# Stepper motor driver

2209 and 2208 have the same pinout, this should mean that they are interchangeable when it comes to the footprint on the pcb.

**Afbeelding met tekst

Automatisch gegenereerde beschrijving**

For layout considerations **check chapter 19** of the tmc2208 datasheet.

Important notes:

## Micro stepping

Normally a stepper motor has 200 steps per complete revolution. Micro stepping can give you up to 51200 steps per complete revolution (depents on the motor of course) or 1/256 steps.

Benefits: improves noise levels and motor smoothness/accuracy and could improve energy effiency.

Drawbacks: decreases torque (especially at higher speeds) which could lead to stalling (some drivers can change stepping modes accordingly to speed).

source on Micro stepping <https://www.youtube.com/watch?v=G8oGa2mawKk&t=68s>

Afbeelding met tafel

Automatisch gegenereerde beschrijving