Environmental Sensor Breakout - BME680

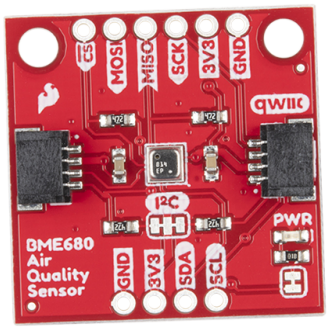
SEN-16466

Product Overview

01-24-2022

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

Description



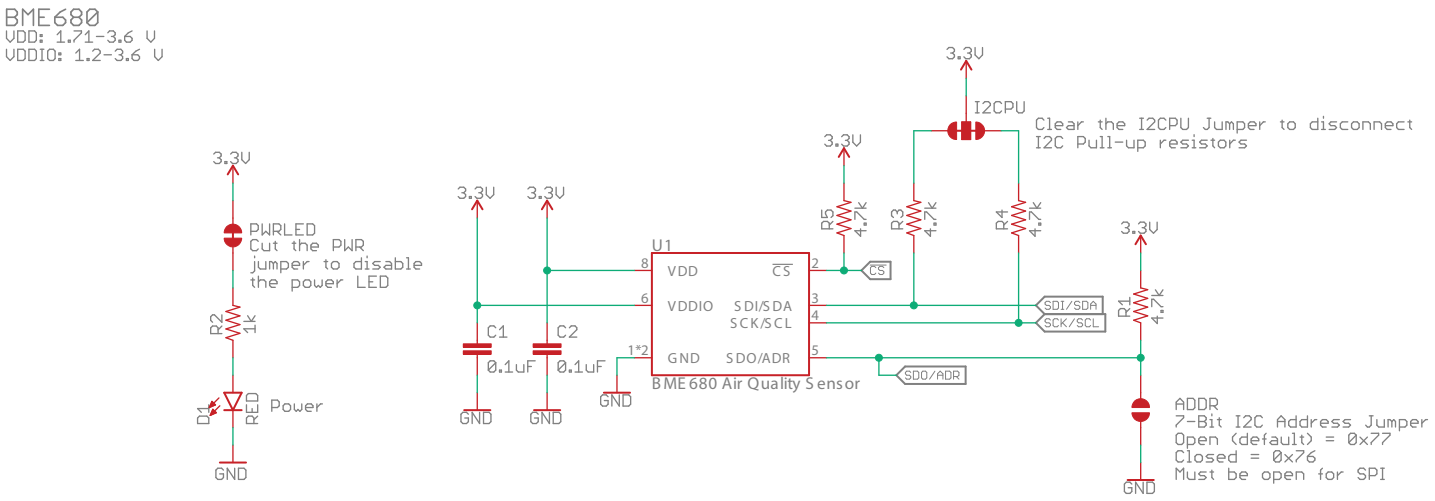
SparkFun Environmental Sensor Breakout - BME680 is designed to combine a gas sensor with temperature, humidity, and barometric pressure sensing. The breakout is a complete environmental sensor in a single package. The gas sensor on the BME680 detects a wide variety of Volatile Organic Compounds (VOC) to monitor indoor air quality. The sensor module is placed in a highly compact metal-lid LGA package with a footprint of only 3.0mm2 x 3.0mm2 with a maximum height of 1.0mm (0.93 ±0.07mm). The sensor communicates via either I²C or SPI. The I²C pins are broken out to the Qwiic system, so no soldering is required to connect it to the rest of the system, but if preferred, both the I²C and SPI pins are also broken out standard 0.1-inch spaced pins.

Features

- Uses I²C interface (Qwiic-enabled)
  - 0x77 (default) or 0x76 I²C addresses
  - 2x Qwiic connectors
- Operating voltage range
  - 1.71V to 3.6V voltage range
  - 3.3V(typically) if using the Qwiic cable
- Relative humidity
  - 0% to 100% operating range
  - ±3%RH absolute accuracy
  - ±0.008%RH resolution
- Temperature
  - -40°C to 85°C operating range
  - ±0.5°C to ±1.0°C absolute accuracy
  - 2.1µA to 18mA
  - 0.15µA (sleep mode)
  - 0.01°C resolution
- Pressure
  - 300hPa to 1100hPa operating range
  - Relative accuracy ±12Pa (25°C to 40°C at constant RH)
  - ±60Pa (0°C to 65°C) absolute accuracy
  - 0.18PA resolution (highest oversampling)
- Gas
  - 0.05% to 0.11% resolution of gas sensor resistance
- Typical current consumption (varies based on mode and active sensor)

The information contained in this document should be used as a guideline only.

Schematic



Mouser Part Number

View Part

To learn more, visit https://www.mouser.com/new/sparkfun/sparkfun-environmental-sensor-breakout/

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