

## MEAS TSYS02D SENSOR FOR GROVE SYSTEM

### Digital Temperature Sensor

The TSYS02D provides the necessary hardware to interface the TSYS02D digital temperature sensor to any system that utilizes Grove compatible expansion ports configurable for I<sup>2</sup>C communication. The TSYS02D sensor is a self-contained temperature sensor that is fully calibrated during manufacture. The sensor model works in 5V voltage external. The TSYS02D has a low power stand-by mode for power-sensitive applications.

### Performance

- -5°C to 50°C accuracy: 0.2°C
- -20°C to 100°C accuracy: 0.5°C
- -40°C to 125°C accuracy: 1°C
- Very low power consumption
- Operates 5V
- Time constant – 4 seconds typical
- Conversion time – 43ms typical

### Specifications

- Measures temperature from -40°C to 125°C
- I<sup>2</sup>C communication
- Fully calibrated
- Fast response time
- Very low power consumption

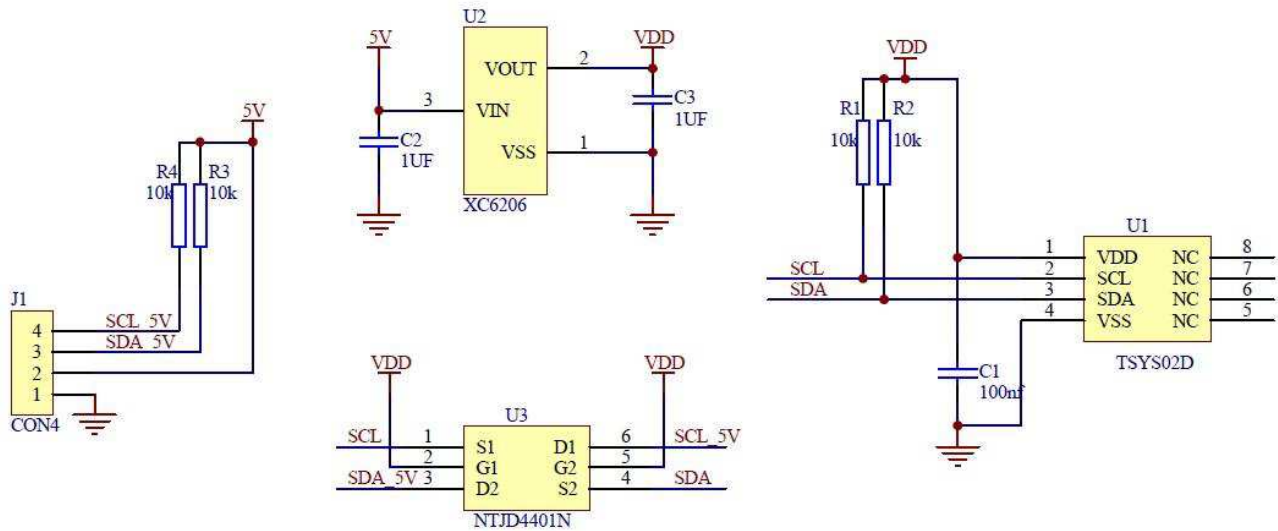
### Features

- 4-pin Grove compatible connector
- I<sup>2</sup>C interface
- 24/16 bits resolution for temperature
- Parameters stored on chip

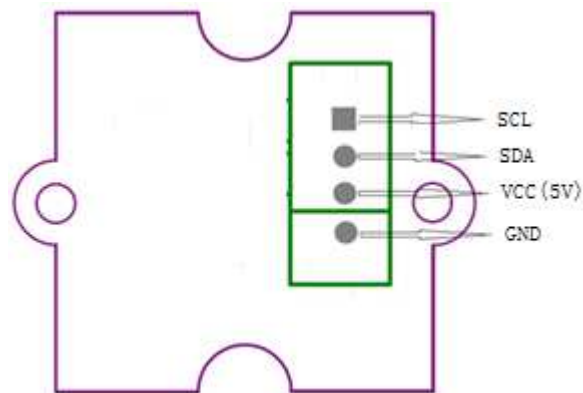
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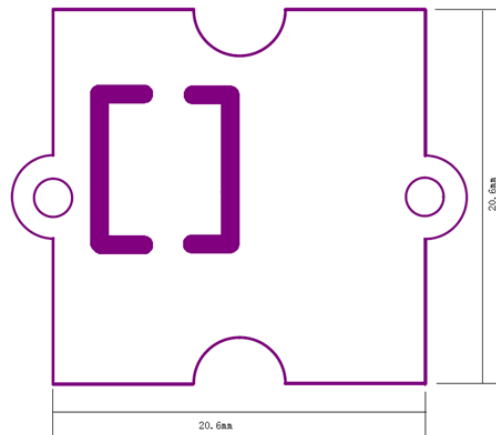
### Schematic



### Connector Pin Assignments (I<sup>2</sup>C Communications)



### Dimensions (mm)



### Detailed Description

#### I<sup>2</sup>C Interface:

The TSYS01 Grove compliant module can interface to the host in I<sup>2</sup>C model with 5V supply, it has a Grove compatible four pins port connector configured for I<sup>2</sup>C.

#### External Control Signals 5V supply:

The IC operates as an I<sup>2</sup>C slave using the standard 2-wire I<sup>2</sup>C connection scheme. As IC is power rated at 3.6V, the board integrates 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 I<sup>2</sup>C lines and power supply.

### Reference Material

Detailed information regarding operation of the IC:

- [TSYS02D Datasheet](#)

### Ordering Information

Description	Part Number
TSYS02D GROVE BOARD	DPP202G000

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