



## PRODUCT / PROCESS CHANGE NOTIFICATION

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### SO8N capacity increase at ST Shenzhen: SHD assembly line introduction for RF EEPROM products

#### What is the change?

STMicroelectronics MMY Division is pleased to announce the capacity increase of the SO8N at ST Shenzhen (China) assembly & test plant. In this purpose, the SHD (**S**uper **H**igh **D**ensity) assembly line, already qualified for other EEPROM product families, will be used for RF EEPROM products.

#### Why?

The strategy of STMicroelectronics Memory Division is to support our customers on a long-term basis. In line with this commitment, the qualification of the SO8N SHD assembly line in ST Shenzhen for RF EEPROM products will increase the production capacity and consequently improve the service to our customers.

#### When?

The assembly of the ST25 Dynamic tags (ST25DV / M24LR / M24SR) range 6 products in SO8N on the SHD line will ramp up from May 2018. Range 8 products will ramp up from September 2018.

#### How will the change be qualified?

The SO8N SHD assembly line at ST Shenzhen will be qualified for RF EEPROM products following the standard STMicroelectronics Corporate Procedures for Quality and Reliability.

#### What is the impact of the change?

- **Form:** Bottom side showing ejector pin mark on products assembled on SHD line
- **Fit:** no change
- **Function:** no change

## How can the change be seen?

- **BOX LABEL MARKING**

The change is visible on the **BOX LABEL MARKING**, inside the **Finished Good Part Number**:

→ Example for M24LR64E-RMN6T/2

STMicroelectronics

Manufactured under patents or patents pending

Country Of Origin: China

Pb-free            2<sup>nd</sup> Level Interconnect

MSL: 1            NOT MOISTURE SENSITIVE

PBT: 260 °C    Category: e4            ECOPACK2/ROHS

TYPE: **M24LR64E-RMN6T/2**  
**M24LR64EMN6T2UHB**


Total Qty:    **2500**

**Mask revision:**  
"H" for SHD assembly  
"G" for current version

Trace Codes    PPYWLLL    WX    TF

Marking            24LFERB

Bulk ID            X0X00XXX0000



Please provide the bulk ID for any inquiry

## Appendix A- Product Change Information

|  |   |
|--|---|
| <b>Product family / Commercial products:</b>   | ST25D products family SO8 package including ST25DVxxx, M24LRxxx and M24SRxxx  |
| <b>Customer(s):</b>  | All   |
| <b>Type of change:</b>   | Package assembly process  |
| <b>Reason for the change:</b>  | Capacity increase   |
| <b>Description of the change:</b>  | SHD assembly line for SO8N at ST Shenzhen   |
| <b>Forecast date of the change:<br/>(Notification to customer)</b>   | Week 13 / 2018  |
| <b>Forecast date of<br/><u>Qualification samples</u> availability<br/>for customer(s):</b>                         | See Appendix B  |
| <b>Forecast date for the internal<br/>STMicroelectronics change,<br/><u>Qualification Report</u> availability:</b> | Qualification report will be available from May 2018 (Range 6) and September 2018 (Range 8)<br><b>Qualification plan is available</b> and included in this document in Appendix C |
| <b>Marking to identify the changed product:</b>  | Date code (date to be communicated upon ST qualification)   |
| <b>Description of the qualification program:</b>   | Standard ST Microelectronics Corporate Procedures for Quality and Reliability   |
| <b>Product Line(s) and/or Part Number(s):</b>  | See Appendix B  |
| <b>Manufacturing location</b>  | ST Shenzhen (China)   |

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**Appendix B: Concerned Commercial Part Numbers:**

| <b>Commercial Part Numbers</b> | <b>Package</b> | <b>Samples Availability</b> | <b>Estimated date of first shipment</b> |
|--------------------------------|----------------|-----------------------------|---|
| M24SR02-YMN6T/2                | SO8N           | May 2018                    | May 2018                                |
| M24SR04-YMN6T/2                | SO8N           | May 2018                    | May 2018                                |
| M24SR16-YMN6T/2                | SO8N           | May 2018                    | May 2018                                |
| M24SR64-YMN6T/2                | SO8N           | May 2018                    | May 2018                                |
| M24SR64-YMN8T/2                | SO8N           | September 2018              | September 2018                          |
| M24LR04D-WMN8T/2               | SO8N           | September 2018              | September 2018                          |
| M24LR04E-RMN6T/2               | SO8N           | May 2018                    | May 2018                                |
| M24LR16D-WMN8T/2               | SO8N           | September 2018              | September 2018                          |
| M24LR16E-RMN6T/2               | SO8N           | May 2018                    | May 2018                                |
| M24LR64E-RMN6T/2               | SO8N           | May 2018                    | May 2018                                |
| ST25DV04K-IER6S3               | SO8N           | May 2018                    | May 2018                                |
| ST25DV04K-IER8S3               | SO8N           | September 2018              | September 2018                          |
| ST25DV16K-IER6S3               | SO8N           | May 2018                    | May 2018                                |
| ST25DV16K-IER8S3               | SO8N           | September 2018              | September 2018                          |
| ST25DV64K-IER6S3               | SO8N           | May 2018                    | May 2018                                |
| ST25DV64K-IER8S3               | SO8N           | September 2018              | September 2018                          |

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**Appendix C: Qualification Plan:**

| Test     | Test short description                               |  |                   |                       |            |                     |
|----------|--|--|-------------------|-----------------------|------------|---------------------|
|          | Method   | Conditions                                   | Sample Size / lot | No. of lots           | Duration   | Acceptance criteria |
| PC       | <b>Preconditioning: moisture sensitivity level 1</b> |  |                   |                       |            |                     |
|          | JESD22-A113 / J-STD-020E                             | MSL1, peak temperature at 260 °C, 3 IReflow. | 333               | 3 lots by product (2) | N/A        | 0 fail / 333        |
| THB (1)  | <b>Temperature humidity bias</b>                     |  |                   |                       |            |                     |
|          | JESD22-A101  | 85 °C, 85% RH, bias Vcc max                  | 77                | 3 lots by product (2) | 1000 hrs   | 0 fail / 77         |
| TC (1)   | <b>Temperature cycling</b>                           |  |                   |                       |            |                     |
|          | JESD22-A104  | -65 °C / +175 °C                             | 77                | 3 lots by product (2) | 500 cy     | 0 fail / 77         |
| TMSK (1) | <b>Thermal shocks</b>                                |  |                   |                       |            |                     |
|          | JESD22-A106  | -55°C / +125 °C                              | 25                | 3 lots by product (2) | 200 shocks | 0 fail / 25         |
| AC (1)   | <b>Autoclave (pressure pot)</b>                      |  |                   |                       |            |                     |
|          | JESD22-A102  | 121 °C, 100% RH at 2 ATM                     | 77                | 3 lots by product (2) | 96 hrs     | 0 fail / 77         |
| HTSL (1) | <b>High temperature storage life</b>                 |  |                   |                       |            |                     |
|          | JESD22-A103  | High Temperature Storage at 150 °C           | 77                | 3 lots by product (2) | 1000 hrs   | 0 fail / 77         |
| ESD CDM  | <b>Electrostatic discharge (machine model)</b>       |  |                   |                       |            |                     |
|          | ANSI/ESDA/ JEDEC JS-002-2014                         | Field induced charging method                | 18                | 1 lot by product (2)  | N/A        | 0 fail / 18         |



Note (1) : THB-, TC-, TMSK-, AC-, HTSL- dedicated parts are first subject to preconditioning flow.  
 Note (2) : Products used for qualification are : M24SR64, M24LR64, ST25DV64

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| <b>Document Revision History</b> |      |                             |
|----------------------------------|------|-----------------------------|
| Date                             | Rev. | Description of the Revision |
| February 20 , 2018               | 1.00 | First draft creation        |
|                                  |      |                             |
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| <b>Source Documents &amp; Reference Documents</b> |       |       |
|---|-------|-------|
| Source document Title                             | Rev.: | Date: |
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