

回路講習2



Altairu

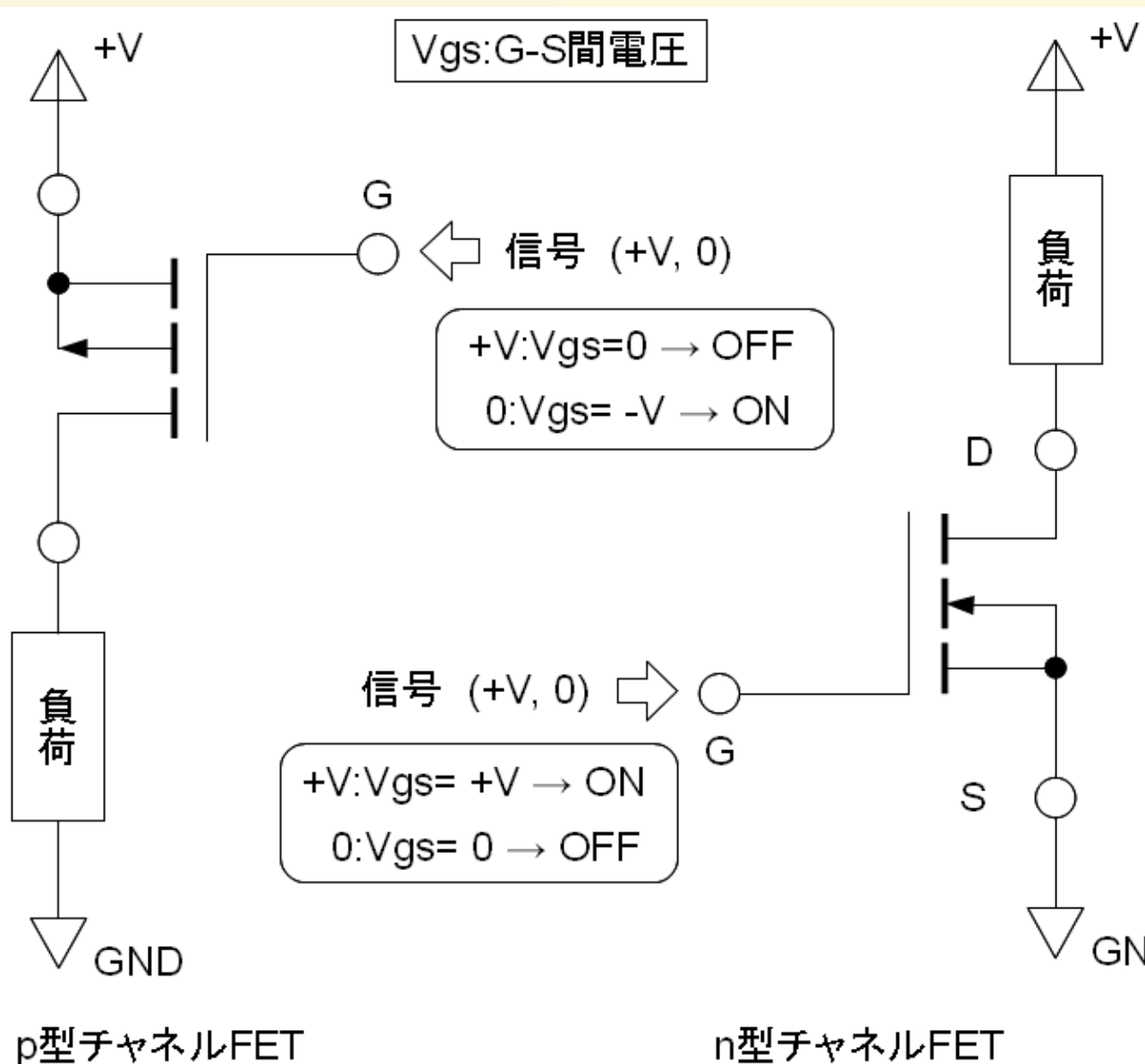


@Flying__eagle



モーターを回してみる

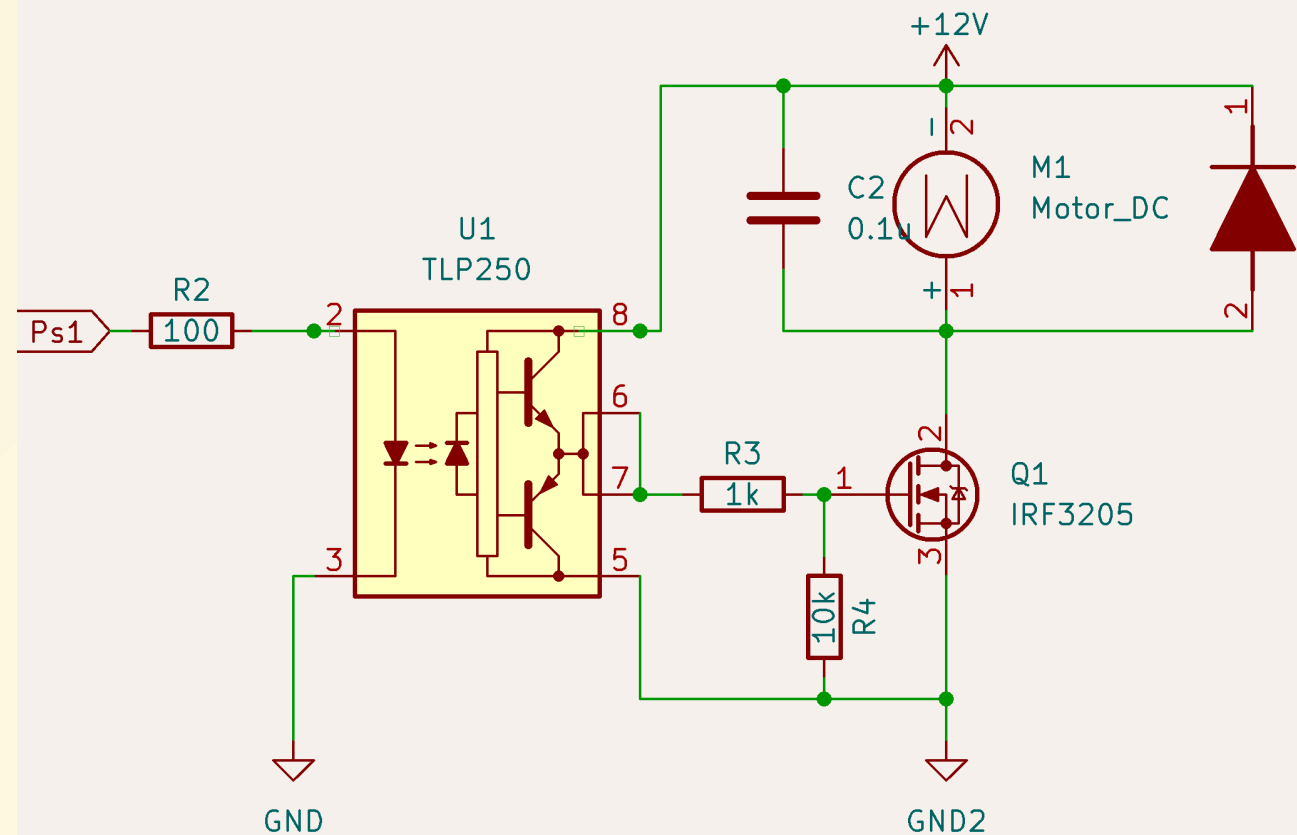
N-CH MOSFETを使って
モーターを単方向に回す
回路を作ってみよう.



KiCadで作ってみよう

- フォトカプラ
 - TLP250
- MOSFET
 - IRF3205

逆起電力防止用ダイオード
ノイズ除去コンデンサ



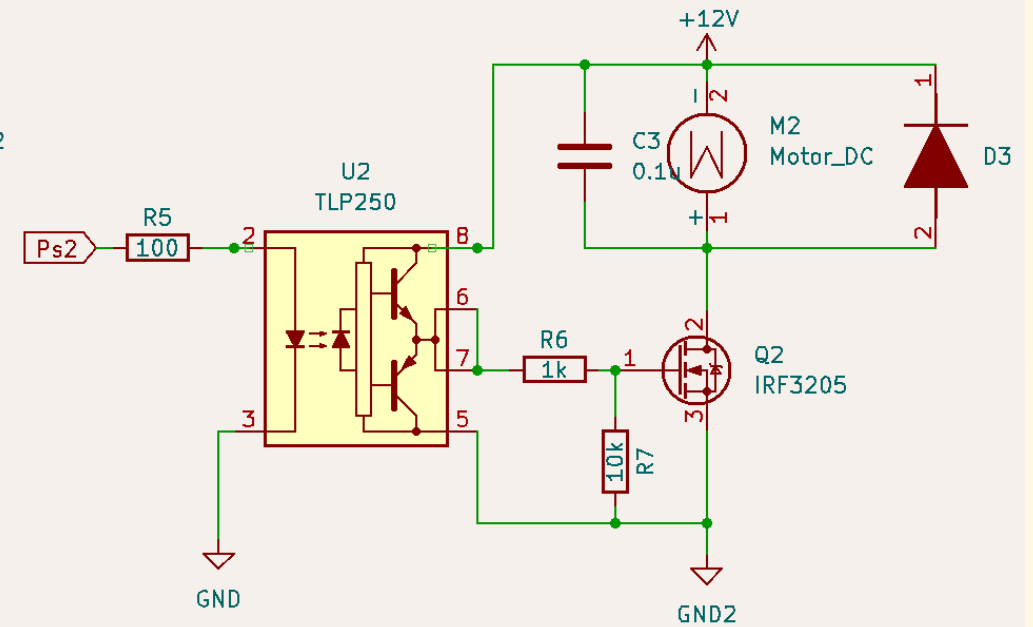
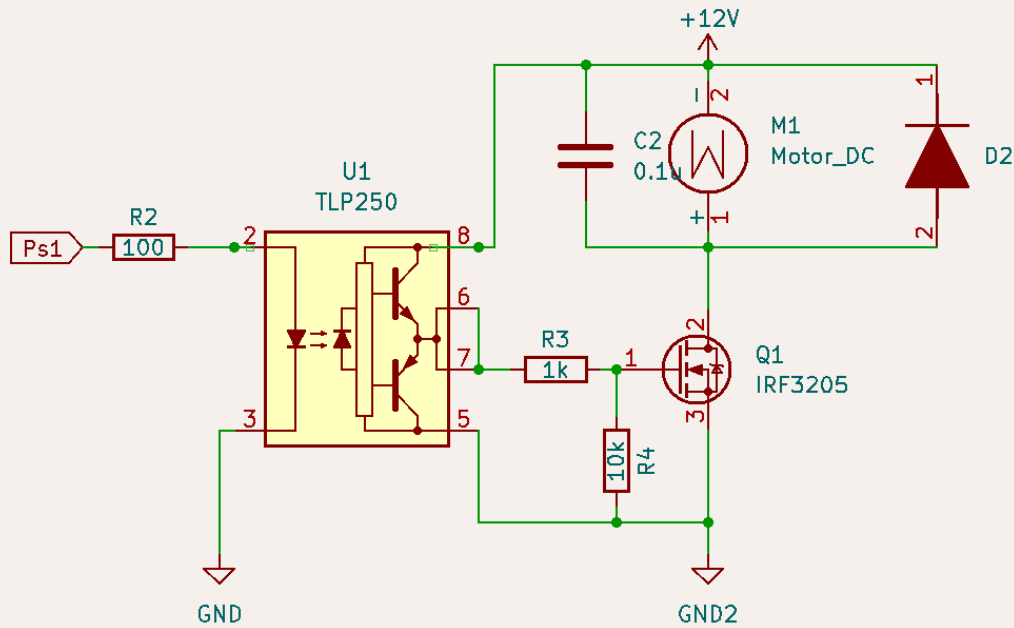
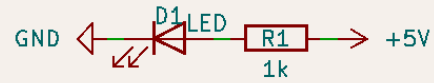
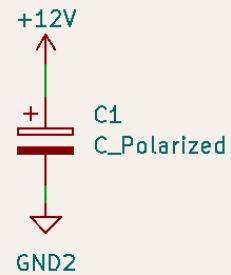
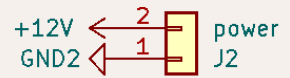
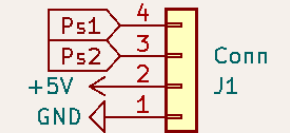
以下の使用のものを作れ

モーターを単方向に二つ動かす回路マイコンにより制御されマイコンと駆動部のGNDを絶縁すること

マイコン信号:Conn_01x04 (Ps1,Ps2,+5V,GND)

電源入力:Conn_01x02(+12V,GND2)

電源にバイパスコンデンサ:C_Polarized



シンボル : フットプリント割り当て

| | | | |
|----|------|--------------|--|
| 1 | C1 - | C_Polarized | : Capacitor_THT:CP_Radial_D5.0mm_P2.50mm |
| 2 | C2 - | 0.1u | : Capacitor_THT:C_Disc_D4.3mm_W1.9mm_P5.00mm |
| 3 | C3 - | 0.1u | : Capacitor_THT:C_Disc_D4.3mm_W1.9mm_P5.00mm |
| 4 | D1 - | LED | : LED_THT:LED_D3.0mm |
| 5 | D2 - | RF201LAM2STR | : Diode_THT:D_D0-34_SOD68_P7.62mm_Horizontal |
| 6 | D3 - | RF201LAM2STR | : Diode_THT:D_D0-34_SOD68_P7.62mm_Horizontal |
| 7 | H1 - | MountingHole | : MountingHole:MountingHole_3.2mm_M3 |
| 8 | H2 - | MountingHole | : MountingHole:MountingHole_3.2mm_M3 |
| 9 | H3 - | MountingHole | : MountingHole:MountingHole_3.2mm_M3 |
| 10 | H4 - | MountingHole | : MountingHole:MountingHole_3.2mm_M3 |
| 11 | J1 - | Conn | : Connector_JST:JST_XA_S04B-XASK-1_1x04_P2.50mm_Horizontal |
| 12 | J2 - | power | : Connector_AMASS:AMASS_XT30U-M_1x02_P5.0mm_Vertical |
| 13 | M1 - | Motor_DC | : Connector_AMASS:AMASS_XT30UPB-F_1x02_P5.0mm_Vertical |
| 14 | M2 - | Motor_DC | : Connector_AMASS:AMASS_XT30UPB-F_1x02_P5.0mm_Vertical |
| 15 | Q1 - | IRF3205 | : Package_TO_SOT_THT:T0-220-3_Vertical |
| 16 | Q2 - | IRF3205 | : Package_TO_SOT_THT:T0-220-3_Vertical |
| 17 | R1 - | 1k | : Resistor_THT:R_Axial_DIN0207_L6.3mm_D2.5mm_P10.16mm_Horizontal |
| 18 | R2 - | 100 | : Resistor_THT:R_Axial_DIN0207_L6.3mm_D2.5mm_P10.16mm_Horizontal |
| 19 | R3 - | 1k | : Resistor_THT:R_Axial_DIN0207_L6.3mm_D2.5mm_P10.16mm_Horizontal |
| 20 | R4 - | 10k | : Resistor_THT:R_Axial_DIN0207_L6.3mm_D2.5mm_P10.16mm_Horizontal |
| 21 | R5 - | 100 | : Resistor_THT:R_Axial_DIN0207_L6.3mm_D2.5mm_P10.16mm_Horizontal |
| 22 | R6 - | 1k | : Resistor_THT:R_Axial_DIN0207_L6.3mm_D2.5mm_P10.16mm_Horizontal |
| 23 | R7 - | 10k | : Resistor_THT:R_Axial_DIN0207_L6.3mm_D2.5mm_P10.16mm_Horizontal |
| 24 | U1 - | TLP250 | : Package_DIP:DIP-8_W7.62mm |
| 25 | U2 - | TLP250 | : Package_DIP:DIP-8_W7.62mm |

