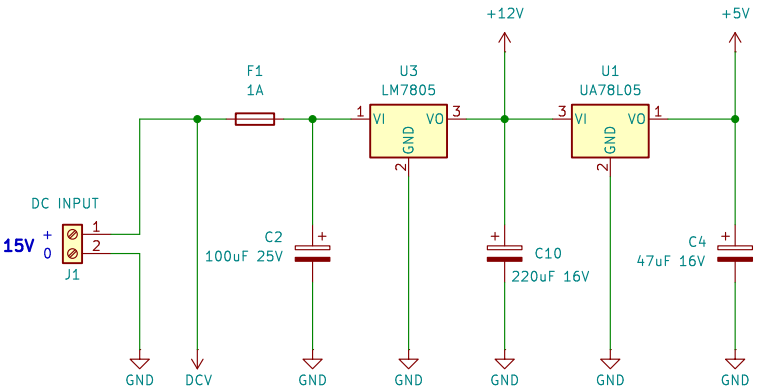
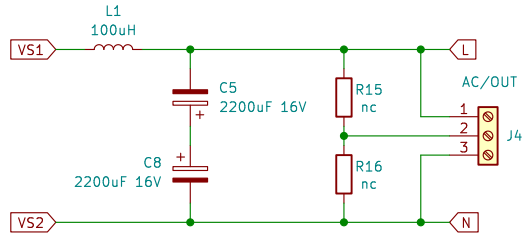
INPUT

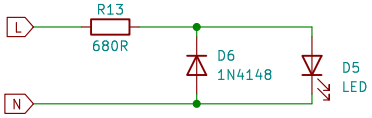


DC module input absolute voltage: 14V–24V

OUTPUT

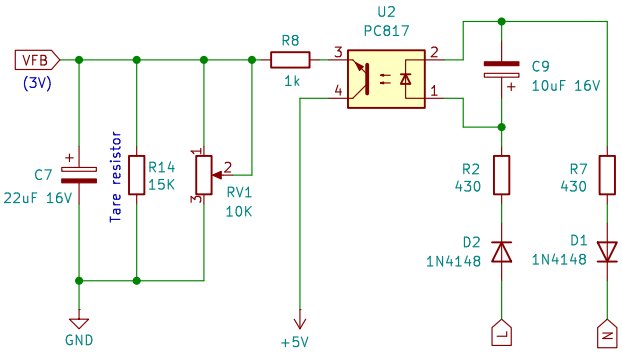


Connect the internal turns of the coil to VS1 (IN on PCB).
Leave a space between the coil and the PCB.



VOLTAGE AC FEEDBACK

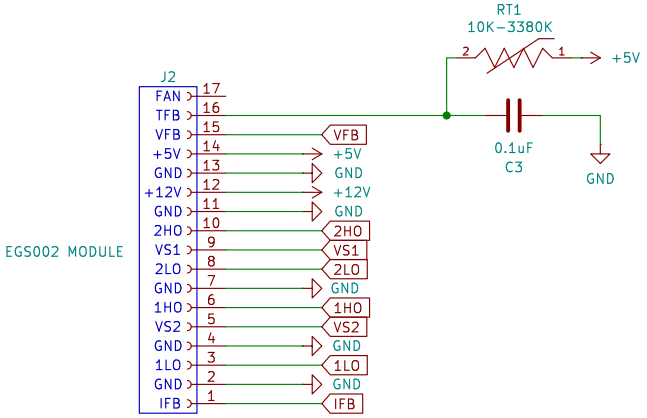
Range: 4V – 8V



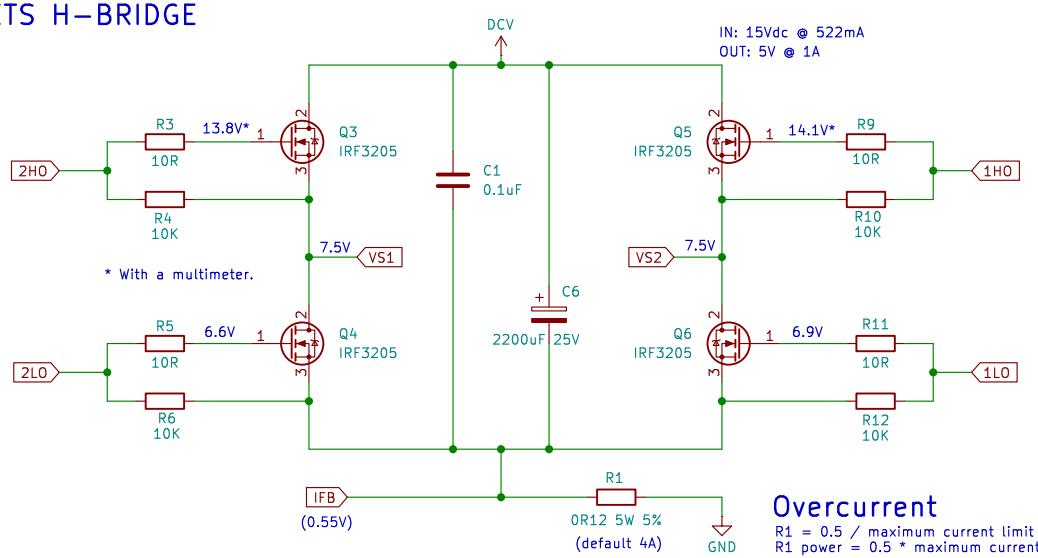
RV1: Preset the potentiometer to 5K before soldering it (1–2).
Overvoltage protection is set at 3.15V with 300mS delay.
Undervoltage protection is set at 2.75V with 3S delay.

EGS002 MODULE

Headers receptacle for ESG002 module: 1x17 Harwin M20–7821746 (855–M20–7821746)



MOSFETS H–BRIDGE



Overcurrent

R1 = 0.5 / maximum current limit
R1 power = 0.5 * maximum current limit

FILTER COMPONENTS

C5 and C8: two polarized polymer capacitors connected in series, plus to plus.
2200uF = RNL1C222MDS1PH – 470uF = A758MU477M1CAAE10
1500uF = RNL1C152MDS1PH – 1800uF = RNL1C182MDS1PH

Coils: Mundorf F2625, L2510 and L3020 body fits on the PCB.
Basic tube heating config (<1.5A): L1 = Mundorf BL71 0.1mH 0R23 – C8/C5: 2200uF (962uF) – f: 510Hz
For 5U4G (3A): L1 = Mundorf BL100 0.27mH 0R23 – C8/C5: 1800uF (892uF) – f: 320Hz

Direct heated triodes config (up to 1.5A)
For 300B (1.1A): L1 = Mundorf (B)H71 3.3mH 0R50 – C8/C5: 470uF (260uF) – ƒ 170Hz
For 300B (1.1A): L1 = Mundorf (B)H71 1.2mH 0R25 – C8/C5: 1500uF (720uF) – ƒ 170Hz

No load consumption: 45–110mA
SNR: 64dB with 3.3mH coil.
Distorsion: <1%

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File: LVPS–DC–AC–Inverter–EGS.kicad_sch

Title: LVPS DC–AC 4V–8V 50Hz Inverter

Size: A4	Date: 2025–03–07	**Rev: 1.0.3b8**
KiCad E.D.A. 8.0.8		Id: 1/1