MEAS TSD305-1C55 SENSOR FOR GROVE SYSTEM

Digital Thermopile Temperature Sensor

The MEAS TSD305 development board module provides the necessary hardware to interface the TSD305-1C55 digital temperature sensor to any system that utilizes Grove compatible expansion ports configurable for I²C communication. The TSD305-1C55 is a contactless temperature measurement system located in a TO5 package. The TSD includes an infrared sensor (thermopile) and a sensor signal conditioner.
The sensor model works in 5V voltage external. The sensor module includes an internal temperature sensor and a low power 16-bits ΔΣ ADC with internal factory-calibrated coefficients.

Specifications

- Measures temperature from 0°C to 100°C
- I²C communication
- Contactless temperature measurement
- Fully calibrated
- Up to ±1°C accuracy
- Operating Temperature Range: -10°C to +85°C
- Low current consumption

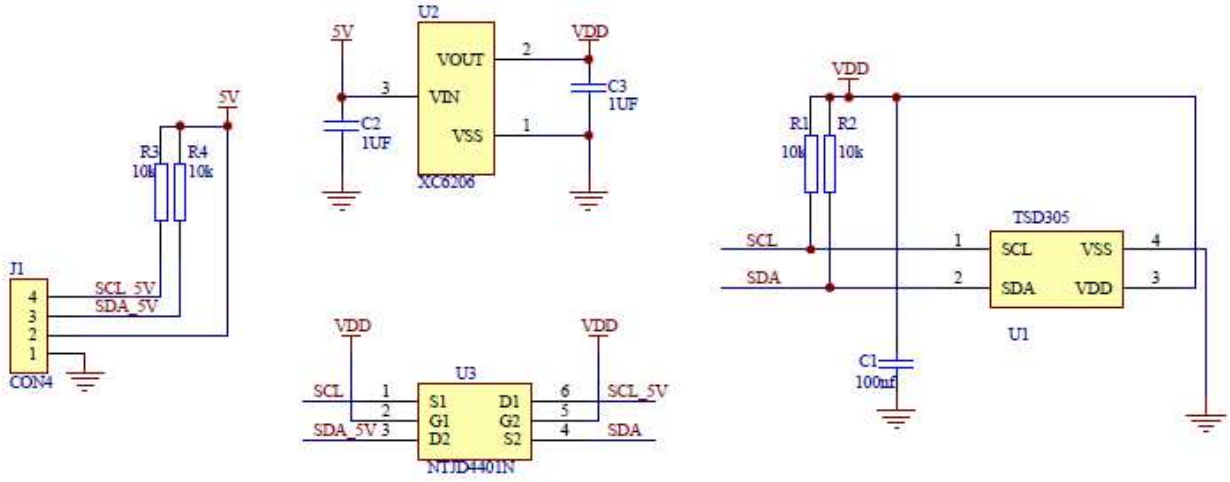
Features

- 4-pin Grove compatible connector
- I²C interface
- 24-bits resolution for temperature
- Parameters stored on chip

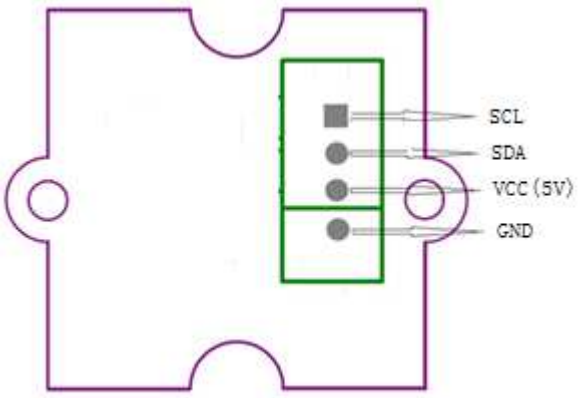
Applications

- Contactless temperature measurement
- Climate control
- Industrial process control
- Household applications

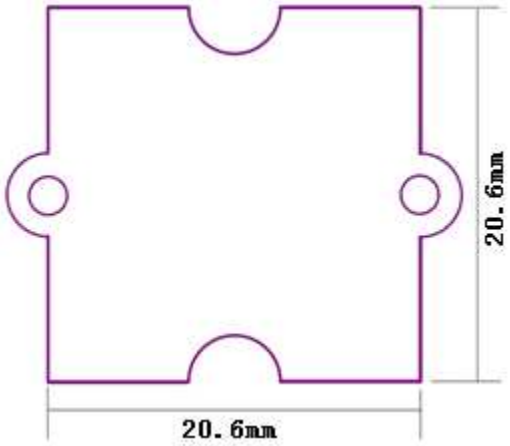
Schematic



Connector Pin Assignments (I²C Communications)



Dimensions (mm)



Detailed Description

I²C Interface:
The TSD305 Grove compliant module can interface to the host in I²C model with 5V supply, it has a Grove compatible four pins port connector configured for I²C.

External Control Signals 5V supply:
The IC operates as an I2C slave using the standard 2-wire I2C connection scheme. As the IC is power rated at 3.6V, the board integrates the necessary fixture, such as a regulator and electrical level shift, so that the SCL and SDA signals could be driven directly from an external 5V I²C lines and power supply.

Reference Material

Detailed information regarding operation of the IC:
• TSD305-1C55 Datasheet

Ordering Information

Description	Part Number
TSD305 GROVE BOARD	DPP203G000

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