

PRODUCT / PROCESS CHANGE NOTIFICATION

1. PCN basic data

1.1 Company		STMicroelectronics International N.V
1.2 PCN No.		MDG/18/11130
1.3 Title of PCN		Extension of AMKOR XDLF SO8N assembly & test line usage to CMOSF8H Industrial Range EEPROM (M24256, M24512, M24M01, M24M02, M95256, M95512, M95M01, M95M02)
1.4 Product Category		EEPROM in SO8N from CMOS F8H process: M24256, M24512, M24M01, M24M02, M95256, M95512, M95M01, M95M02
1.5 Issue date		2018-10-09

2. PCN Team

2.1 Contact supplier	
2.1.1 Name	ROBERTSON HEATHER
2.1.2 Phone	+1 8475853058
2.1.3 Email	heather.robertson@st.com
2.2 Change responsibility	
2.2.1 Product Manager	Benoit RODRIGUES
2.1.2 Marketing Manager	Hubert LEDUC
2.1.3 Quality Manager	Rita PAVANO

3. Change

3.1 Category	3.2 Type of change	3.3 Manufacturing Location
Machines	New equipment changing process technique or using different technology (eg first equipment of a new brand)	AMKOR (Philippines)

4. Description of change

	Old	New
4.1 Description	The EEPROM products (industrial range) processed with CMOSF8H process technology (M24256, M24512, M24M01, M24M02, M95256, M95512, M95M01, M95M02) at ST Rousset (France) and assembled/tested in SO8N package at ST Shenzhen (China) and at Amkor (Philippines) on HDLF line.	will be also assembled/tested on AMKOR extra high density lead frame (XDLF) assembly line.
4.2 Anticipated Impact on form,fit, function, quality, reliability or processability?	No change	

5. Reason / motivation for change

5.1 Motivation	Capacity increase
5.2 Customer Benefit	CAPACITY INCREASE

6. Marking of parts / traceability of change

6.1 Description	Finished Good Marking on Box Label
-----------------	------------------------------------

7. Timing / schedule

7.1 Date of qualification results	2018-11-16
7.2 Intended start of delivery	2019-01-01
7.3 Qualification sample available?	Upon Request

8. Qualification / Validation

8.1 Description	
-----------------	--

8.2 Qualification report and qualification results	In progress	Issue Date	
-----------------------------------------------------------	-------------	-------------------	--

9. Attachments (additional documentations)

11130 Public product.pdf
11130 XDLF_P2v3.pdf

10. Affected parts

10.1 Current	10.2 New (if applicable)
10.1.1 Customer Part No	10.1.2 Supplier Part No
	M24256-BRMN6TP
	M24256-BWMN6TP
	M24256-DFMN6TP
	M24512-DFMN6TP
	M24512-RMN6TP
	M24512-WMN6TP
	M24M01-DFMN6TP
	M24M01-RMN6TP
	M24M02-DRMN6TP
	M95256-DFMN6TP
	M95256-RMN6TP
	M95256-WMN6TP
	M95512-DFMN6TP
	M95512-RMN6TP
	M95512-WMN6TP
	M95M01-DFMN6TP
	M95M01-RMN6TP
	M95M02-DRMN6TP

IMPORTANT NOTICE – PLEASE READ CAREFULLY

Subject to any contractual arrangement in force with you or to any industry standard implemented by us, STMicroelectronics NV and its subsidiaries ("ST") reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST's terms and conditions of sale in place at the time of order acknowledgement.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of Purchasers' products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2018 STMicroelectronics – All rights reserved



Public Products List

Public Products are off the shelf products. They are not dedicated to specific customers, they are available through ST Sales team, or Distributors, and visible on ST.com

PCN Title : Extension of AMKOR XDLF SO8N assembly & test line usage

to CMOSF8H Industrial Range EEPROM (M24256, M24512, M24M01, M24M02, M95256, M95512, M95M01, M95M02)

PCN Reference : MDG/18/11130

Subject : Public Products List

Dear Customer,

Please find below the Standard Public Products List impacted by the change.

M24256-DFMN6TP	M24512-WMN6TP	M24256-BRMN6TP
M95256-WMN6TP	M95M02-DRMN6TP	M95256-DFMN6TP
M24M01-RMN6TP	M24512-DFMN6TP	M24M01-DFMN6TP
M24512-RMN6TP	M95512-DFMN6TP	M95256-RMN6TP
M95512-WMN6TP	M24256-BWMN6TP	M95M01-DFMN6TP
M24M02-DRMN6TP	M95512-RMN6TP	M95M01-RMN6TP



IMPORTANT NOTICE – PLEASE READ CAREFULLY

Subject to any contractual arrangement in force with you or to any industry standard implemented by us, STMicroelectronics NV and its subsidiaries ("ST") reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST's terms and conditions of sale in place at the time of order acknowledgement.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of Purchasers' products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2018 STMicroelectronics – All rights reserved



PRODUCT / PROCESS CHANGE NOTIFICATION

Extension of AMKOR XDLF SO8N assembly & test line usage to CMOSF8H Industrial Range EEPROM (M24256, M24512, M24M01, M24M02, M95256, M95512, M95M01, M95M02)

What is the change?

The EEPROM products (industrial range) processed with CMOSF8H process technology (M24256, M24512, M24M01, M24M02, M95256, M95512, M95M01, M95M02) at ST Rousset (France) and assembled/tested in SO8N package at ST Shenzhen (China) and at Amkor (Philippines) on HDLF line will be also assembled/tested on AMKOR *extra high density lead frame* (XDLF) assembly line.

This XDLF line is already qualified and running in full production for the manufacturing of CMOSF8H+ EEPROM (PCN MMS-MMY/14/8411, associated Qualification Report QRMMY1304).

Why?

The strategy of STMicroelectronics Memory Division is to support our customers on a long-term basis. In line with this commitment, the extension of the AMKOR XDLF SO8N assembly line usage for the EEPROM products (industrial range) in CMOSF8H will increase the production capacity throughput and consequently improve the service to our customers.

When?

The assembly of the EEPROM products in SO8N on the XDLF line will ramp up from Week 48/2018 and shipments can start from Week 01/2019 onward

How will the change be qualified?

The assembly and the functional test of M24256, M24512, M24M01, M24M02, M95256, M95512, M95M01, M95M02 on the XDLF line at AMKOR will be qualified following the standard ST Microelectronics Corporate Procedures for Quality and Reliability.

What is the impact of the change?

- **Form:** no change
- **Fit:** no change
- **Function:** no change

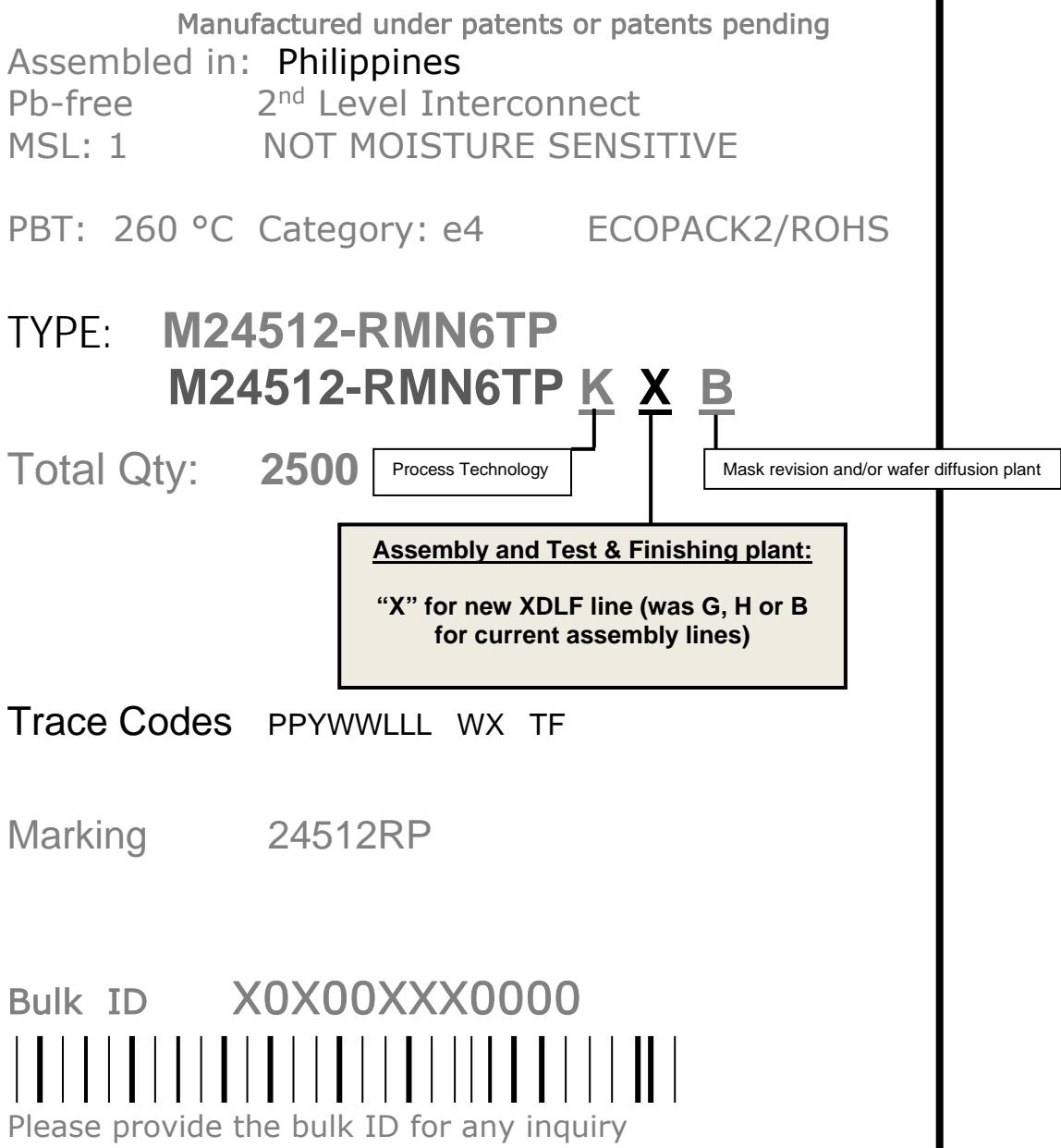
- BOX LABEL MARKING

How can the change be seen?

The change is visible on the **BOX LABEL MARKING**, inside the **Finished Good Part Number**: the **Assembly and Test & Finishing** plant identifier is "X" for the **SO8N XDLF** line.

→ Example for M24512-RMN6TP

STMicroelectronics



Appendix A- Product Change Information

Product family / Commercial products:	EEPROM in SO8N from CMOS F8H process: M24256, M24512, M24M01, M24M02, M95256, M95512, M95M01, M95M02
Customer(s)	All
Type of change	Package assembly process change
Reason for the change	Capacity increase
Description of the change	Extension of XDLF assembly line (AMKOR) usage
Forecast date of the change	Week 40 / 2018
Forecast date of <u>Qualification samples availability</u> for customer(s)	<ul style="list-style-type: none"> -> Week 46/2018 for M24256, M24512, M24M01 & M95512 -> Week 51/2018 for M95256 & M95M01 -> March 2019 for M24M02 & M95M02
Forecast date for the internal STMicroelectronics change, Qualification Report availability	<ul style="list-style-type: none"> -> Week 46/2018 for M24256, M24512, M24M01 & M95512 -> Week 51/2018 for M95256 & M95M01 -> March 2019 for M24M02 & M95M02
Marking to identify the changed product	Finished Good Marking on Box Label
Description of the qualification program:	Standard ST Microelectronics Corporate Procedures for Quality and Reliability
Product Line(s) and/or Part Number(s)	See APPENDIX B
Manufacturing location	AMKOR (Philippines)
Estimated date of first shipment	Week 01 / 2019

Appendix B- Concerned Commercial Part Numbers:

Commercial Product	Qualification report	Qualification samples
M24256-BRMN6TP	Week 46 - 2018	Week 46 - 2018
M24256-BWMN6TP	Week 46 - 2018	Week 46 - 2018
M24256-DFMN6TP	Week 46 - 2018	Week 46 - 2018
M24512-DFMN6TP	Week 46 - 2018	Week 46 - 2018
M24512-RMN6TP	Week 46 - 2018	Week 46 - 2018
M24512-WMN6TP	Week 46 - 2018	Week 46 - 2018
M24M01-DFMN6TP	Week 46 - 2018	Week 46 - 2018
M24M01-RMN6TP	Week 46 - 2018	Week 46 - 2018
M24M02-DRMN6TP	March 2019	March 2019
M95256-DFMN6TP	Week 51 - 2018	Week 51 - 2018
M95256-RMN6TP	Week 51 - 2018	Week 51 - 2018
M95256-WMN6TP	Week 51 - 2018	Week 51 - 2018
M95512-DFMN6TP	On request	Week 46 - 2018
M95512-RMN6TP	Week 46 - 2018	Week 46 - 2018
M95512-WMN6TP	Week 46 - 2018	Week 46 - 2018
M95M01-DFMN6TP	On request	Week 51 - 2018
M95M01-RMN6TP	Week 51 - 2018	Week 51 - 2018
M95M02-DRMN6TP	March 2019	March 2019

Document Revision History

Date	Rev.	Description of the Revision
Sept. 25, 2018	1.00	First draft creation – Christian POLI

Source Documents & Reference Documents

Source document Title	Rev.:	Date: