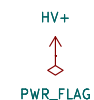
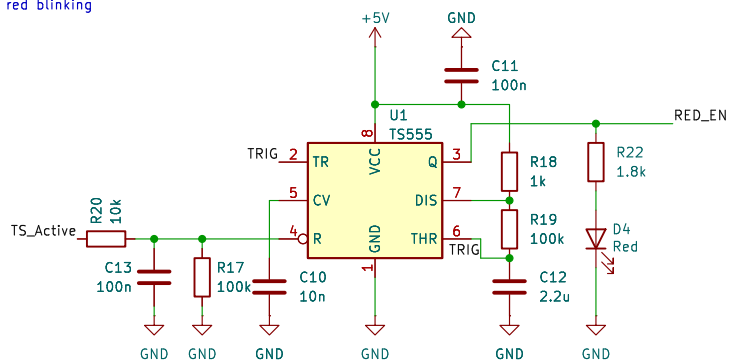
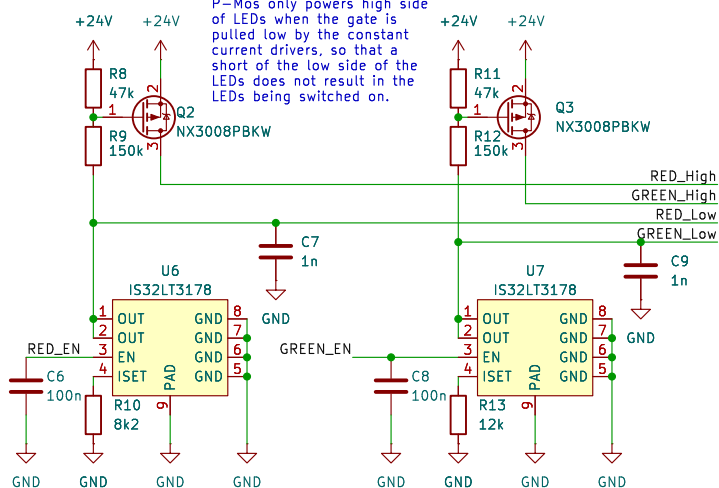


LV TS



P-Mos only powers high side of LEDs when the gate is pulled low by the constant current drivers, so that a short of the low side of the LEDs does not result in the LEDs being switched on.

[illegible]

Voltage Detection

TS>60V

R7 1k

C14 100n

U3 MCP6561

D3 Amber

+3V3_HV

+3V3_HV

HV+

R23 10k

Vdiv

R24 10k

Vref

D1 3V7

R1 >300VDC 1M 1%

R2 >300VDC 1M 1%

R3 62k 1%

HV-

HV-

3V7 or 4V. A 3V3 Zener pulls V_{div} down because it allows more current to pass in comparison to the voltage divider. look into it :)

$$\begin{aligned} V_{ref_max} &= 3.47V \cdot 10.1k\Omega / (10.1k\Omega + 9.9k\Omega) = 1.76V \\ V_{div@60V_min} &= 60V \cdot 61.38k\Omega / (2 \cdot 990k\Omega + 61.38k\Omega) = 1.8V \\ V_{hyst_max@75deg} &= 6mV < 40mV (1.80V - 1.76V) \end{aligned}$$

LV Connector

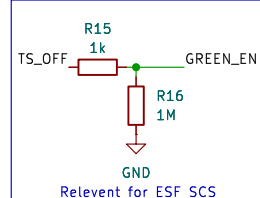
J4 PWR_FLAG D6 +24V

430450810 STPS1L30AFN

RED_High 5 4
GREEN_High 6 3 SDC
RED_Low 7 2 TS_OFF
GREEN_Low 8 1

MP

GND GND



The diagram shows a 5V voltage regulator circuit. A green box labeled 'U5' represents the 173010542 regulator. Its pin 1 (Vin) is connected to a +24V source through a green wire. Its pin 2 (GND) is connected to ground. Its pin 3 (Vout) is connected to a +5V output. A 4.7uH inductor (L1) is connected between the output and a 16V X7R capacitor (C3), which is connected to ground. A 1k resistor (R5) is connected between the output and a blue LED (D5), which is also connected to ground. The LED is labeled 'Blu'.