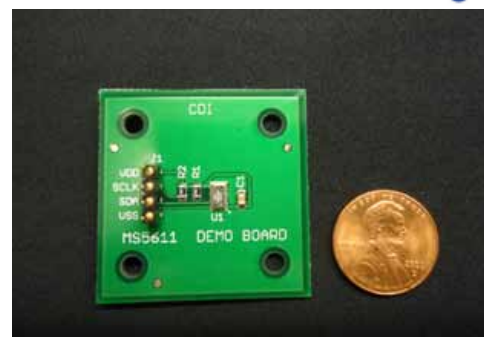


Features:

- MS5611-01BA03 Barometer/Altimeter
- Quick Test Ability
- SMD Device on a PCB
- Easy to connect Pins
- Supply Voltage 3.3 V +0.5V



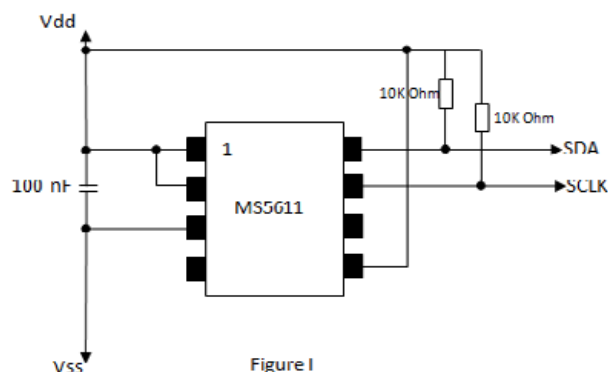
Introduction:

The MS5611-01BA03 demo board is designed to expedite the process of prototyping the capabilities of the MS5611 Barometer/Altimeter pressure sensor. While MS5611 can be configured in either an I2C or SPI output protocol, the MS5611 is designed to operate with an I2C output with the pull up resistors included in the circuit. In this configuration, the MS5611 sensor operates from 3.3 V power, is accurate to 13 cm, and the output is digital I2C. ([Click here](#) to view the datasheet for all device specifications.) The MS5611-01BA can be interfaced to virtually any microcontroller. The communication protocol is simple, without the need of programming internal registers in the device.

This demonstration board will address the function of the pins on the demo board only. The actual communication with the MS5611-01BA03 via I2C can be found on the Meas-Spec applications note, AN520 by [clicking here](#). This note shows complete timing and communication guidelines (for both the I2C and the SPI communication.)

Schematic and Board Pin Out:

The MS5611-01BA03 sensor was designed in a small 3mm x 5 mm surface mount package. Surface mount devices can often be problematic to quickly and easily test as connection issues are always a pain. The MS5611-01BA03 demo board solves this problem by putting the MS5611 sensor on printed circuit board and bringing the pinout to easy points to connect. The simple sensor schematic is shown in Figure 1.



MS5611-01BA03 is to be operated from a 3.3V+0.5V power supply. The output pins can be accessed thru two, 0.100 inch pins. The pin out for the MS5611 Demo Board is shown on Table 1:

Pin Number	Label	Description
1	Vdd	Power Supply (3.3±0.5V)
2	SCLK	Serial Clock
3	SDA	Serial Data
4	VSS	Ground

Table 1 – PCB Pin out

Serial Clock & Data Test Points (SDA, SCL)

The external microcontroller clocks in the data through the input SCLK (Serial CLock) and SDA (Serial Data). The sensor responds on the same pin SDA which is bidirectional for the I2C bus interface. So this interface type uses only 2 signal lines and does not require a chip select, which can be favorable to reduce board space. It is possible to use two sensors with two different addresses on the I2C bus.

Final Comments:

The electrical contact pads are protected against ESD up to 4 kV HBM (human body model). It is therefore essential to ground machines and personnel properly during assembly and handling of the device. The MS5611-01BA is shipped in antistatic transport bags. Any test adapters or production transport boxes used during the assembly of the sensor shall be of an equivalent antistatic material.