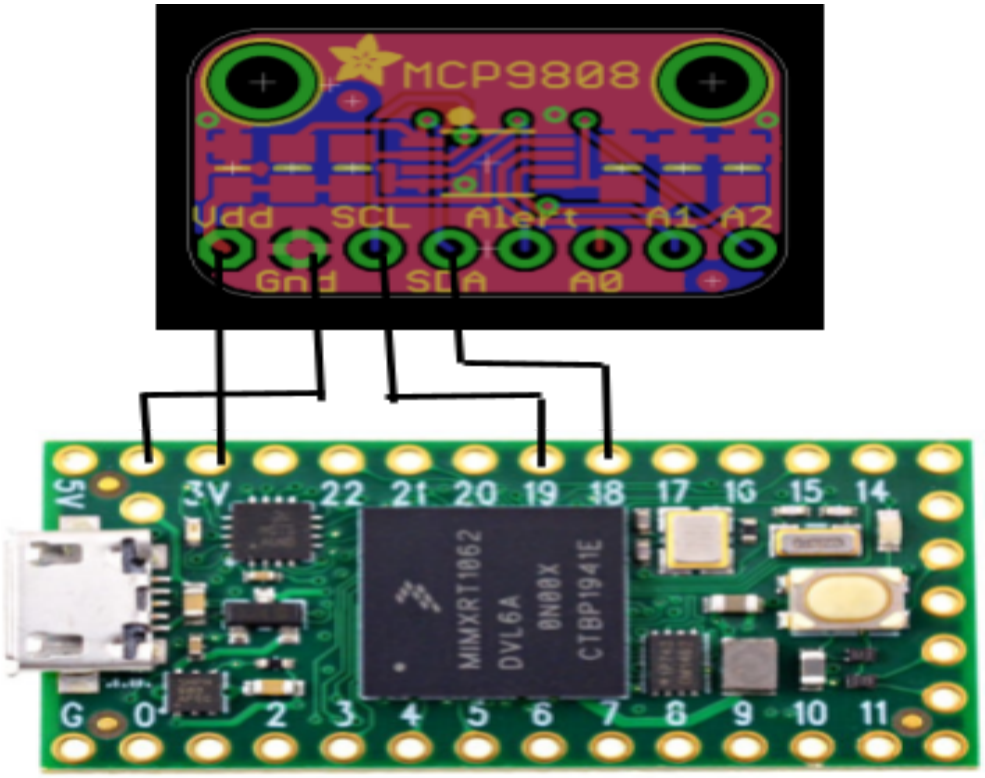
Test Procedure for mcp9808 Temperature sensor



For interfacing teensy 4 board with the mcp9808 temperature sensor we are using i2c communication protocol.

Connection

Vdd of the sensor - 3v pin of teensy
Ground-ground
Scl- pin 19(already 10k pullup resistor on sensor board)
Sda- pin 18 (already 10k resistor on board)

For programming we are using arduino IDE 1.8.13 with teensy addon. For that first we have to install arduino ide and after that we have to install teensyduino.

Adafruit test library program

```
/**************************************************************************/
/*!
This is a demo for the Adafruit MCP9808 breakout
----> http://www.adafruit.com/products/1782
Adafruit invests time and resources providing this open source code,
please support Adafruit and open-source hardware by purchasing
products from Adafruit!
*/
/**************************************************************************/

#include <Wire.h>
#include "Adafruit_MCP9808.h"

// Create the MCP9808 temperature sensor object
Adafruit_MCP9808 tempsensor = Adafruit_MCP9808();

void setup() {
  Serial.begin(9600);
  while (!Serial); //waits for serial terminal to be open, necessary in newer arduino boards.
  Serial.println("MCP9808 demo");

  // Make sure the sensor is found, you can also pass in a different i2c
  // address with tempsensor.begin(0x19) for example, also can be left in blank for default address use
  // Also there is a table with all addres possible for this sensor, you can connect multiple sensors
  // to the same i2c bus, just configure each sensor with a different address and define multiple objects for that
  //  A2 A1 A0 address
  //  0  0  0   0x18  this is the default address
  //  0  0  1   0x19
  //  0  1  0   0x1A
  //  0  1  1   0x1B
  //  1  0  0   0x1C
  //  1  0  1   0x1D
  //  1  1  0   0x1E
  //  1  1  1   0x1F
  if (!tempsensor.begin(0x18)) {
    Serial.println("Couldn't find MCP9808! Check your connections and verify the address is correct.");
    while (1);
  }

   Serial.println("Found MCP9808!");

  tempsensor.setResolution(3); // sets the resolution mode of reading, the modes are defined in the table bellow:
  // Mode Resolution SampleTime
  //  0    0.5°C       30 ms
  //  1    0.25°C      65 ms
  //  2    0.125°C     130 ms
  //  3    0.0625°C    250 ms
}

void loop() {
  Serial.println("wake up MCP9808.... "); // wake up MCP9808 - power consumption ~200 mikro Ampere
  tempsensor.wake();   // wake up, ready to read!
```

```
  // Read and print out the temperature, also shows the resolution mode used for reading.
  Serial.print("Resolution in mode: ");
  Serial.println (tempsensor.getResolution());
  float c = tempsensor.readTempC();
  float f = tempsensor.readTempF();
  Serial.print("Temp: ");
  Serial.print(c, 4); Serial.print("*C\t and ");
  Serial.print(f, 4); Serial.println("*F.");

  delay(2000);
  Serial.println("Shutdown MCP9808.... ");
  tempsensor.shutdown_wake(1); // shutdown MSP9808 - power consumption ~0.1 mikro Ampere, stops temperature
sampling
  Serial.println("");
  delay(200);
}
```

Reference

https://forum.pjrc.com/threads/63035-Teensy-3-6-not-detecting-MCP9808-sensor/page2