

JEDEC PUBLICATION

JC-42.6 Manufacturer Identification (ID) Code for Low Power Memories

JEP166D

(Revision of JEP166C, published July 2018)

APRIL 2021

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
©JEDEC Solid State Technology Association 2021
3103 North 10th Street
Suite 240 South
Arlington, VA 22201-2107

This document may be downloaded free of charge; however JEDEC retains the copyright on this material. By downloading this file the individual agrees not to charge for or resell the resulting material.

PRICE: Contact JEDEC

Printed in the U.S.A.
All rights reserved

PLEASE!

DON'T VIOLATE
THE
LAW!

This document is copyrighted by JEDEC and may not be
reproduced without permission.

For information, contact:

JEDEC Solid State Technology Association
3103 North 10th Street
Suite 240 South
Arlington, VA 22201-2107

or refer to www.jedec.org under Standards-Documents/Copyright Information.

JC-42.6 Manufacturer Identification (ID) Code for Low Power Memories

(From JEDEC Board Ballot JCB-12-64, JCB-14-48, and JCB-15-47, formulated under the cognizance of the JC-42.6 Subcommittee on Low Power Memory.)

1 Scope

This document defines the JC-42.6 Manufacturer ID. This document covers Manufacturer ID Codes for the following technologies: LPDDR (JESD209), LPDDR2 (JESD209-2), LPDDR3 (JESD209-3), LPDDR4 (JESD209-4), Wide-IO (JESD229), and Wide-IO2 (JESD229-2). The purpose of this document is to define the Manufacturer ID for these devices.

2 LPDDR (JESD209) Manufacturer ID

LPDDR Manufacturer ID			
DQ3	DQ2	DQ1	DQ0
LPDDR Manufacturer ID			
LPDDR Manufacturer ID	Read-Only	OP<3:0>	0000B : Reserved 0001B : Samsung 0010B : Infineon 0011B : Elpida 0100B : Etron 0101B : Nanya 0110B : SK hynix 0111B : Mosel 1000B : Winbond 1001B : ESMT 1010B : NVM 1011B : ISSI 1100B : JSC 1101B : AP Memory 1110B : all others 1111B : Micron

3 LPDDR2 and LPDDR3 (JESD209-2 and JESD209-3) Manufacturer ID

LPDDR2/LPDDR3 Manufacturer ID							
OP7	OP6	OP5	OP4	OP3	OP2	OP1	OP0
LPDDR2/LPDDR3 Manufacturer ID	Read-Only	OP<7:0>	0000 0000B : Reserved				
			0000 0001B : Samsung				
			0000 0010B : Qimonda				
			0000 0011B : Elpida				
			0000 0100B : Etron				
			0000 0101B : Nanya				
			0000 0110B : SK hynix				
			0000 0111B : Mosel				
			0000 1000B : Winbond				
			0000 1001B : ESMT				
			0000 1010B : Zentel				
			0000 1011B : Spansion				
			0000 1100B : SST				
			0000 1101B : ZMOS				
			0000 1110B : Intel				
			0000 1111B : Reserved				
			0001 0000B : Reserved				
			0001 0001B : Reserved				
			0001 0010B : Being Advanced Memory Corp				
			0001 0011B : Reserved				
			0001 1010B : Xi'an UniIC Semiconductors				
			Co., Ltd				
			0001 1011B : ISSI				
			0001 1100B : JSC				
			1010 1010B : Tezzaron				
			1100 0010B : Macronix				
			1111 1000B : Fidelix				
			1111 1100B : everAM				
			1111 1101B : AP Memory				
			1111 1110B : Numonyx				
			1111 1111B : Micron				
			All Others : Reserved				

4

WIDE I/O (JESD229) Manufacturer ID

DQ3	DQ2	DQ1	DQ0
Wide I/O Manufacturer ID			

Wide I/O Manufacturer ID	Read-Only	OP<3:0>	0000B : Reserved 0001B : Samsung 0010B : Being Advanced Memory Corporation 0011B : Elpida 0100B : Reserved 0101B : Nanya 0110B : SK hynix 0111B : Reserved 1000B : Winbond 1001B : ESMT 1010B : Reserved 1011B : Reserved 1100B : Reserved 1101B : Reserved 1110B : Reserved 1111B : Micron
-----------------------------	-----------	---------	--

5 LPDDR4 (JESD209-4) Manufacturer ID

LPDDR4 Manufacturer ID							
OP7	OP6	OP5	OP4	OP3	OP2	OP1	OP0
LPDDR4 Manufacturer ID	Read-Only	OP<7:0>	0000 0000B : Reserved				
			0000 0001B : Samsung				
			0000 0010B : Reserved*				
			0000 0011B : Reserved*				
			0000 0100B : Reserved*				
			0000 0101B : Nanya				
			0000 0110B : SK hynix				
			0000 0111B : Reserved*				
			0000 1000B : Winbond				
			0000 1001B : ESMT				
			0000 1010B : Reserved				
			0000 1011B : Reserved*				
			0000 1100B : Reserved*				
			0000 1101B : Reserved*				
			0000 1110B : Reserved*				
			0000 1111B : Reserved*				
			0001 0010B : Reserved*				
			0001 0011B : CXMT				
			0001 1010B : Xi'an UniIC Semiconductors Co., Ltd				
			0001 1011B : Reserved*				
			0001 1100B : JSC				
			1010 1010B : Reserved*				
			1100 0010B : Reserved*				
			1111 1000B : Fidelix				
			1111 1001B : Ultra Memory				
			1111 1100B : Reserved*				
			1111 1101B : AP Memory				
			1111 1110B : Reserved*				
			1111 1111B : Micron				
			All others : Reserved				

* Reserved codes highlighted with an asterisk (*) have vendor name assignments in other standards in this document. Use caution when assigning those codes in the future.

6

WIDE I/O2 (JESD229-2) Manufacturer ID

OP7	OP6	OP5	OP4	OP3	OP2	OP1	OP0
Wide I/O2 Manufacturer ID							
Wide I/O 2 Manufacturer ID	Read- Only	OP<7:0>	0000 0000B : Reserved				
			0000 0001B : Samsung				
			0000 0010B : Reserved*				
			0000 0011B : Reserved*				
			0000 0100B : Reserved*				
			0000 0101B : Nanya				
			0000 0110B : SK hynix				
			0000 0111B : Reserved*				
			0000 1000B : Winbond				
			0000 1001B : ESMT				
			0000 1010B : Reserved				
			0000 1011B : Reserved*				
			0000 1100B : Reserved*				
			0000 1101B : Reserved*				
			0000 1110B : Reserved*				
			0000 1111B : Reserved*				
			0001 0010B : Reserved*				
			0001 1011B : Reserved*				
			0001 1100B : Reserved*				
			1100 0010B : Reserved*				
			1111 1110B : Reserved*				
			1111 1111B : Micron				
			All others : Reserved				

* Reserved codes highlighted with an asterisk (*) have vendor name assignments in other standards in this document. Use caution when assigning those codes in the future.

Annex A (informative) Obtaining a JC42.6 Manufacturer Identification Code (ID)

JC-42.6 Manufacturer Identification Codes for Low-Power Memories are assigned, maintained, and updated by the JC-42.6 Subcommittee. The JC-42.6 chairperson is responsible for assigning the ID code. The JEDEC office will update JEP166 editorially and publish it in a timely manner.

A new Manufacturer Identification Code for Low-Power Memories can be obtained at the following web page <http://www.jedec.org/id-codes-low-power-memories>.

Annex B (informative) Differences between revisions

This annex briefly describes most of the additions/changes made to entries that appear in this publication, JEP166D, compared to its predecessors. .

B.1 Differences between JEP166D and JEP166C (July 2018)

Clause	Description of change
5	Added “CXMT” to 0001 0011B.

B.2 Differences between JEP166C and JEP166B (February 2016)

Clause	Description of change
2, 3 and 5	“EMLSI” changed to “JSC” (LPDDR4)
3, 5	Added: “0001 1010B : Xi'an UnilC Semiconductors Co., Ltd” (LPDDR4 and LPDDR2/3)
5	Added: “1111 1001B : Ultra Memory” (LPDDR4)

B.3 Differences between JEP166B and JEP166A (December 2014)

Clause	Description of change
Annex A	modified with new information
2, 3, 5	new ID codes assigned

B.4 Differences between JEP166A and JEP166 (March 2014)

Clause	Description of change
1	In Scope: added reference to JESD209-4, and JESD229-2
5	Added
6	Added



Standard Improvement Form

JEDEC **JEP166D**

The purpose of this form is to provide the Technical Committees of JEDEC with input from the industry regarding usage of the subject standard. Individuals or companies are invited to submit comments to JEDEC. All comments will be collected and dispersed to the appropriate committee(s).

If you can provide input, please complete this form and return to:

JEDEC
Attn: Publications Department
3103 North 10th Street
Suite 240 South
Arlington, VA 22201-2107

Fax: 703.907.7583

1. I recommend changes to the following:

☐ Requirement, clause number _____

☐ Test method number _____ Clause number _____

The referenced clause number has proven to be:

☐ Unclear ☐ Too Rigid ☐ In Error

☐ Other _____

2. Recommendations for correction:

3. Other suggestions for document improvement:

Submitted by

Name: _____

Phone: _____

Company: _____

E-mail: _____

Address: _____

City/State/Zip: _____

Date: _____

JEDEC®

The JEDEC logo is centered on a light yellow rectangular background. The word "JEDEC" is written in a bold, italicized, dark brown sans-serif font. A registered trademark symbol (®) is located at the end of the word. Below the text, a thick red horizontal line with a slight upward curve on the right side serves as a graphic underline.