

Pressure Sensor - BMP384 (Qwiic)

SEN-19662

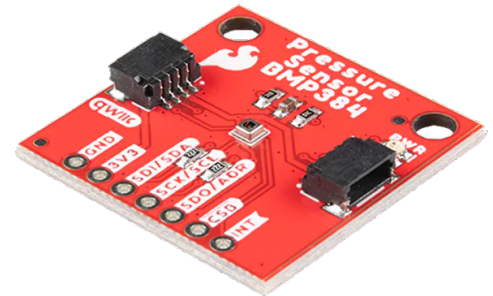
Product Overview

09/29/2022

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

Description

SparkFun Pressure Sensor - BMP384 (Qwiic) excels at high-resolution measurements (up to 24-bit) and uses a gel-filled cavity to provide resistance to liquids (water and other chemicals). Due to this cavity, the sensor is able to monitor pressure near water or in humid environments though the sensor is not waterproof. This pressure sensor features an internal temperature sensor, a configurable oversampling setting, a FIFO buffer for storing up to 73 measurements, and a low-pass filter. The Qwiic pressure sensor - BMP384 (Qwiic) communicates over I²C by default (utilizing the Qwiic system), so no soldering is required to connect it to the sensor. This BMP384 pressure sensor operates from -40°C to 85°C temperature range and 1.65V to 3.6V supply voltage range.



The pressure sensor - BMP384 has three operating modes sleep mode, normal mode, and forced mode. In the sleep mode, the sensor is idle and consumes 2μA. In the normal mode, the sensor automatically cycles between measurement and standby periods and consumes 700μA at peak current draw during measurements. In the forced mode, BMP384 allows direct control of measurements to wake the sensor from sleep mode, take a single-shot measurement and return the device to sleep mode.

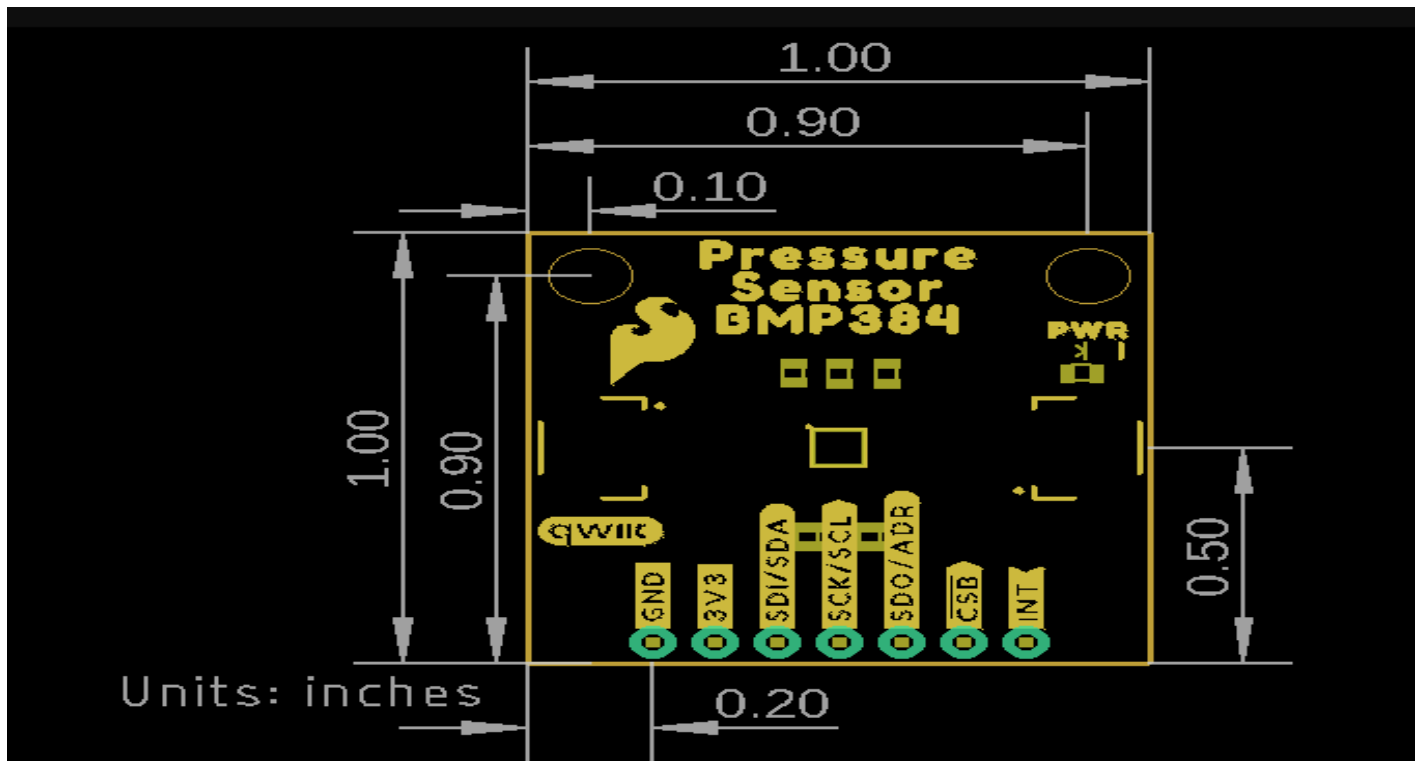
Specifications

- 1.65V to 3.6V supply voltage range
- Current draw:
 - 700μA peak while measuring pressure
 - 3.4μA at 1Hz pressure and temperature monitoring with ultra-low power oversampling settings
 - 2μA in sleep mode
- Data transfer speeds:
 - 3.4MHz (I²C)
 - 10MHz (SPI)
- 0x77 (Default), 0x76 (Alternate) I²C address
- Internal temperature sensor

Board Overview



Board Dimensions



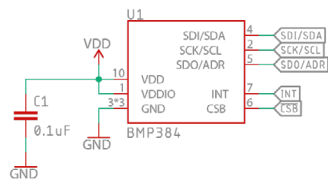
Schematic

Pressure Sensor – BMP384

VDD Range:
1.65V to 3.6V

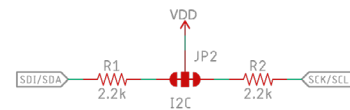
WARNING

Interface pins should
be kept low while
not powered!

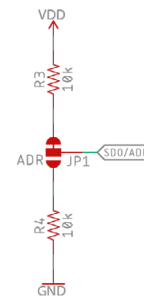


SDA/SCL Pullups

Cut traces to remove pullup resistors

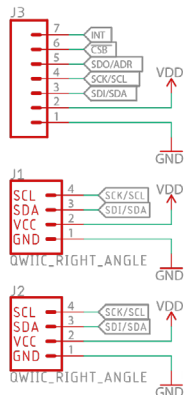


I2C Address Selection

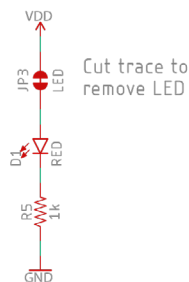


I2C Address Select	
GND	0x76
VDD (Default)	0x77
Open	SPI
Both	Undef

Connectors



Power LED



Mouser Part Number

[View Part](#)

To learn more, visit <https://www.mouser.com/new/sparkfun/sparkfun-pressure-sensor-bmp384/>