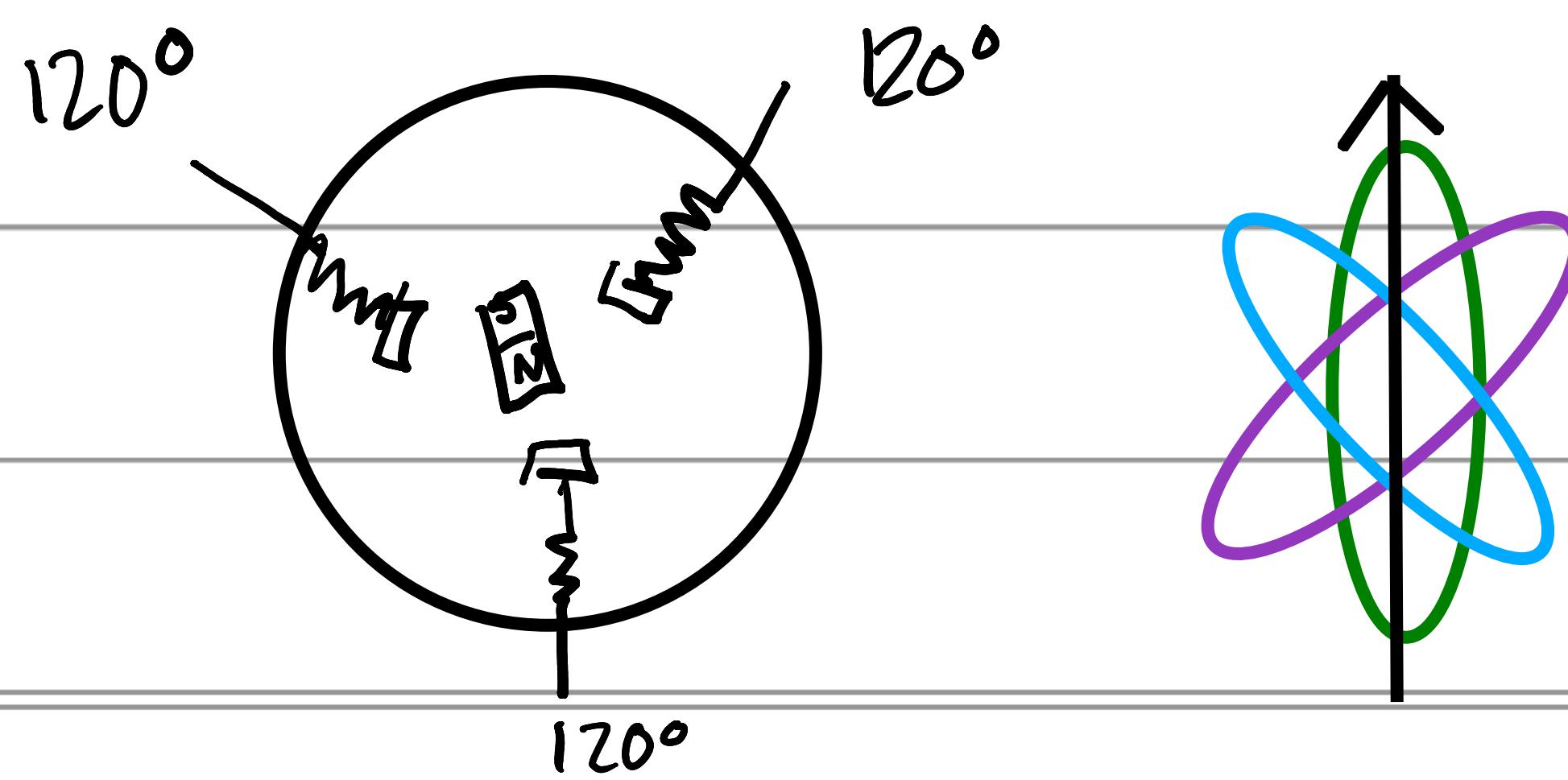
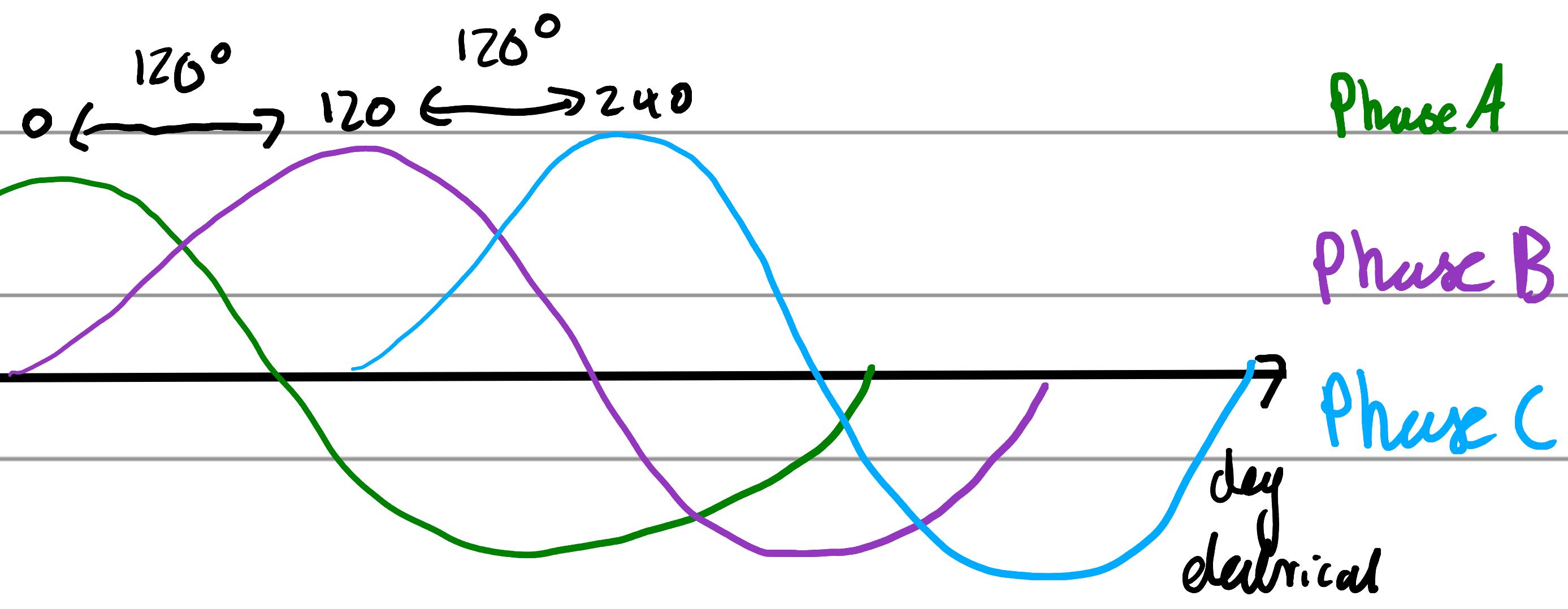
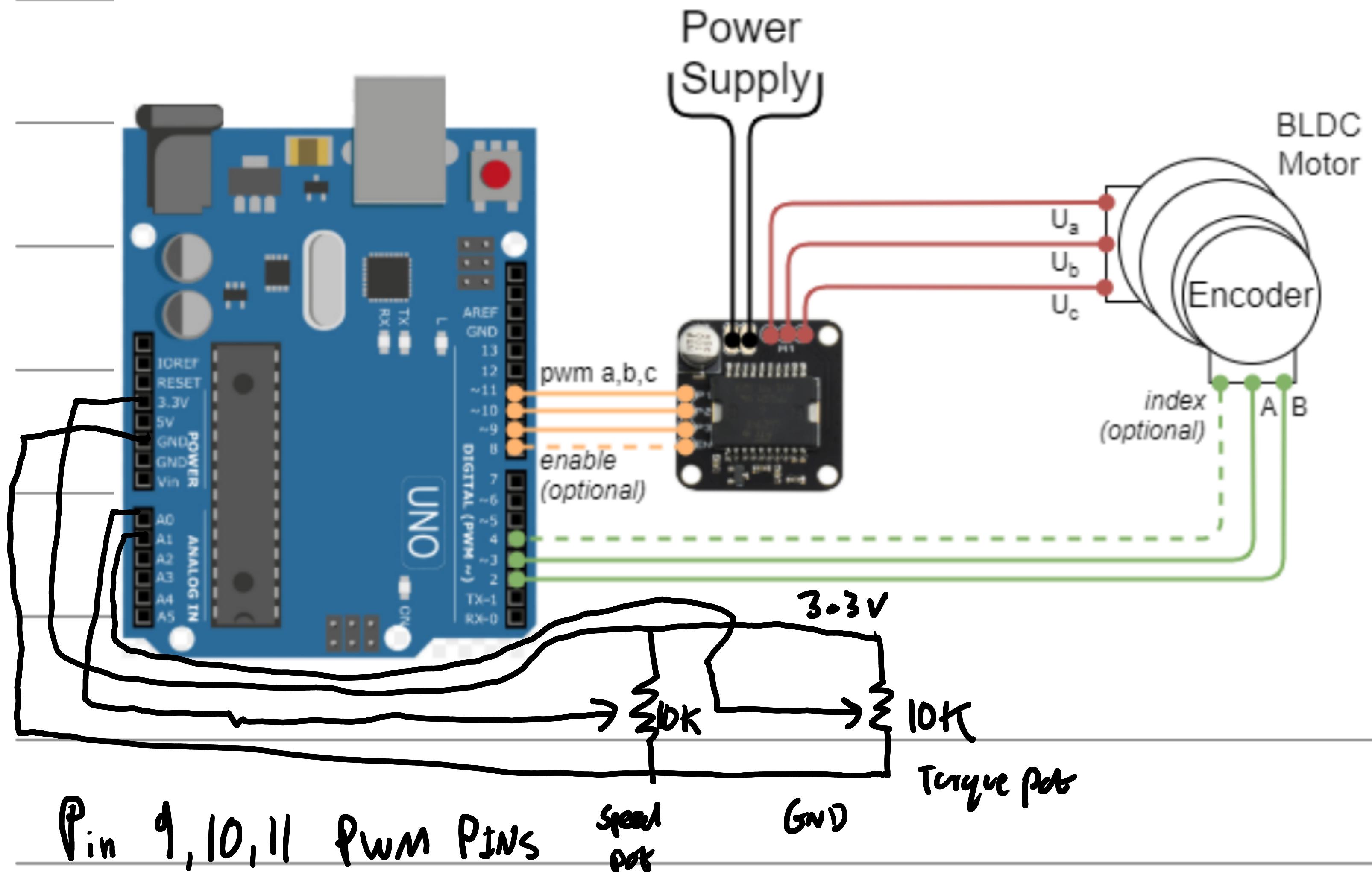
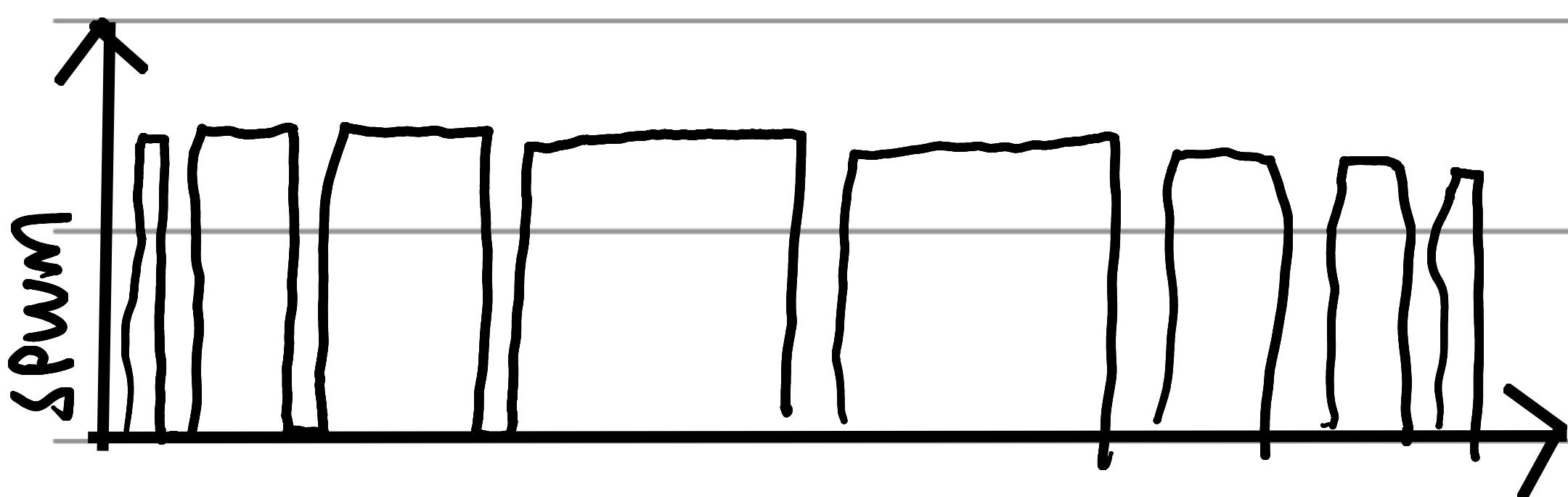
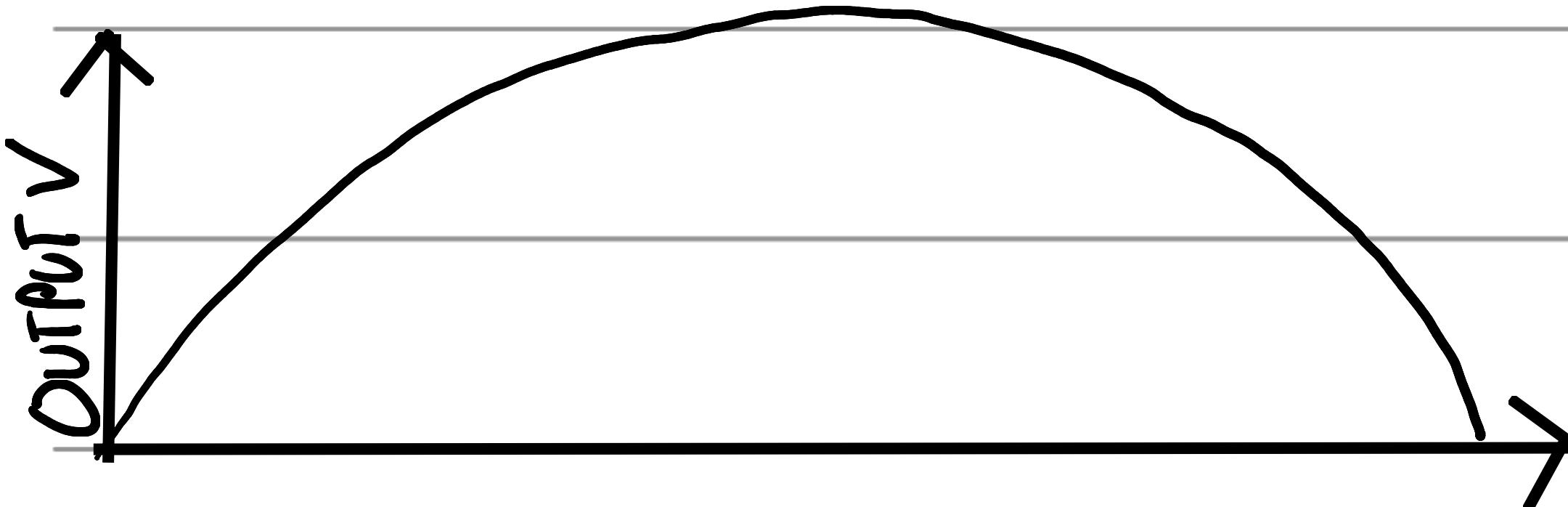


# L6234D breakout + uno 3phase driver



Use the Arduino to create the sinusoidal waves & the L6234 to amplify the signal. & apply them to the motor.

How to create such signals from PWM, SPWM modules  
The signals to generate an approximate sinusoidal signal. One changes the width of the PWM signal that follow a sine wave amplitude



Degrees to radians  $1^{\circ} \text{ deg} \times \frac{\pi}{180} = 0.0174533^{\circ} \text{ rad}$

int electrical-degrees-phase A = 0

phase B = 120

phase C = 240

loop electrical angle

loop: electrical-degrees-phase A % = 360

-phase B % = 360

-phase C % = 360

get SPWM duty

SPWM-phase-A =  $\sin((\text{double}) \text{electrical-deg-phase-A} \times \pi / 180) \times 127.5 + 127.5$

phase-B

-phase B

phase-C

-phase C

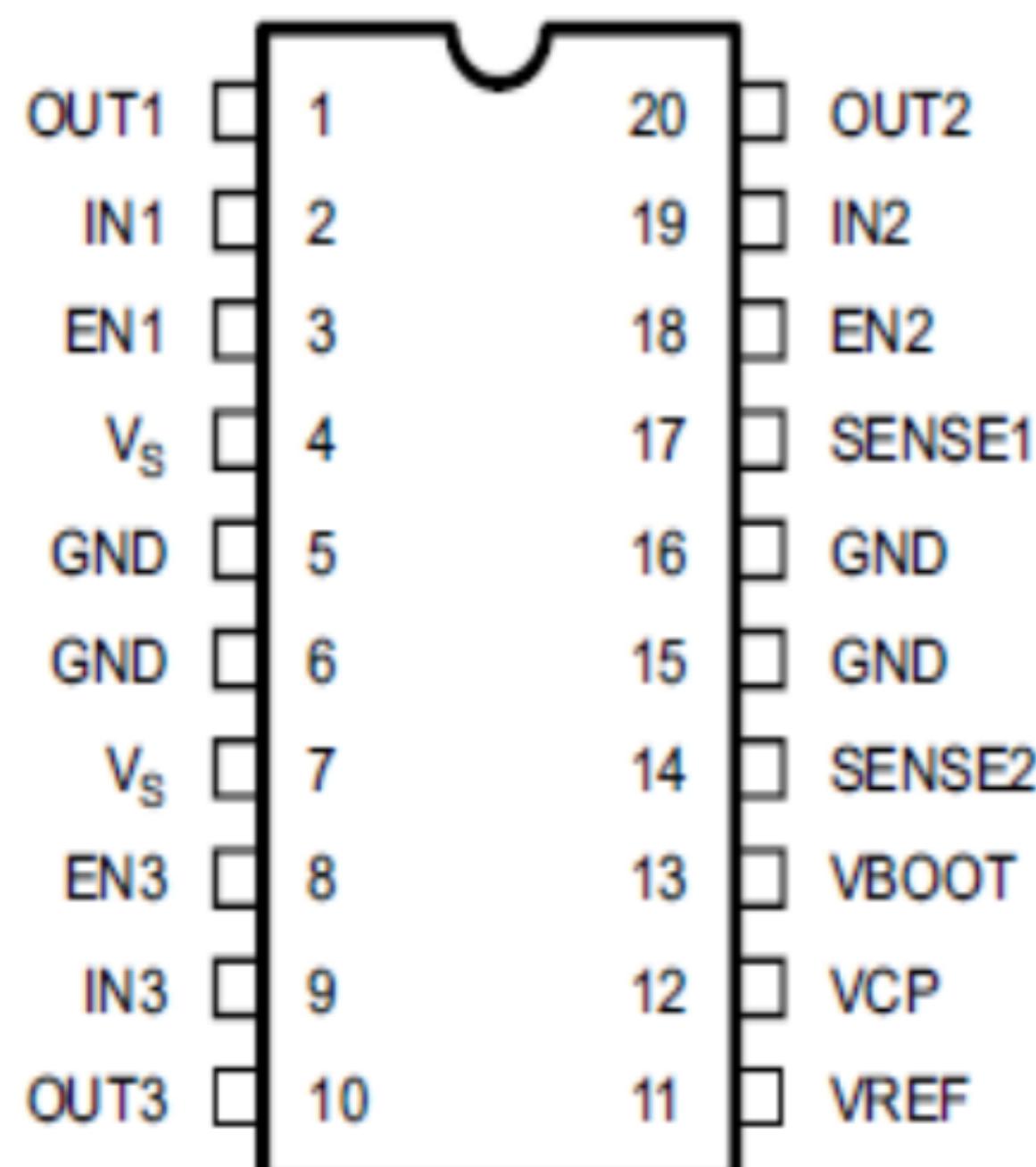
wire duty

angle\_wire( Mbof phase A, SPWM-phase-A  $\times$  amplitude )<sup>PC</sup>

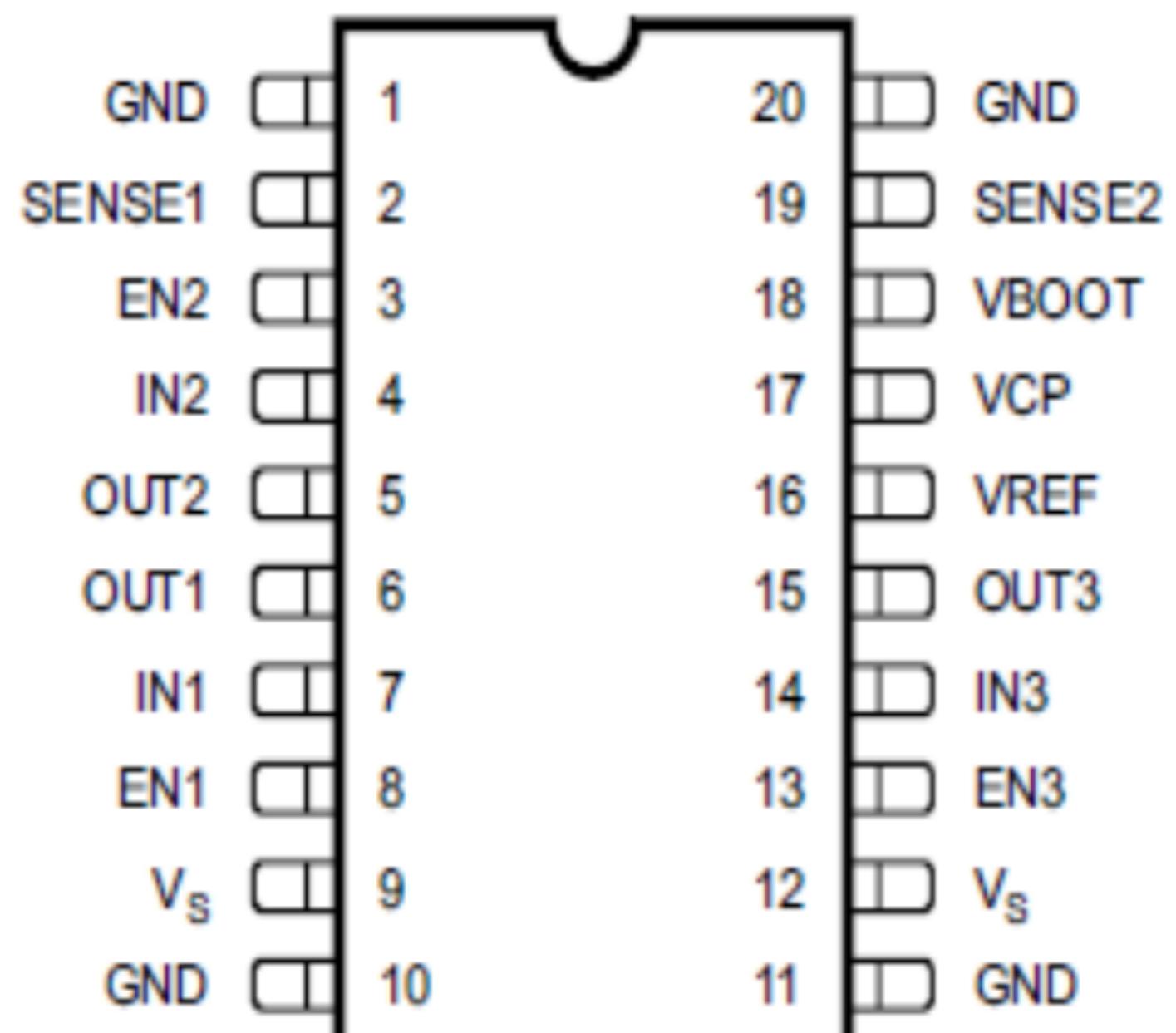
delay ( scan speed interval ).

extra ... set pump clocks. etc

L6234 Pin out

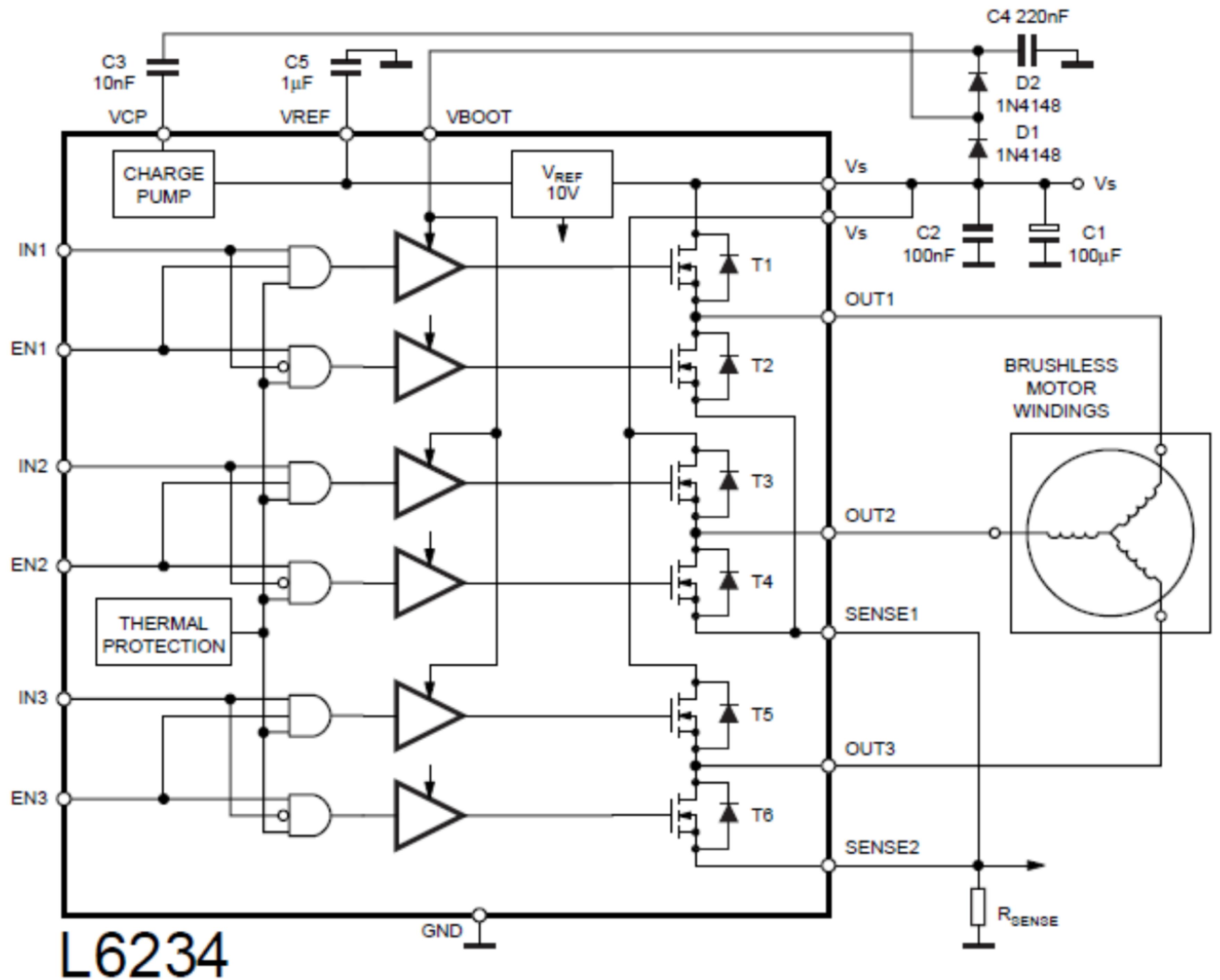


**POWER DIP (16+2+2)**



**PowerSO20**

# L6234 Datasheet Circuit



Components

C1: 100 $\mu$ F polarised 25V

R<sub>SENSE</sub> 4x 1Ω

C2: 100nF

C5: 1μF

C3: 10nF

D1/D2: 1N4148

# DIP 20 circuit

