

# **JEDEC STANDARD**

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**SPD5118, SPD5108 Hub and Serial  
Presence Detect Device Standard**

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**JESD300-5**

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**JEDEC SOLID STATE TECHNOLOGY ASSOCIATION**



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## **SPD5118, SPD5108 Hub and Serial Presence Detect Device Standard**

(From JEDEC Board Ballot JCB-19-26, formulated under the cognizance of JC-42.4, Non-Volatile Memory Devices (Item 1852.07F).)

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### **1 Scope**

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This standard defines the specifications of interface parameters, signaling protocols, and features for DDR5 Serial Presence Detect EEPROM with Hub function (SPD5 Hub) and integrated Temperature Sensor (TS) as used for memory module applications. The Hub feature allows isolation of a local bus from a master host bus. The designations SPD5118 and SPD5108 refer to the families of devices specified by this document. The term SPD5 Hub refers generically to both devices in the family.

The purpose is to provide a standard for the SPD5 Hub family of devices for uniformity, multiplicity of sources, elimination of confusion, ease of device specification, and ease of use.

A single specification document for SPD5 Hub family device is written to establish and maintain the commonality of these devices and promote the interchangeability of devices in target applications that may require the EEPROM and TS for some uses and EE only for other uses.

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

The designations SPD5118, SPD5108 refer to the part of the part designation of a series of commercial logic parts common in the industry. This number is normally preceded by a series of manufacturer specific characters to make up a complete part designation.

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### **2 Definition Of SPD5 5118, SPD5108 Hub Device for Memory Module Applications**

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#### **2.1 Device Standard**

##### **2.1.1 Description**

The SPD5 Hub device family contains 1024 bytes of non-volatile memory arranged as 16 blocks of 64 bytes per block. Each block may optionally be write protected via software command. Write protection for each block may be overridden in an offline programmer environment while overrides are prevented in normal use. The SPD5 Hub device operate from 1.8 V nominal power supply input. The SPD5 Hub device is intended to operate up to 12.5 MHz on a 1.0V I<sup>3</sup>C Basic bus or up to 1 MHz on a 1.0 V to 3.3 V I<sup>2</sup>C bus. The SPD5 Hub devices are intended to interface to I<sup>2</sup>C/I<sup>3</sup>C Basic buses which have multiple devices on a shared bus, and must be uniquely addressed with fixed addressing on the same bus.