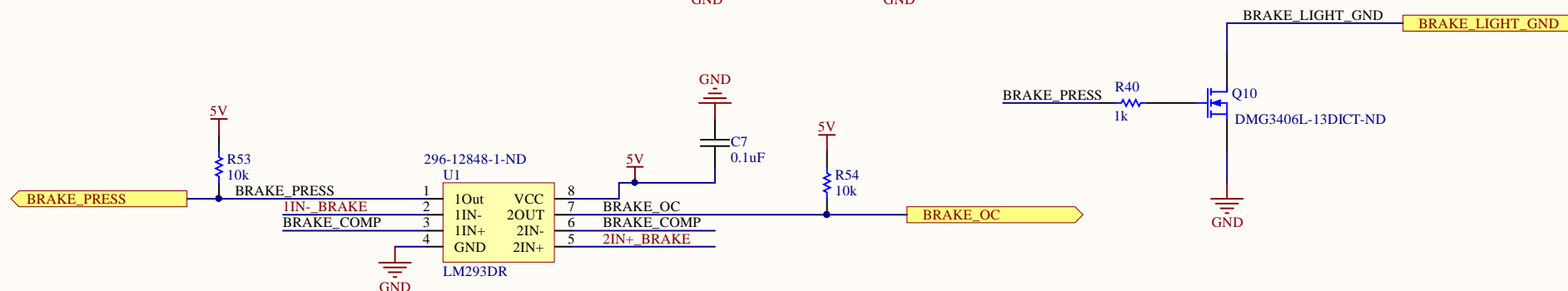
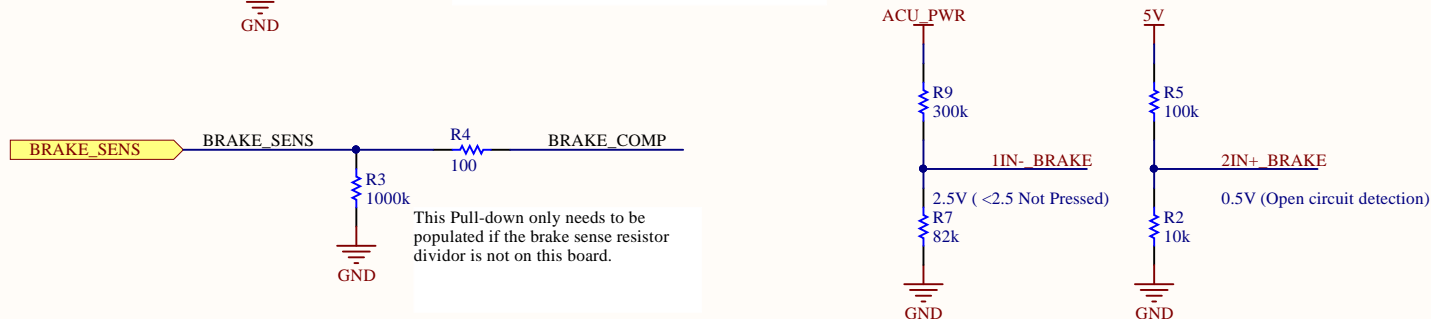
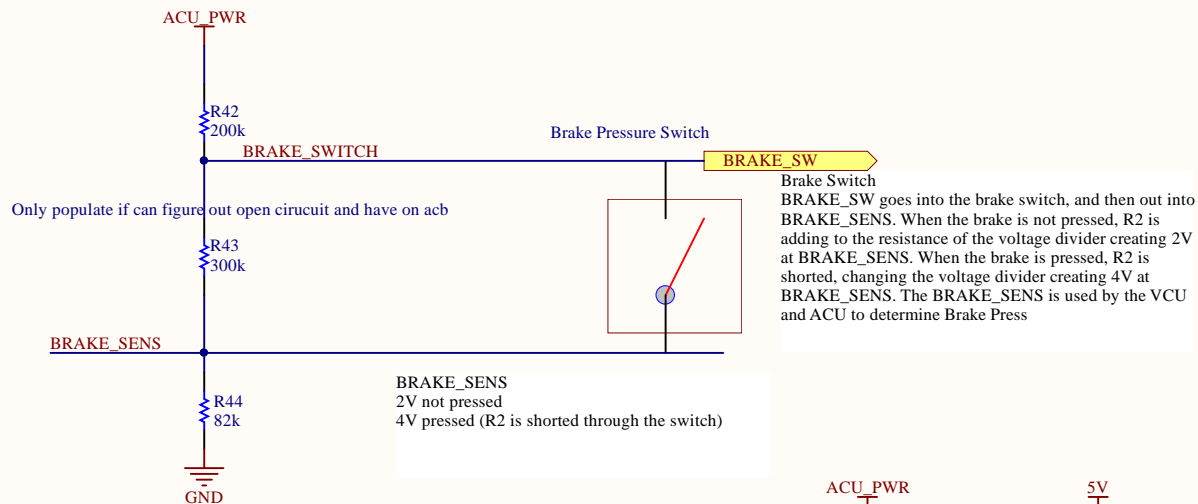
## AND to timer



## Timed to 500ms



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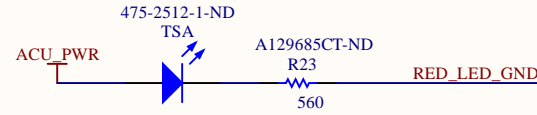
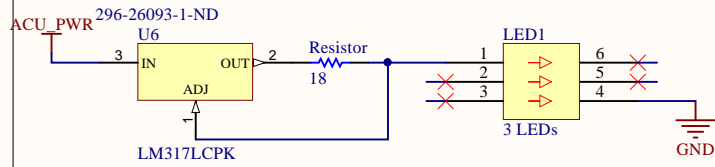


**BRAKE\_PRESS:**  
 5V if BRAKE\_COMP > 1IN- BRAKE (2.5V) (Pressed)  
 0V if BRAKE\_COMP < 1IN- BRAKE (2.5V) (not pressed)

**BRAKE\_OC:**  
 0V if BRAKE\_COMP > 2IN+ BRAKE (0.5V)  
 5V if BRAKE\_COMP < 2IN+ BRAKE (0.5V)

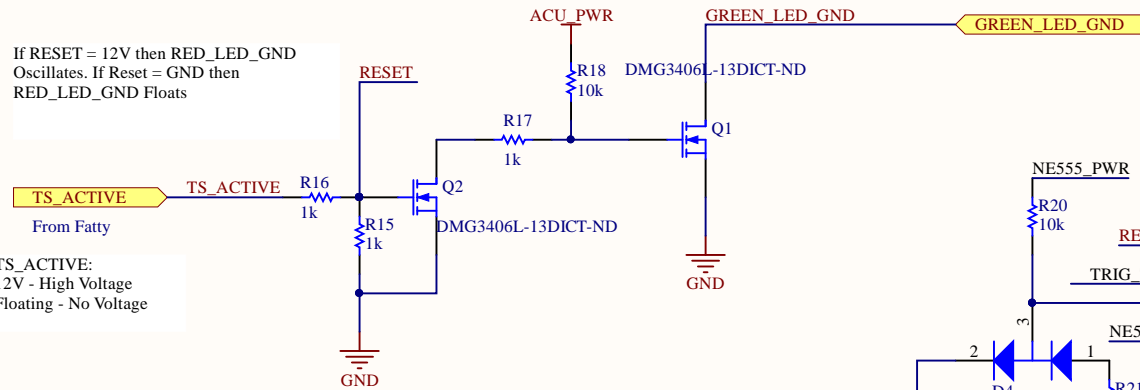
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LOAD DRIVERS MIGHT BE NEEDED, MAY ONLY NEED a 500mA IF USING LED STRIPS DEPENDING ON TESTS



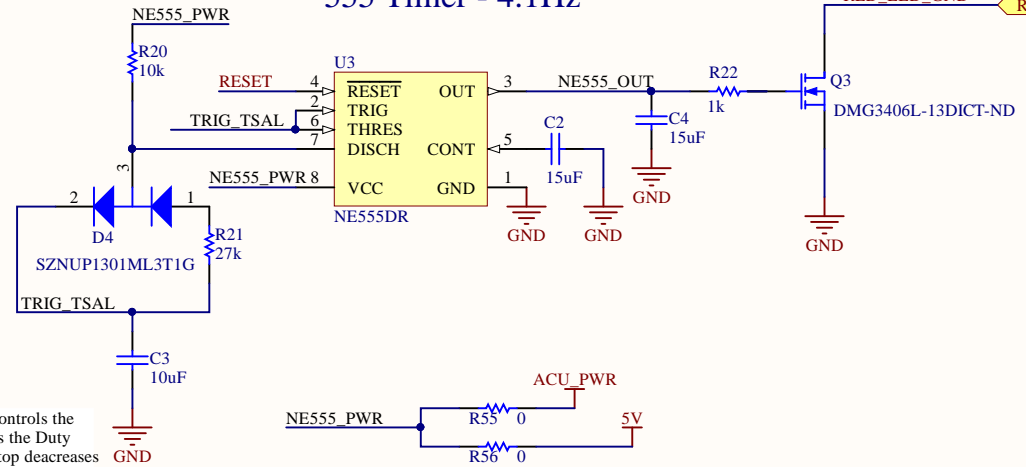
If RESET = 12V then RED\_LED\_GND Oscillates. If Reset = GND then RED\_LED\_GND Floats

TS\_ACTIVE: 12V - High Voltage Floating - No Voltage



Check values on current TSAL for timing

### 555 Timer - 4.1Hz



The Addition of these resistors controls the Frequency. The Division controls the Duty cycle. Increasing the resistor on top decreases the duty cycle. Try to keep the addition constant. NEEDS TO BE TESTED. (I just used the ESD Diodes but might need to find other ones) Cap at output might not be

Powering the Timing with 5V will allow the circuit to be the same frequency no matter what ACU Power is at as the LV battery darins. I am not sure if it might break things though so putting a jumper here to avoid needing a rev if it doesn't work. (Simulations show it does.)

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File:	C:\Users\...\5 - TSAL.SchDoc	Drawn By:

