PRODUCT / PROCESS CHANGE NOTIFICATION

1. PCN basic data	
1.1 Company	STMicroelectronics International N.V
1.2 PCN No.	EMBEDDED PROCESSING/26/16143
1.3 Title of PCN	TSHT (China) additional back-end qualification for 1Kb, 2Kb, 4Kb and 16Kb I²C EEPROM in SO8N
1.4 Product Category	M24C01, M24C02, M24C04 and M24C16 EEPROM products in SO8N
1.5 Issue date	2026-02-04

2. PCN Team	
2.1 Contact supplier	
2.1.1 Name	
2.1.2 Phone	
2.1.3 Email	
2.2 Change responsibility	
2.2.1 Product Manager	
2.1.2 Marketing Manager	
2.1.3 Quality Manager	

3. Change		
3.1 Category	3.2 Type of change	3.3 Manufacturing Location
Transfer	Line transfer for a full process or process brick (process step, control plan, recipes) from one site to another site: Finishing (SOP 2617)	N/A

4. Description of change		
	Old	New
4.1 Description	The M24C01, M24C02, M24C04 and M24C16 currently assembled in SO8N and tested at ST Shenzhen (China)...	...will be also assembled & tested at TSHT (China) subcontractor.
4.2 Anticipated Impact on form,fit, function, quality, reliability or processability?	Form: Marking change - Fit: no change - Function: no change	

5. Reason / motivation for change	
5.1 Motivation	The strategy of the STMicroelectronics Memory division is to support our customers on products and service quality on a long-term basis. In line with this commitment, the qualification of the TSHT back-end assembly & test site as a second source will allow us to increase capacity and reinforce long term competitiveness.
5.2 Customer Benefit	DOUBLE SOURCING

6. Marking of parts / traceability of change	
6.1 Description	Assembly plant identifier “9” on SO8N package top marking

7. Timing / schedule	
7.1 Date of qualification results	2026-02-03
7.2 Intended start of delivery	2026-05-08
7.3 Qualification sample available?	Upon Request

8. Qualification / Validation			
8.1 Description	16143 RRCS2505 Reliability report F8H SO8N TSHT CuPd.pdf		
8.2 Qualification report and qualification results	Available (see attachment)	Issue Date	2026-02-04

9. Attachments (additional documentations)
16143 Public product.pdf 16143 PCN TSHT ALL CUSTOMERS LOW DENSITIES I2C F8H+ .pdf 16143 RRCS2505 Reliability report F8H SO8N TSHT CuPd.pdf

10. Affected parts		
10. 1 Current		10.2 New (if applicable)
10.1.1 Customer Part No	10.1.2 Supplier Part No	10.1.2 Supplier Part No
	M24C02-WMN6TP	

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Public Products List

Publict 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 : TSHT (China) additional back-end qualification for 1Kb, 2Kb, 4Kb and 16Kb I²C EEPROM in SO8N

PCN Reference : EMBEDDED PROCESSING/26/16143

Subject : Public Products List

Dear Customer,

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

M24C02-WMN6TP	M24C04-RMN6TP	M24C02-FMN6TP
M24C02-RMN6TP	M24C04-WMN6TP	M24C01-RMN6TP
M24C16-FMN6TP	M24C16-WMN6TP	M24C16-RMN6TP
M24C04-FMN6TP	M24C01-WMN6TP	

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RRCS2505 - Reliability Report

New Back End site qualification

F8H SO8N TSHT CuPd

General Information	
Commercial Product	M24C01-RMN6TP M24C01-WMN6TP M24C02-FMN6TP M24C02-RMN6TP M24C02-WMN6TP M24C04-FMN6TP M24C04-RMN6TP M24C04-WMN6TP M24C16-FMN6TP M24C16-RMN6TP M24C16-WMN6TP
Product Line	3FE41T, 24161T
Package	SO 08 .15 JEDEC
Silicon Technology	CMOSF8H

Traceability	
Diffusion Plant	Rousset 8
Assembly Plant	TSHT- TianShui HuaTian-China

Reliability Assessment	
Pass	x
Fail	

Release	Date	Author	Function
1.0	Sept 18th 2025	Michel DERIE	CS Back-End quality Manager

DOCUMENT ACTORS:

Name	Function	Location	Date
Michel DERIE	CS Back-End quality Manager	Rousset	Sept 18th 2025
Nicolas DUMONT	CS Product Qualification and Reliability Manager	Rousset	Sept 18th 2025

This report is a summary of the reliability trials performed in good faith by STMicroelectronics. This report does not imply for STMicroelectronics expressly or implicitly any contractual obligations other than as set forth in STMicroelectronics General Terms and Conditions of Sale.

RELIABILITY EVALUATION OVERVIEW

- **OBJECTIVE**

The aim of this reliability is to qualify the new TSHT assembly site for F8H technology EEPROM ICs for SO8N package.

Scope:

- F8H technology serial EEPROM products with memory size 1 to 16k
- Package SO8N
- Wire type CuPd

- **CONCLUSION**

All reliability tests have been completed with positive results. Neither functional nor parametric rejects were detected at final electrical testing.
Package oriented tests have not put in evidence any criticality.

Based on the overall results obtained, F8H technology EEPROM products with memory size 1 to 16k, assembled in SO8N package using TSHT plant have positively passed reliability evaluation.

TABLE OF CONTENT

1. RELIABILITY STRATEGY

Reliability evaluation is based on the standard STMicroelectronics corporate procedures for quality and reliability, namely RELIABILITY TESTS AND CRITERIA FOR QUALIFICATION, and in compliance with the JESD-47K international standard.

The following qualification strategy has been defined:

• Package reliability evaluation on 3 assembly lots of F8H technology.

Reliability trials performed as part of this reliability evaluation are listed in test results summary in section 3, including specifications references

2. PRODUCT OR TEST VEHICLE CHARACTERISTICS

2.1. Generalities

The 3 lots used for qualification are 4k product.

2.2. Traceability

2.2.1.Wafer Fab Information

Main die - S3FE41TA

Wafer Fab Information	
FAB1	
Wafer fab name / location	ST SAS Rousset / Rousset 8
Wafer diameter (inches)	8
Wafer thickness (µm)	280
Silicon process technology	CMOSF8H4
Die finishing front side (passivation) materials	USG NitUV (HFP USG UV Nitride)
Die finishing back side Materials	RAW SILICON - BACK GRINDING
Stepping die size (µm)	582, 604
Sawing street width (X,Y) (µm)	60,80

2.2.2.Assembly information

-Assembly Information	
Package 1:SO 08 .15 JEDEC	
Assembly plant name / location	TSHT / SC-Tian Shui Hua Tian-China
Die thickness after back-grinding (µm)	280µ
Die sawing method	Mechanical
Lead frame/Substrate material/supplier/reference	SO8 70x70 (HTBJ)
Lead frame finishing (material/thickness)	Ag Spot
Die attach material/type(glue/film)/supplier	EN-4900GC
Wire bonding material/diameter/supplier	0.8mil PdCu
Molding compound material/supplier/reference	CEL-9220HF10TS
Package Moisture Sensitivity Level (JEDEC J-STD020D)	MSL1

3. TEST RESULTS SUMMARY

3.1. Reliability testing information

Reliability Testing Information	
Reliability laboratory name / location	Grenoble Rel Lab, Rousset MDG Rel Lab , TSHT reliability lab

Note: ST is ISO 9001 certified. This induces certification of all internal and subcontractor labs. ST certification document can be downloaded under the following link: http://www.st.com/content/st_com/en/support/quality-and-reliability/certifications.html

3.2. Lot information

SO8N

Lot #	Diffusion Lot	Assy Lot	Raw Line	Package
Lot 1	G450705	G9522168	TSO7*2404FTA	SO 08 .15 JEDEC
Lot 2	G450553	G9522159	TSO7*2404FTA	SO 08 .15 JEDEC
Lot 3	G450554	G9522156	TSO7*2404FTA	SO 08 .15 JEDEC

3.3. Test plan and results summary

ACCELERATED ENVIRONMENT STRESS TESTS

Test code	Stress method	Stress Conditions	Lots Qty	S.S.	Total	Results/Lot Fail/S.S.	Comments:(N/A =Not Applicable)
PC	J-STD-020	24h bake@125°C, T&H 168h 85°C/85%RH 3x Reflow simulation Peak Reflow Temp= 260°C ☒ Testing at Room T°	3	231	693	Lot 1 : 0/231 Lot 2 : 0/231 Lot 3 : 0/231	
HTSL	JESD22-A103	Ta= 150°C Duration= 1000h ☒ Testing at Room T°	3	77	231	Lot 1 : 0/77 Lot 2 : 0/77 Lot 3 : 0/77	
TC	JESD22-A104	Ta= -65 / +150°C, 2cy/h Duration = 500cy ☒ After PC ☒ Testing at Room T°	3	77	231	Lot 1 : 0/77 Lot 2 : 0/77 Lot 3 : 0/77	
HAST	JESD22-A118	Ta=130°C/85%RH + bias 5.6V Duration= 96h ☒ After PC ☒ Testing at Room T°	3	77	231	Lot 1 : 0/77 Lot 2 : 0/77 Lot 3 : 0/77	
UHAST	JESD22-A118	Ta=130°C/85%R Duration= 96h ☒ After PC ☒ Testing at Room T°	3	77	231	Lot 1 : 0/77 Lot 2 : 0/77 Lot 3 : 0/77	

Electrical Verification Tests

Test code	Stress method	Stress Conditions	Lots Qty	S.S.	Total	Results/Lot Fail/S.S.	Comments:(N/A =Not Applicable)
CDM	JS-002	3u/ voltage: 250, to 1500V by step of 250V total 18u ☒Testing at Room T°	3	18	54	Lot 1 : 0/18 Lot 2 : 0/18 Lot 3 : 0/18	Gating= 500V

Package Assembly Integrity Tests

Test code	Stress method	Stress Conditions	Lots Qty	S.S.	Total	Results/Lot Fail/S.S.	Comments:(N/A =Not Applicable)
PD	Internal	Dimensions measurement vs POA	3	10	30	PASS	
SD	J-STD-002D	2 conditions ☒ Dry (150℃,8H) SnAgCu ☒ Steam (85 ℃/85%RH,8H) SnAgCu	3	20	60	PASS	
WBP	MIL-STD883 Method 2011	EQUIPMENT: Dage BT4000 SAMPLING: 30 wires / 6 units (5 wires /unit) ☒ Testing at T0 after package opening	3	30	90	PASS	
WBS	JESD22-B116	EQUIPMENT: Dage BT4000 SAMPLING: 30 wires / 5 units (6 wires /unit) ☒ Testing at T0 after package opening	3	30	90	PASS	

Note: Test method revision reference is the one active at the date of reliability trial execution.

4. APPLICABLE AND REFERENCE DOCUMENTS

Reference	Short description
JESD47-L	Stress-Test-Driven Qualification of Integrated Circuits

5. GLOSSARY

CDM	Electrostatic Discharge - Charged device model
HAST	Biased HAST (Highly Accelerated Stress Test)
HBM	Electrostatic Discharge - Human Body Model
HTSL	High Temperature Storage Life
PC	Preconditioning
TC	Temperature Cycling
THB	Temperature Humidity Bias
UHAST	Unbiased HAST (Highly Accelerated Stress Test)
WBS	Wire Bond Shear
WBP	Wire Bond Pull
PD	Physical Dimensions
SD	Solderability

6. REVISION HISTORY

Release	Date	Description
1.0	Sept 19th 2025	Initial release

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PRODUCT / PROCESS CHANGE NOTIFICATION

TSHT (China) additional back-end qualification for 1Kb, 2Kb, 4Kb and 16Kb I²C EEPROM in SO8N

What is the change?
The **M24C01, M24C02, M24C04 and M24C16** currently assembled in **SO8N** and tested at ST Shenzhen (China) will be also **assembled & tested** at **TSHT (China)** subcontractor.

This PCN is a first step for the introduction of TSHT as a second source for assembly & test site. ST is preparing a second PCN for densities 8Kb, 32Kb, 64Kb and 128Kb to be issued middle of 2026 for a fully commitment to the market upside in 2H 2026.

Why?
The strategy of the STMicroelectronics Memory division is to support our customers on products and service quality on a long-term basis. In line with this commitment, the qualification of the TSHT back-end assembly & test site as a second source will allow us to increase capacity and reinforce long term competitiveness.

When?
Qualified samples are available for most products (See appendix B).
Shipment will start from Week 19 / 2026 or earlier on customer agreement.

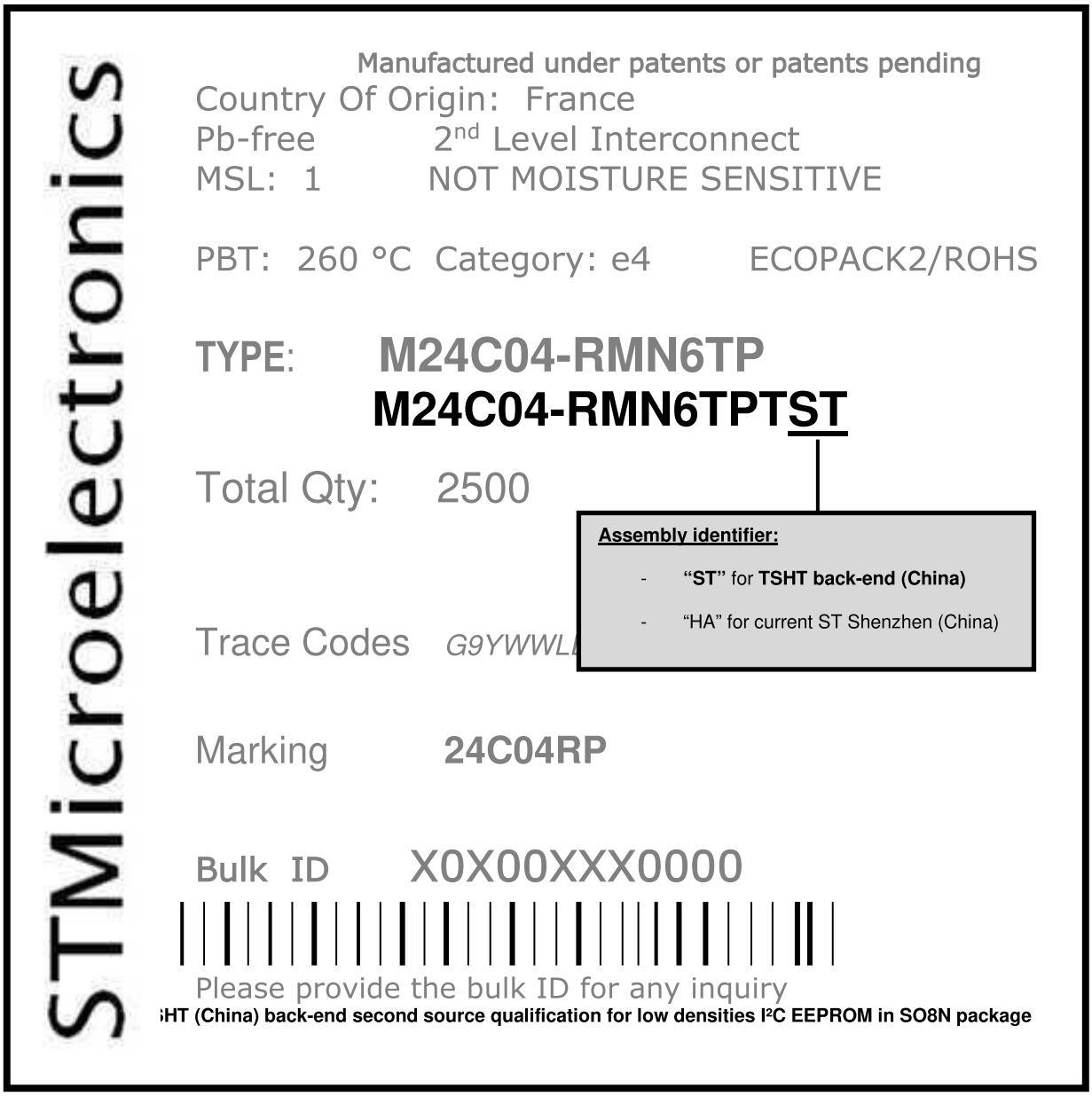
How will the change be qualified?
This change has been qualified using the standard STMicroelectronics Corporate Procedures for Quality and Reliability.
The Reliability Evaluation Report **RRCS2505** is included inside this document set.

What is the impact of the change?
- **Form:** Marking change
- **Fit:** no change
- **Function:** no change

- ***BOX LABEL MARKING***

On the BOX LABEL, the difference is visible inside the **Finished Good Part Number** where the "**Assembly plant**" identifier is "**ST**" for products assembled & tested at the **additional TSHT (China) subcontractor**, this identifier being "HA" for current ST Shenzhen (China).

Example for SO8N: M24C04-RMN6TP



How can the change be seen?

- DEVICE MARKING

The difference is visible inside the trace code (*PYWWT*) where the first digit "*P*" for the **assembly plant** identifier is "**9**" for the **additional TSHT (China) assembly & test subcontractor**, this identifier being "K" for the current ST Shenzhen (China).

	TSHT (China)	ST Shenzhen (China)
SO8N Example: *M24C04-RMN6TP*	**24C04RP** **9** *YWWT*	**24C04RP** **K** *YWWT*

P = Assembly plant
Y = Last digit of the Year of Assembly
WW = Assembly Week
T = Process technology code/ Wafer Fab ID

Appendix A- Product Change Information

Product family / Commercial products:	M24C01, M24C02, M24C04 and M24C16 EEPROM products in SO8N
Customer(s):	All
Type of change:	Additional back-end site
Reason for the change:	Additional sourcing
Description of the change:	TSHT (China) subcontractor additional back-end to current ST Shenzhen (China).
Forecast date of the change: (Notification to customer)	Week 06 / 2026
Forecast date of Qualification samples availability for customer(s):	As per defined in Appendix B
Qualification Report availability:	The Reliability Evaluation Report **RRCS2505** is included inside this document set.
Marking to identify the changed product:	*Assembly plant identifier "**9**" on SO8N package.*
Description of the qualification program:	Standard ST Microelectronics Corporate Procedures for Quality and Reliability
Estimated date of first shipment:	Week 19 / 2026 or earlier on customer agreement

Appendix B: concerned Commercial Part Numbers:

Commercial product	Qualified samples availability
M24C01-RMN6TP	Available
M24C01-WMN6TP	Available
M24C02-FMN6TP	Available
M24C02-RMN6TP	Available
M24C02-WMN6TP	Available
M24C04-FMN6TP	Week 14 / 2026
M24C04-RMN6TP	Week 14 / 2026
M24C04-WMN6TP	Week 14 / 2026
M24C16-FMN6TP	Available
M24C16-RMN6TP	Available
M24C16-WMN6TP	Available

Appendix C: BOM comparison:

	TSHT	ST Shenzhen
Leadframe	Tin post plating	PPF 4-layer NiPdAgAu
Molding compound	HITACHI CEL 9220	SUMITOMO G700K
Glue die-attach	HITACHI EN 4900	ABLESTIK 8611
Wire	CuPd	Cu

Document Revision History		
Date	Rev.	Description of the Revision
Feb. 03, 2026	1.00	Christian POLI - First draft creation

Source Documents & Reference Documents		
Source document Title	**Rev.:**	**Date:**