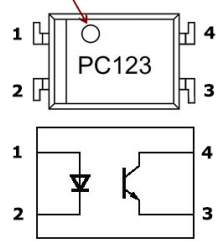


**Notes:** part reference designators vary for various models of LPS. Many connectors are not named so we used this tools labeling schema.

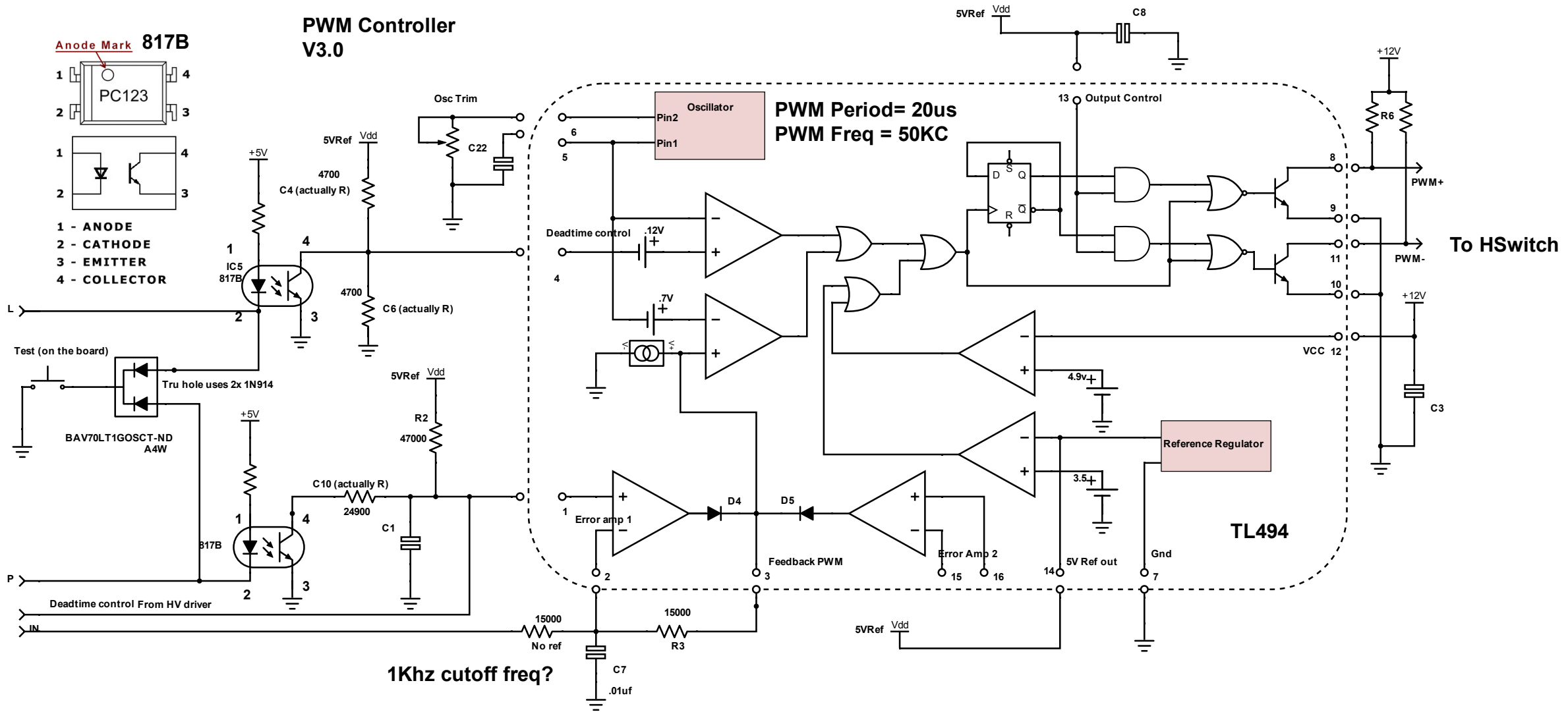
**High Voltage Driver V3.0**

# PWM Controller V3.0

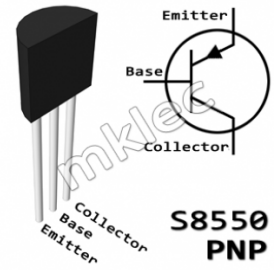
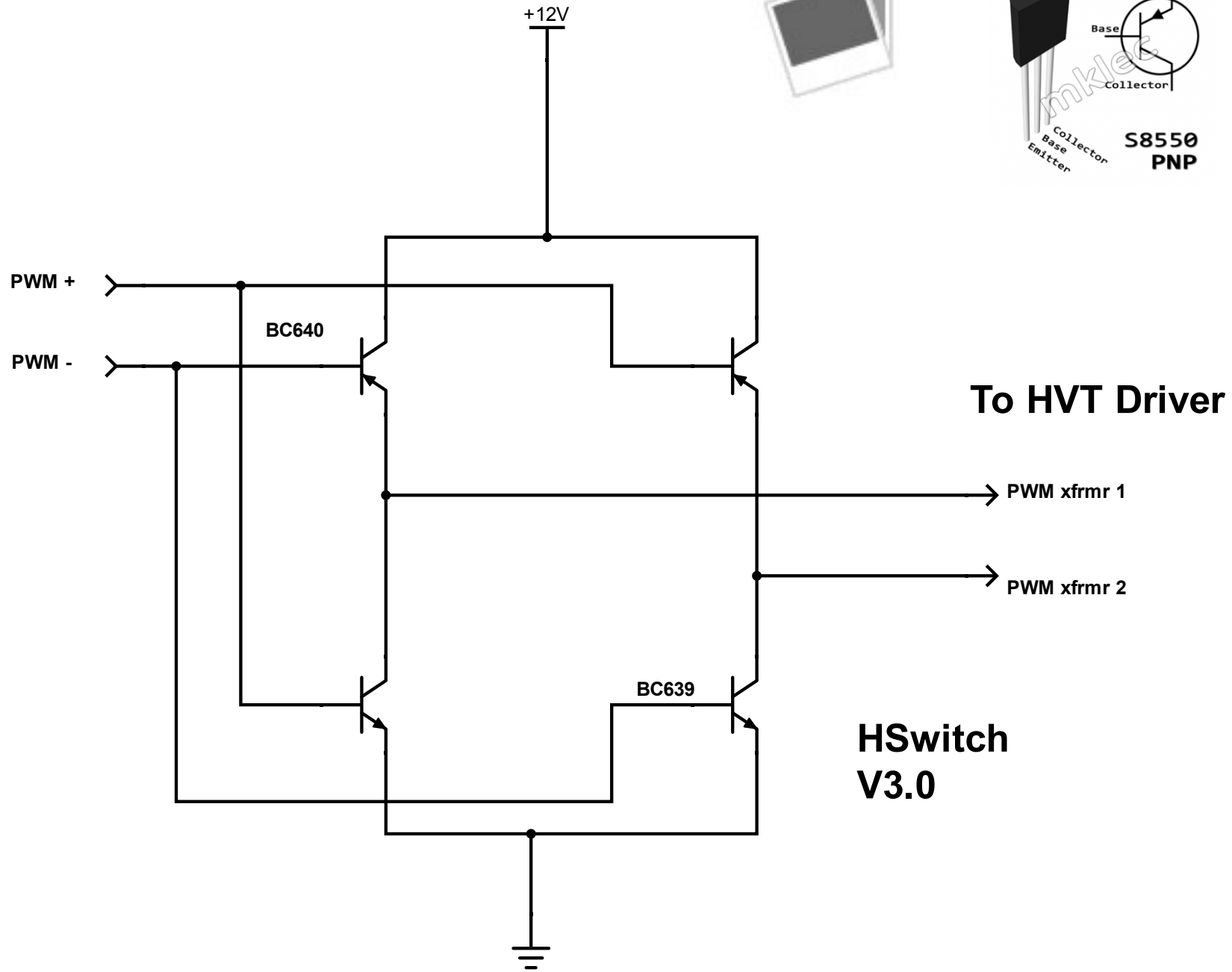
Anode Mark 817B



- 1 - ANODE
- 2 - CATHODE
- 3 - EMITTER
- 4 - COLLECTOR

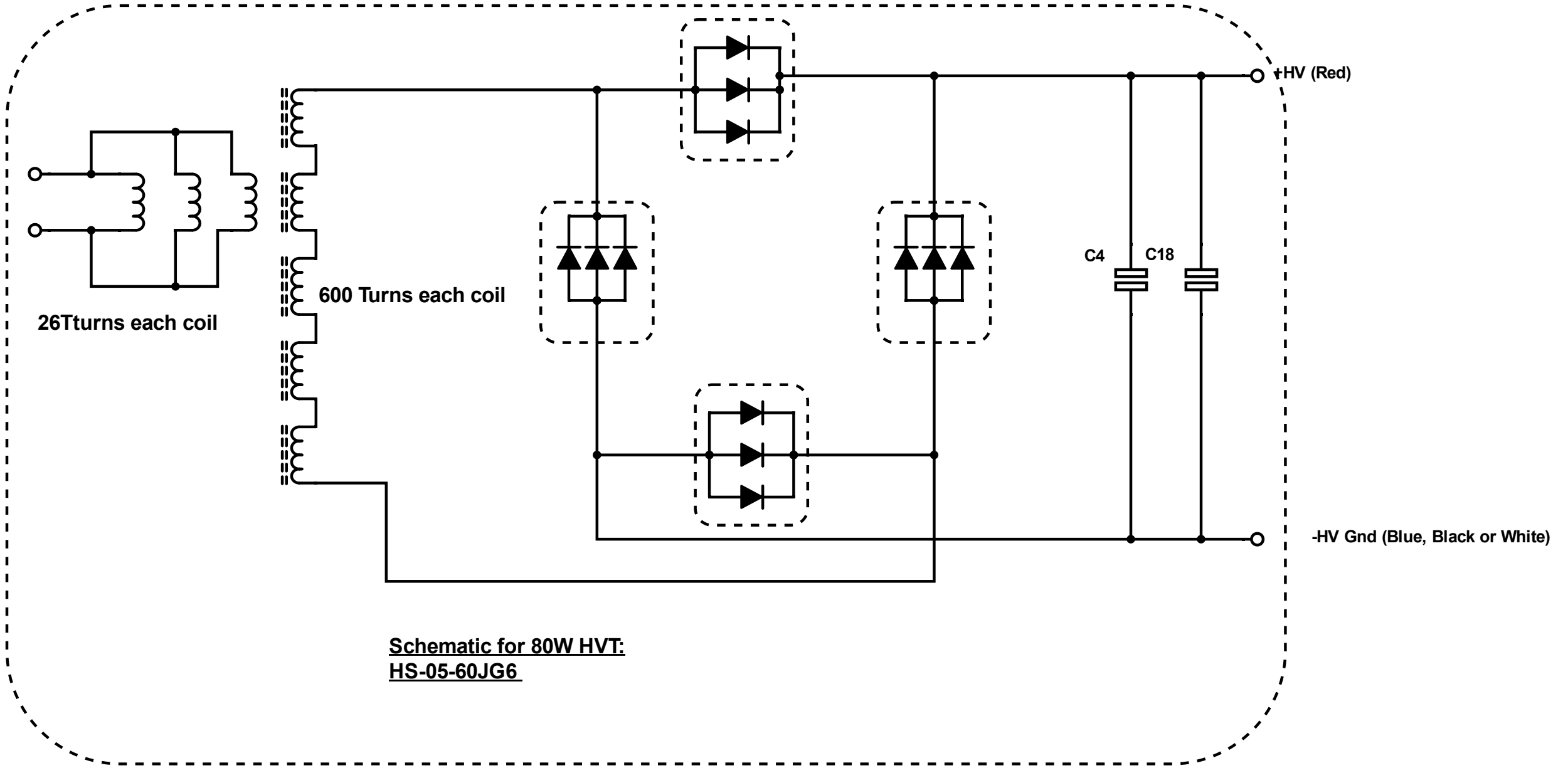


**From PWM controller**

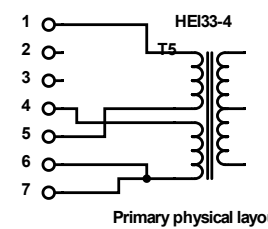
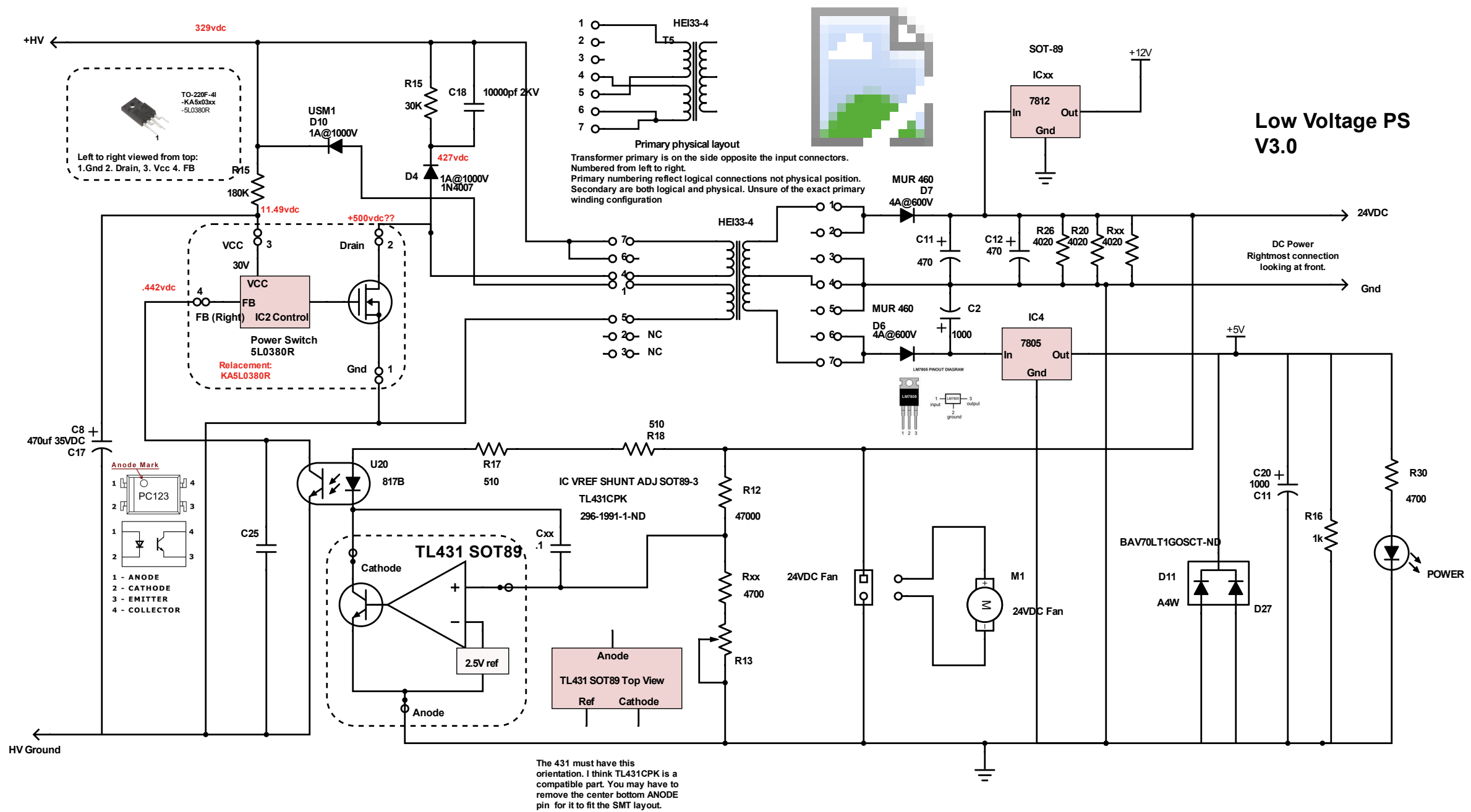


**To HVT Driver**

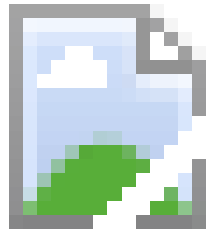
**HSwitch V3.0**



**Schematic for 80W HVT:**  
**HS-05-60JG6**



Primary physical layout  
 Transformer primary is on the side opposite the input connectors. Numbered from left to right. Primary numbering reflect logical connections not physical position. Secondary are both logical and physical. Unsure of the exact primary winding configuration



### Low Voltage PS V3.0

DC Power  
 Rightmost connection looking at front.

The 431 must have this orientation. I think TL431CPK is a compatible part. You may have to remove the center bottom ANODE pin for it to fit the SMT layout.

Left to right viewed from top:  
 1.Gnd 2. Drain, 3. Vcc 4. FB

- Anode Mark
- 1 - ANODE
  - 2 - CATHODE
  - 3 - EMITTER
  - 4 - COLLECTOR

TO-220F-4L  
 +KA5x03xx  
 -5L0380R

IC2 Control  
 Power Switch  
 5L0380R  
 Relacement:  
 KA5L0380R

IC VREF SHUNT ADJ SOT89-3  
 TL431CPK  
 296-1991-1-ND

TL431 SOT89  
 Top View  
 Anode, Cathode, Ref

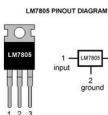
SOT-89  
 ICxx

7812  
 In, Out, Gnd

IC4  
 7805  
 In, Out, Gnd

MUR 460  
 D7  
 4A@600V

MUR 460  
 D6  
 4A@600V



BAV70LT1GOSCT-ND  
 D11, D27  
 A4W

M1  
 24VDC Fan

24VDC Fan

POWER

+HV

HV Ground

24VDC

Gnd

+5V

+12V

329vdc

427vdc

11.49vdc

.442vdc

+500vdc??

C8 +  
 470uf 35VDC  
 C17

C25

Cxx  
 .1

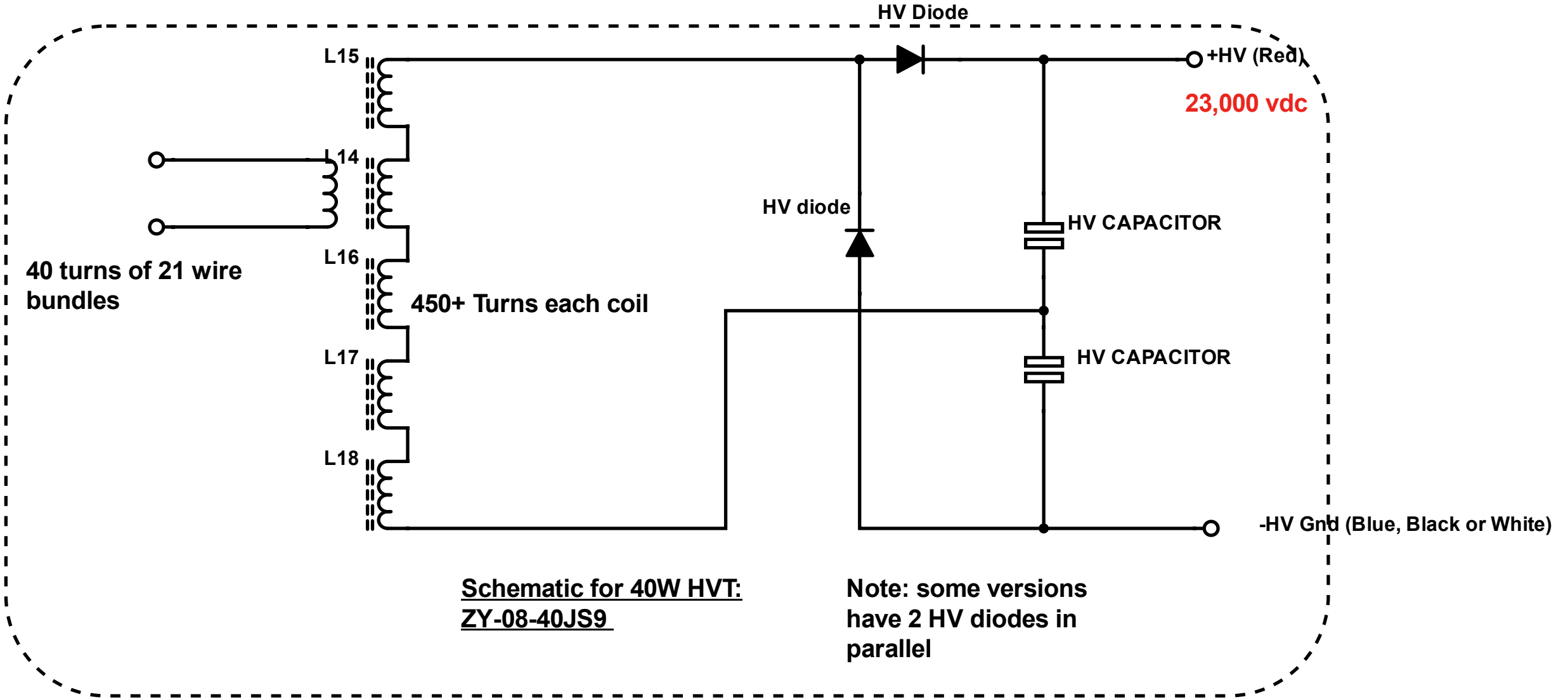
C20 +  
 1000  
 C11

U20  
 817B

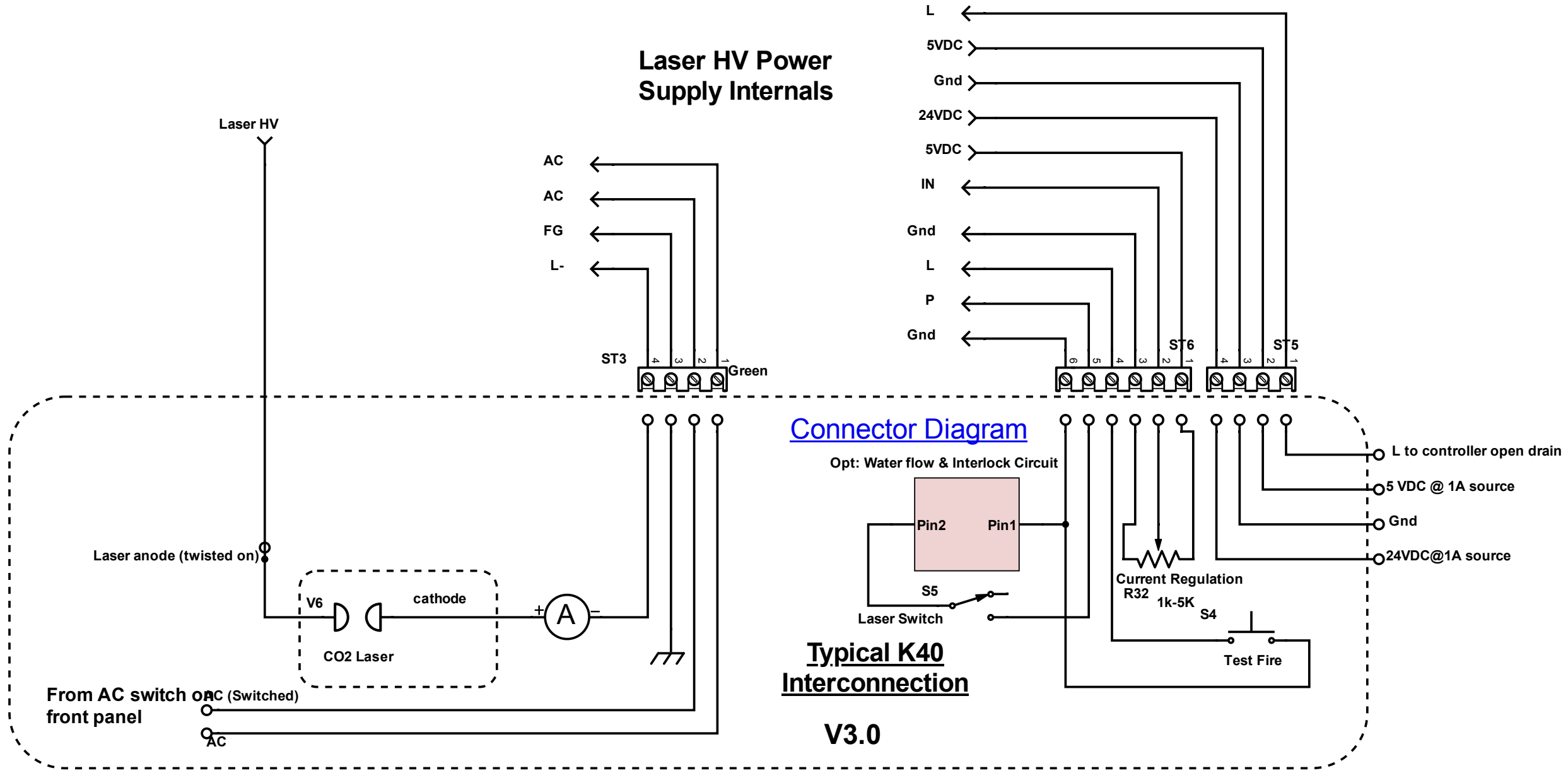
2.5V ref

24VDC Fan

24VDC Fan

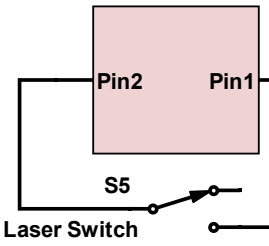


# Laser HV Power Supply Internals



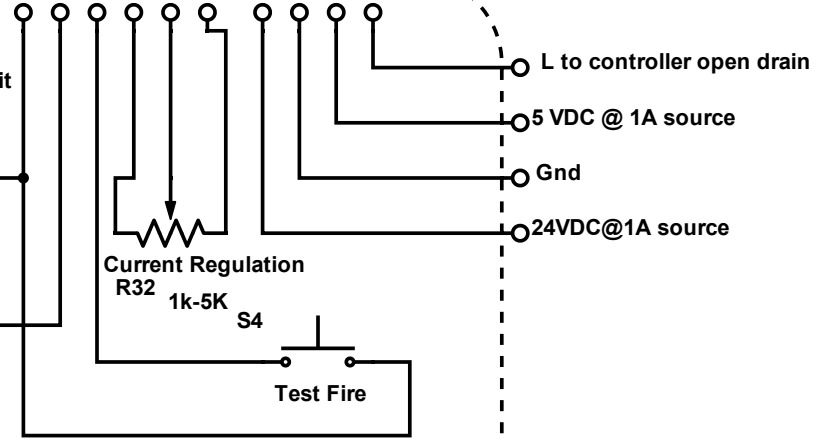
## Connector Diagram

Opt: Water flow & Interlock Circuit

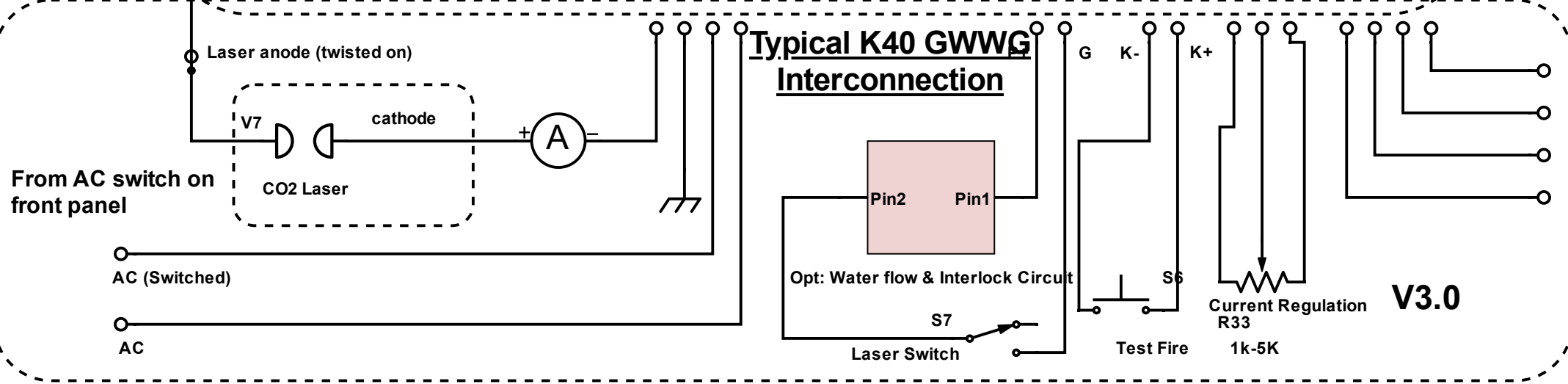
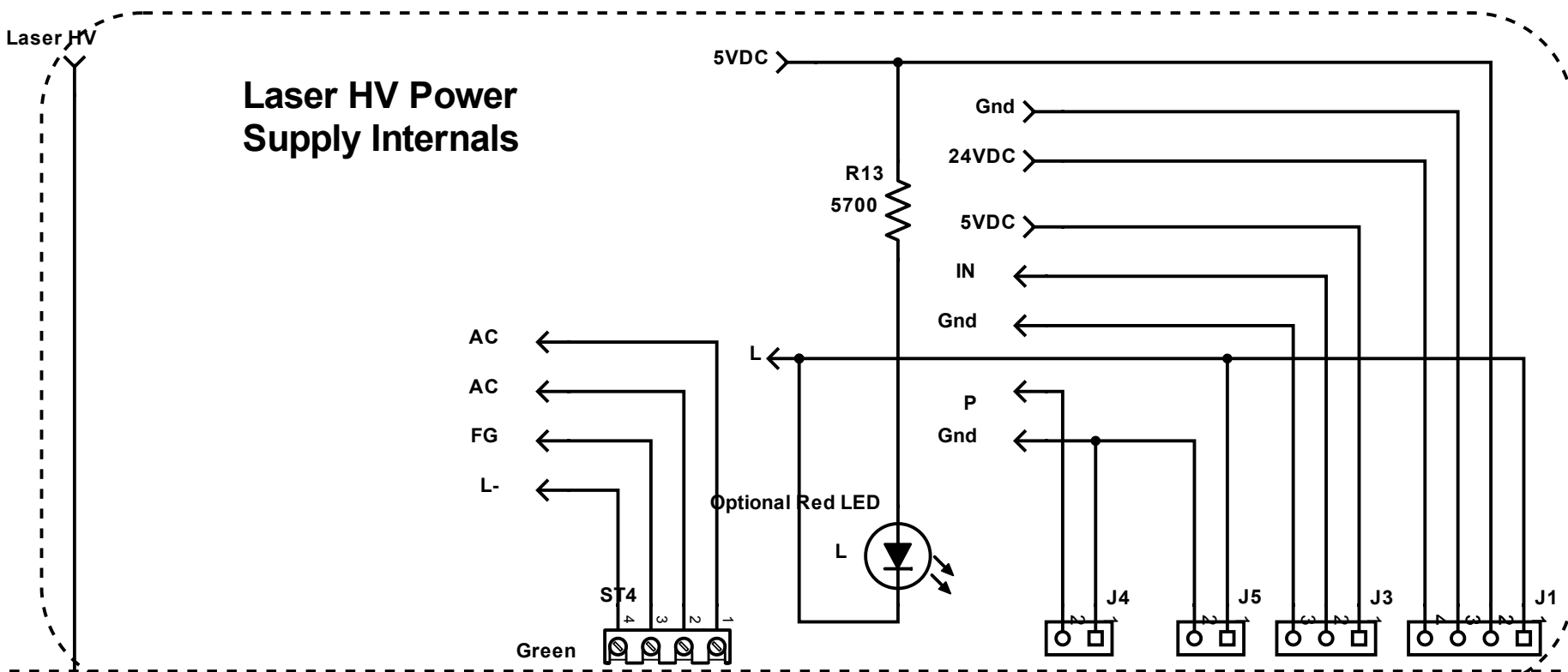


## Typical K40 Interconnection

V3.0



# Laser HV Power Supply Internals



## Typical K40 GWWG Interconnection

- L to controller open drain
- 5 VDC @ 1A source
- Gnd
- 24VDC@1A source

**V3.0**