

Gravity MEMS Gas Sensor

SEN0377

Product Overview

02-02-2022

For the most up-to-date information, visit www.mouser.com or the supplier's website.

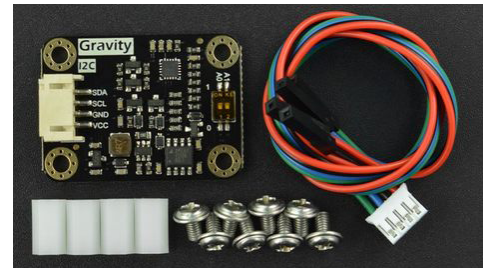
Description

DFRobot Gravity MEMS Gas Sensor is a 3.3V/5V compatible MEMS gas concentration sensor. This sensor supports the detection of various gas concentrations like CO, C₂H₅OH (Alcohol), H₂, NO₂, and NH₃. The gravity MEMS gas sensor integrates different gas concentration conversion formulas in the code to facilitate the testing and use of sensors. This sensor operates between -30°C to 85°C temperature range. The gravity MEMS gas sensor features low power consumption and a lifespan of more than two years (in the air). This sensor is available in 27mm x 37mm circuit board size. Typical applications include gas leak detection, gas safety equipment, and air environment detection.



Features

- Supports the detection of a variety of harmful gas
- Integrate the calculation formulas of various gas concentration
- Low power consumption
- I²C digital output
- Compatible with the 3.3V to 5.5V master controller



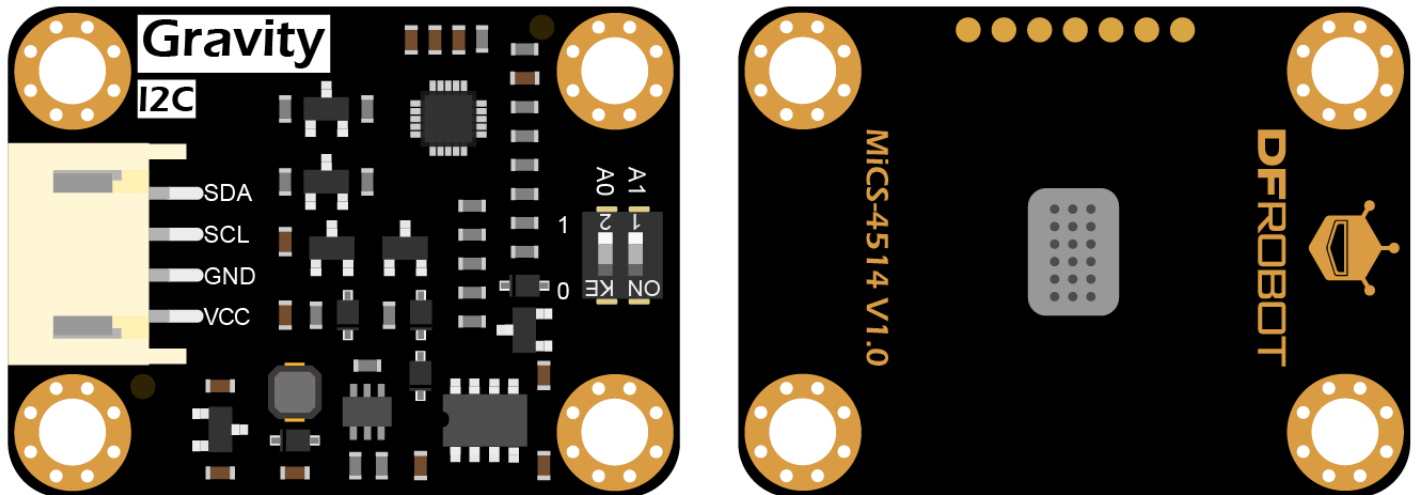
Specifications

- Detection of physical quantities:
 - Gas concentration of CO, C₂H₅OH (Alcohol), H₂, NO₂, NH₃, CH₄
- Measuring range:
 - 1ppm to 1000ppm (Carbon monoxide CO)
 - 0.05ppm to 10ppm (Nitrogen dioxide NO₂)
 - 10ppm to 500ppm (Ethanol C₂H₅OH)
 - 1ppm to 1000ppm (Hydrogen H₂)
 - 1ppm to 500ppm (Ammonia NH₃)
 - >1000ppm (Methane CH₄)
- 3.3V_{DC} to 5.5V_{DC} operating voltage
- 0.45W (5V) power dissipation
- I²C (0V to 3V) output signal
- -30°C to 85°C working temperatures
- 5% to 95% RH (No condensation) working humidity
- -40°C to 85°C storage temperature
- Lifespan:
 - >2 years (in the air)
- 27mm x 37mm circuit board size
- Mounting hole size:
 - 3.1mm inner diameter / 6mm outer diameter

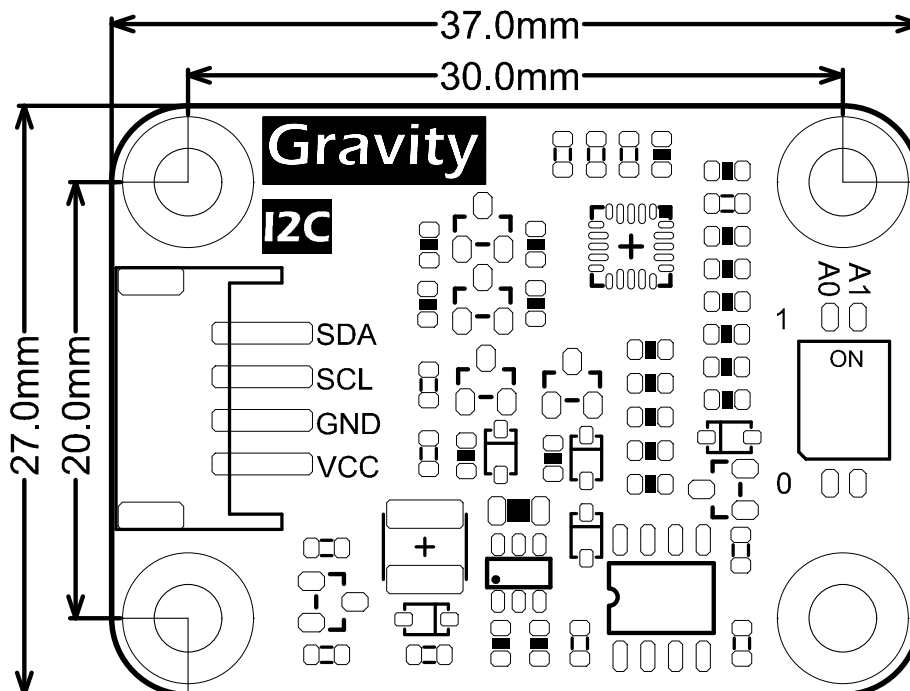
Applications

- Gas leak detection
- Gas safety equipment
- Air environment detection

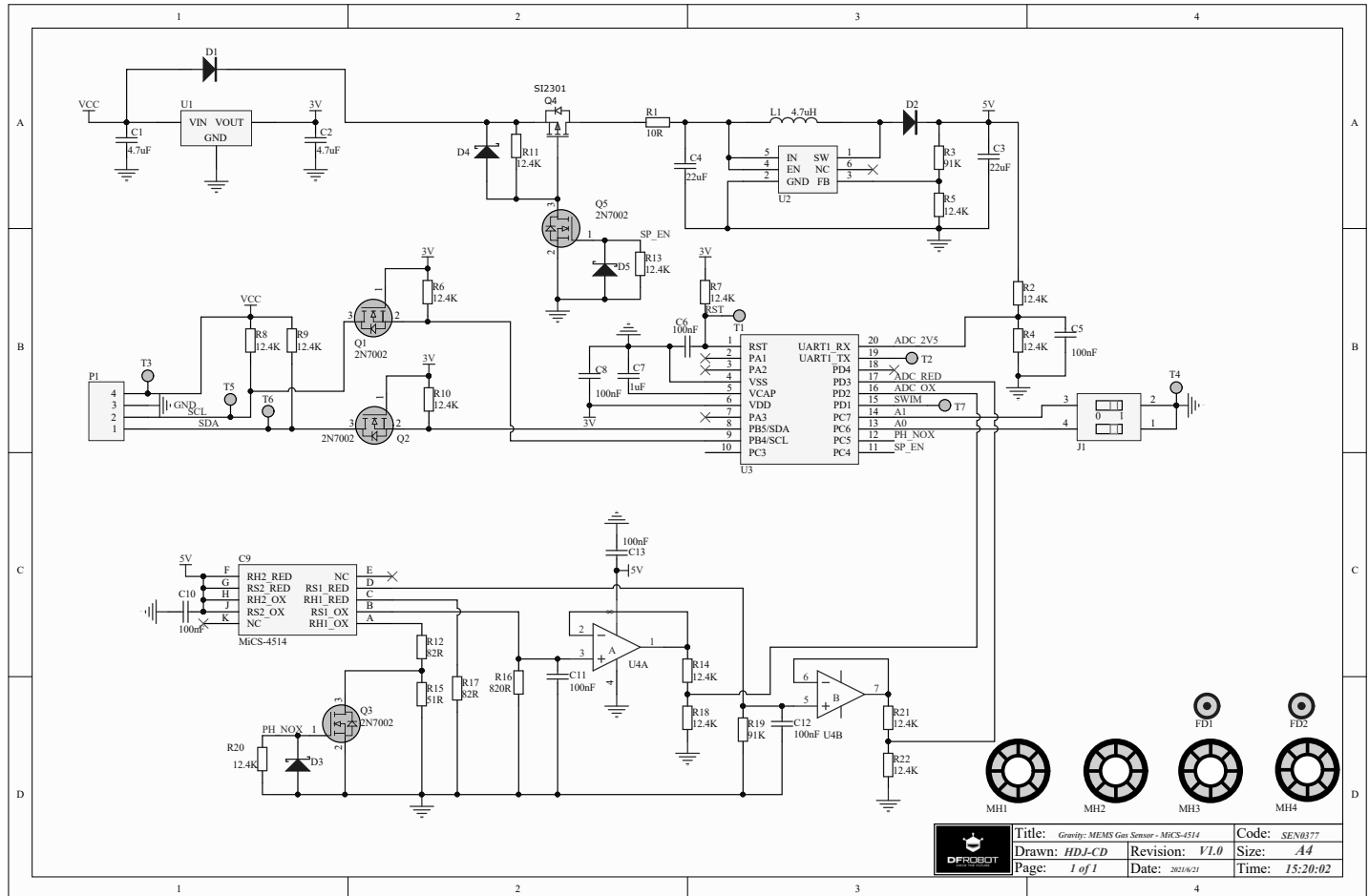
Board Overview



Board Dimensions



Schematics



Mouser Part Number

[View Part](#)

To learn more, visit <https://www.mouser.com/new/dfrobot/dfrobot-gravity-mems-gas-sensor/>