JEDEC STANDARD

POD135 - 1.35 V Pseudo Open Drain I/O

JESD8-21C

(Revision of JESD8-21B, MARCH 2018)

JUNE 2019

JEDEC SOLID STATE TECHNOLOGY ASSOCIATION

NOTICE

JEDEC standards and publications contain material that has been prepared, reviewed, and approved through the JEDEC Board of Directors level and subsequently reviewed and approved by the JEDEC legal counsel.

JEDEC standards and publications are designed to serve the public interest through eliminating misunderstandings between manufacturers and purchasers, facilitating interchangeability and improvement of products, and assisting the purchaser in selecting and obtaining with minimum delay the proper product for use by those other than JEDEC members, whether the standard is to be used either domestically or internationally.

JEDEC standards and publications are adopted without regard to whether or not their adoption may involve patents or articles, materials, or processes. By such action JEDEC does not assume any liability to any patent owner, nor does it assume any obligation whatever to parties adopting the JEDEC standards or publications.

The information included in JEDEC standards and publications represents a sound approach to product specification and application, principally from the solid state device manufacturer viewpoint. Within the JEDEC organization there are procedures whereby a JEDEC standard or publication may be further processed and ultimately become an ANSI standard.

No claims to be in conformance with this standard may be made unless all requirements stated in the standard are met.

Inquiries, comments, and suggestions relative to the content of this JEDEC standard or publication should be addressed to JEDEC at the address below, or refer to www.jedec.org under Standards and Documents for alternative contact information.

Published by

3103 North 10th Street

Suite 240 South

Arlington, VA 22201-2107

PRICE: Contact JEDEC

Printed in the U.S.A.

POD135 - 1.35V PSEUDO OPEN DRAIN I/O

(From JEDEC Board Ballot JCB-19-13, formulated uder the cognizance of the JC-16 Committee on Interface Technology.)

1 Scope

This standard defines the dc and ac single-ended (data) and differential (clock) operating conditions, I/O impedances, and the termination and calibration scheme for 1.35V Pseudo Open Drain I/Os. The 1.35V Pseudo Open Drain interface, also known as POD135, is primarily used to communicate with GDDR5 or GDDR5M SGRAM devices.

Multiple Classes of POD135 are expected to reside within the family of POD135 interfaces in order to accommodate various device and market applications. The various classes standardized within the context of POD135 are documented in the appendices of this document (e.g., POD135/Class A, POD135/Class B, etc).

The core of this standard defines documents the subset of values common to all Classes of POD135 and documents specification items left to definition within a specific Class as denoted by CDV which is defined as Class Dependent Value.

The values specific to each particular class of POD135 are found in the annexes. See specific Class tables for further details. (Note it does not follow that all specification values defined in a given Class are necessarily different from the matching parameter in other Class within POD135. Multiple Classes may reuse a given specification value if appropriate to the Class requirements.)

Classes were not part of the original POD135 specification. With the addition of Classes the original POD135 values remain unchanged and grouped as POD135/Class A and POD135/Class C. The updates to the specification are included in POD135/Class B and POD135/Class D. As other devices or market applications are defined, they may use one of the already defined Class(es) or define a new Class.