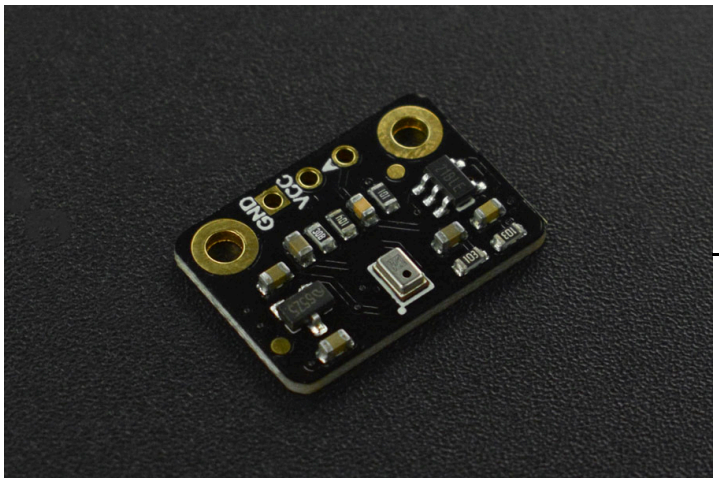
SKU:SEN0487 (https://www.dfrobot.com/product-2357.html)



(https://www.dfrobot.com/product-2357.html)

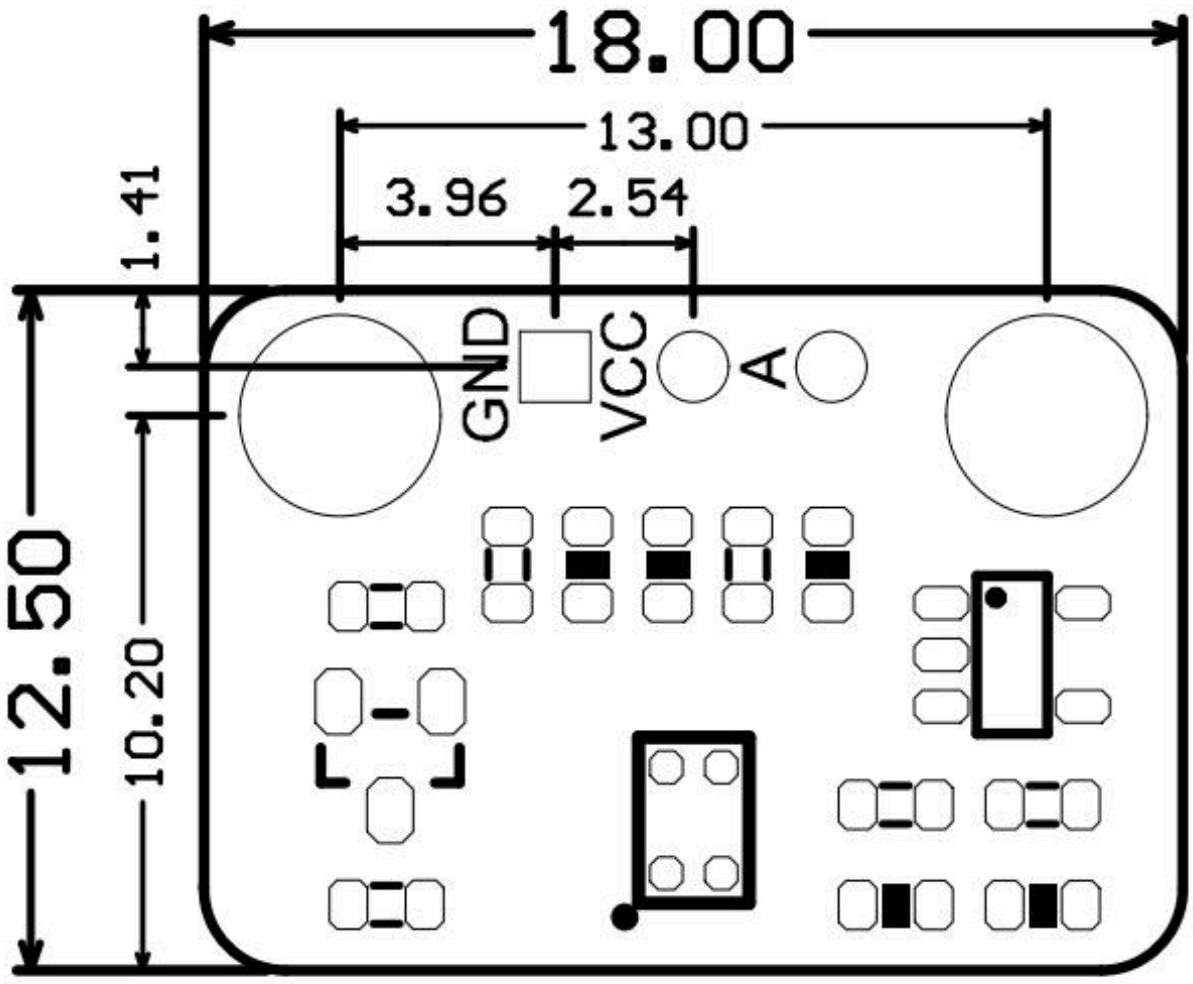
Introduction

This tiny MEMS microphone has an amplifier gain of 66. When there is no sound detected, it outputs voltage around 1.5V. When speaking, you can easily get the acoustic waveform by ADC sampling. The module can be used on all kinds of 3.3V/5V main-controllers.

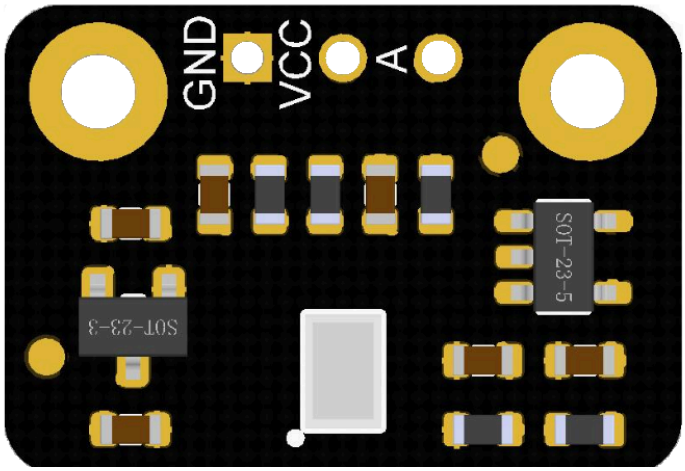
Specification

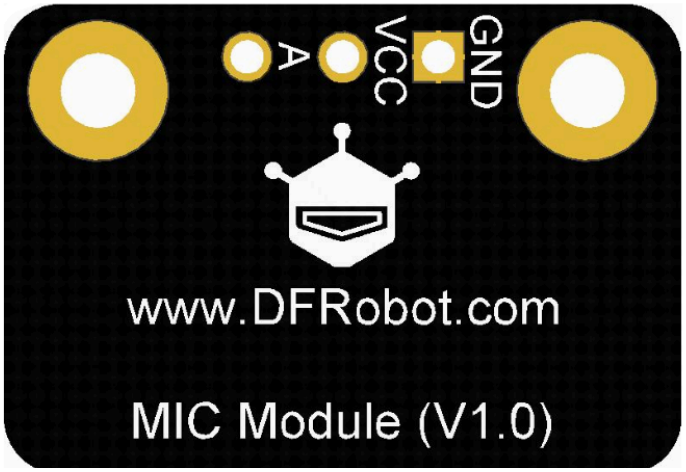
- Signal Type: Analog signal
- VCC: 3.3 V/5 V
- Directivity: All-round
- Sensitivity: -42 dB
- S/N Ratio: 59 dBA

- Frequency Range: 100~8k Hz
- Dimension: 18×12.5 mm/ 0.71×0.49”



Board Overview





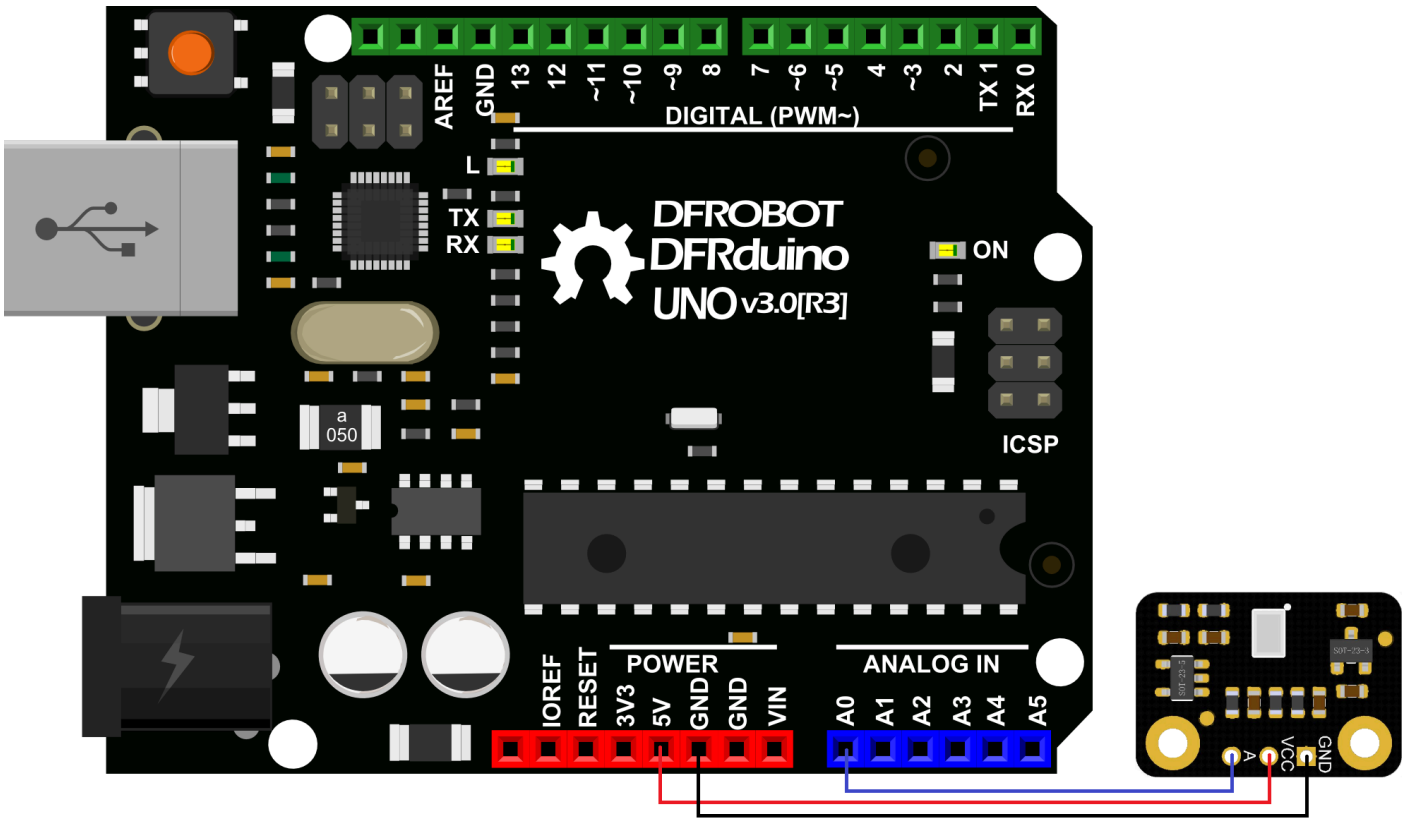
Num	Label	Description
1	GND	Power supply -
2	VCC	Power supply +
3	A	Analog output port

Tutorial

Requirements

- **Hardware**
  - DFRduino UNO R3 (https://www.dfrobot.com/product-838.html) (or similar) × 1
  - MEMS Microphone Sensor × 1
  - M-M/F-M/F-F Jumper wires
- **Software**
  - Arduino IDE (https://www.arduino.cc/en/Main/Software)

Connection Diagram



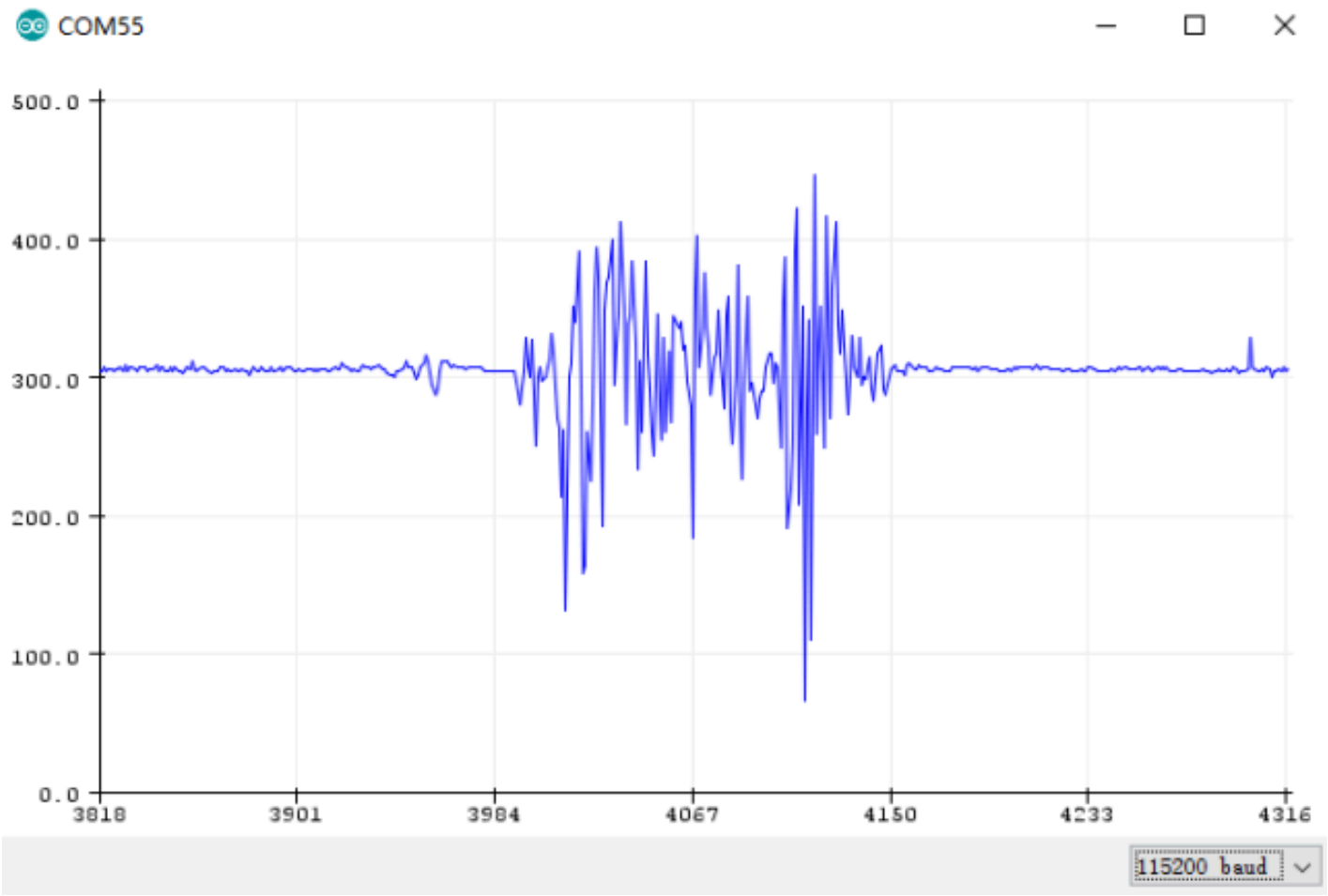
Sample Code - Read Data

Burn code, open the serial port plotter, it will display the acoustic waveform

```
void setup() {
  Serial.begin(115200);
}

void loop() {
  // read the value from the sensor:
  Serial.println(analogRead(A0));
  delay(10);
}
```

Expected Results



FAQ

For any questions, advice or cool ideas to share, please visit the **DFRobot Forum** (https://www.dfrobot.com/forum/).

More Documents

- Schematics Diagram (https://dfimg.dfrobot.com/nobody/wiki/a0ed2fa60584de87a6b47ac6294e690f.pdf)

- Dimension Diagram (https://dfimg.dfrobot.com/nobody/wiki/8b5cd56fb46ca75f3142d0c2ceccb5fd.pdf)

- Datasheet (https://dfimg.dfrobot.com/nobody/wiki/5160bfe4d49deff484e1bd66a44d743a.pdf)
- PCB Package File (https://dfimg.dfrobot.com/nobody/wiki/eec7922a3297dbcbe112621c488e9446.zip)
- STEP File (https://dfimg.dfrobot.com/nobody/wiki/aea408354f3ada131ff5493b5e35a188.zip)