The typical accuracy is ±0.25℃ in the operating temperature range, Support I²C and I3C communication.

1 Description

The TS5110 is a high-accuracy digital temperature sensor. It is fully compliant with JEDEC JESD302-1 specification.

The TS5110 device is intended to operate up to 12.5 MHz on a 1.0V I3C Basic bus or up to 1 MHz on a 1.0 V to 1.2 V I²C bus. When the device is in I3C mode,it supports the in-band interrupt (IBI) function.

The device provides +/-0.25°C typical sensing accuracy, over the entire operating temperature range of -40°C to +125°C. The detection frequency is greater than 8 samples/s, realize real-time monitoring of ambient temperature. By setting reasonable upper and lower temperature thresholds, and generate temperature interruption events to avoid operating exceptions caused by over temperature.

The TS5110 is available in a 6-pin CSP (0.85mmx1.35mm) package.

2 Applications

DDR5 DIMM

Server

Notebook computer

Workstation

SSD

3 Features

- Compliant with JEDEC JESD302-1
- Operating temperature range：-40℃ ~+125℃
- Exceeds JEDEC temperature accuracy specifications：(typ./max.)
  ±0.25℃ / ±0.5℃ from +75℃ to +95℃
  ±0.25℃ / ±0.75℃ from -40℃ to +125℃
- Sample frequency：>8samples/s
- Low power consumption
  Working average current：2.6uA
  Standby current：1.0uA
- Operating voltage range：
  1.70V~1.98V（VDDSPD）
  0.95V~1.05V（VDDIO）
- Support 1MHz I²C and 12.5MHz I3C Bus
- Configurable temperature threshold
- Support PEC and PAR Function
- Support the In Band Interrupt
- 6-pin CSP (0.85mmx1.35mm) package

4 Typical Application Circuit

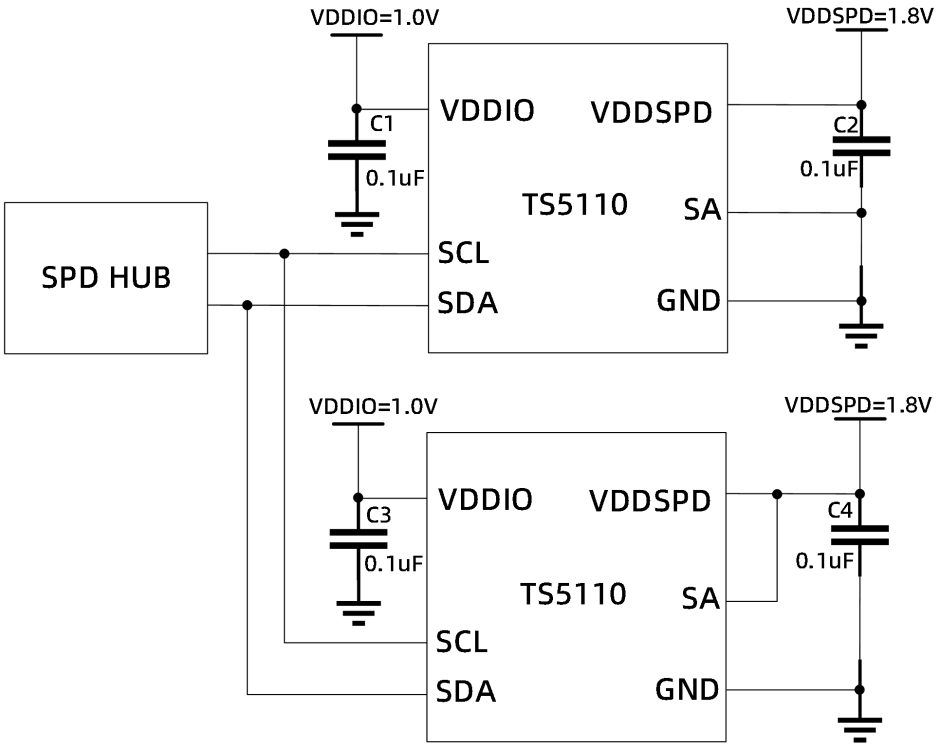

Figure 4- 1. Typical Application Circuit