# JEDEC STANDARD

# TS5111, TS5110 Serial Bus Thermal Sensor Device Standard

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**JEDEC SOLID STATE TECHNOLOGY ASSOCIATION**

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**Definition Of TS5111, TS5110 Thermal Sensing Device for Memory Module Applications**

(From JEDEC Board Ballot JCB-20-43, formulated under the cognizance of the JC-40.1 Subcommittee on Digital Logic Families and Applications.)

## 1 Scope

This standard defines the specifications of interface parameters, signaling protocols, and features for fifth generation Temperature Sensor (TS5) as used for memory module applications. These device operate on $I^2C$ and I3C two-wire serial bus interface. The designation TS5111 and TS5110 refers to the device specified by this document.

The purpose is to provide a standard for the TS5 device for uniformity, multiplicity of sources, elimination of confusion, ease of device specification, and ease of use.

Unless otherwise noted in the document, any illegal operation is not allowed and device operation is not guaranteed.

NOTE The designation TS5111 and TS5110 refers to a portion of the part number designation of a series of commercial logic devices common in the industry. This number is normally preceded by a series of manufacturer specific characters to make up a complete part designation.

## 2 Device Standard

### 2.1 Description

The TS5111 and TS5110 device incorporate thermal sensing capability which is controlled and read over two wire bus. TS5 device operate from a nominal 1.8 V nominal power supply (VDDSPD) and a 1.0 V nominal power supply (VDDIO). The TS5 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 3.3 V (Grade dependent) $I^2C$ bus. The TS5 devices are intended to interface to $I^2C$ or I3C Basic buses which have multiple devices on a shared bus, and must be uniquely addressed with fixed addressing on the same bus. All TS5 devices respond to specific pre-defined device select codes on the two-wire bus.