



PRODUCT/PROCESS CHANGE NOTIFICATION

PCN MMS-SNV/07/2578
Notification Date 05/29/2007

**ST Shenzhen new and additional assembly and test plant
for the 2Kbit serial I2C bus EEPROM family for DIMM
Serial Presence Detect in TSSOP8 package
SNV - MEMORY**

Table 1. Change Identification

Product Identification (Product Family/Commercial Product)	2Kbit serial I ² C bus EEPROM family for DIMM Serial
Type of change	Package assembly location change
Reason for change	Additional source and production capacity increase
Description of the change	TSSOP8 new and additional assembly and test plant
Product Line(s) and/or Part Number(s)	See attached
Description of the Qualification Plan	See attached
Change Product Identification	Assembly country and plant ID
Manufacturing Location(s)	

Table 2. Change Implementation Schedule

Forecasted implementation date for change	01-Aug-2007
Forecasted availability date of samples for customer	04-Jun-2007
Forecasted date for STMicroelectronics change Qualification Plan results availability	01-Aug-2007
Estimated date of changed product first shipment	01-Aug-2007

DOCUMENT APPROVAL

Name	Function
Poli, Christian	Division Marketing Manager
Rodrigues, Benoit	Division Product Manager
Yackowlew, Nicolas	Division Q.A. Manager



ST Shenzhen new and additional assembly and test plant for the 2Kbit serial I²C bus EEPROM family for DIMM Serial Presence Detect in TSSOP8 package.

What is the change?

The 2Kbit serial I²C bus EEPROM family for DIMM Serial Presence Detect products assembled and tested in TSSOP8 package in ST Muar (Malaysia) and Amkor (Philippines) subcontractor will now also be assembled and tested in a new assembly and test line located in ST Shenzhen (China).

Why?

The strategy of the STMicroelectronics Memory division is to support the growth of our customers on a long-term basis. In line with this commitment, the qualification of the ST Shenzhen (China) assembly and test plant will secure an additional source. It will also increase the production capacity and throughput, reduce the lead-time and consequently improve the service to our customers.

When?

The assembly and test will ramp up in July 2007 and shipments could start from August 2007 onward.

How will the change be qualified?

It will be qualified using the standard STMicroelectronics Corporate Procedures for Quality and Reliability.
The Qualification Report QREE0705 will be available in August 2007.

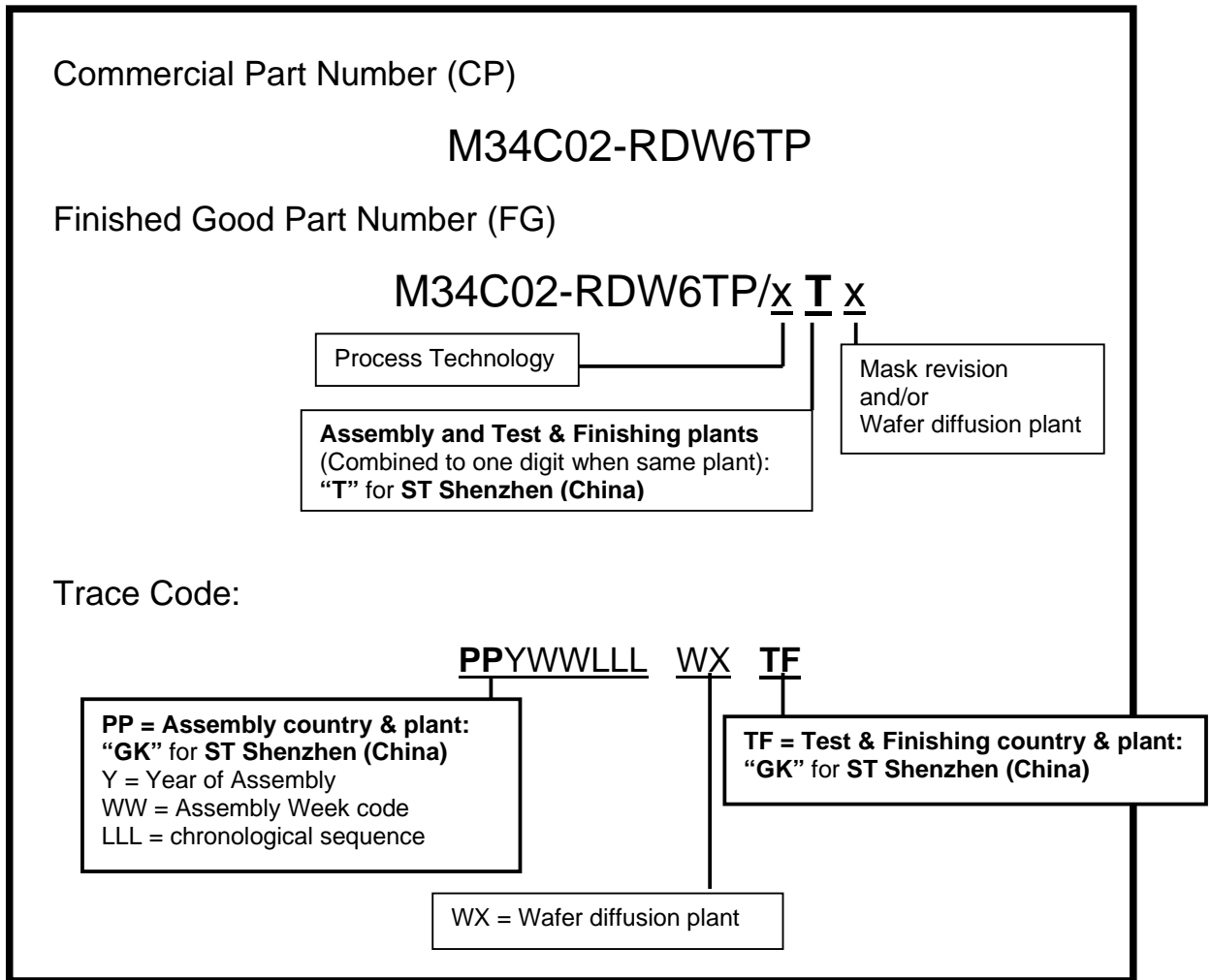
How can the change be seen?

- BOX LABEL MARKING

On the BOX LABEL MARKING, the change is visible inside the Finished Good Part Number:
The combined digit for **Assembly and Test & Finishing plants** identifiers (same plant) is “**T**” for **ST Shenzhen (China)**.

The change is also visible inside the Trace Code:
The **Assembly country & plant** (PP) and the **Test & Finishing** (TF) identifiers are “**GK**” for **ST Shenzhen (China)**.

→ Example for M34C02-RDW6TP (2Kbit, 1.8V to 5.5V Vcc range, TSSOP8 RoHS* compliant package)




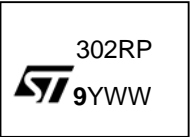

*RoHS: Restriction of the use of certain Hazardous Substances in electrical and electronic equipments

How can the change be seen?

- DEVICE MARKING

On the DEVICE MARKING, the change is visible on the top side marking, inside the second line of the trace code (PYWW):

The **Assembly Country & plant** identifier is “K” for **ST Shenzhen (China)**, the identifier being “9” for ST Muar (Malaysia) and “B” for Amkor (Philippines) subcontractor.

	ST Shenzhen (China)	ST Muar (Malaysia)	subcon. Amkor (Philippines)
TSSOP8 Example: M34C02-RDW6TP			

The traceability for each device is as follows:

P = Assembly country and plant:
→ “K” for **ST Shenzhen (China)**
Y = Last digit of the Year of Assembly
WW = Assembly Week code

APPENDIX A - Product / Process Change Notification

Product family / Commercial products:	2Kbit serial I ² C bus EEPROM family for DIMM Serial Presence Detect
Customer(s):	All
Type of change:	TSSOP8 new and additional assembly and test plant
Reason for the change:	Additional source and production capacity increase
Description of the change:	TSSOP8 new and additional assembly and test plant
Forecast date of the change:	August 2007
Forecast availability date of qualification sample for the customer(s):	Starting Week 23 / 2007
Forecast date for the internal STMicroelectronics change, Qualification report availability:	August 2007
Marking to identify the changed product:	Assembly country and plant ID
Description of the qualification program:	Standard ST Microelectronics Corporate Procedures for Quality and Reliability
Product Line(s) and/or Part Number(s):	M34C02-LDW6TP (*) M34C02-RDW6TP M34E02-FDW1TP
Manufacturing location:	ST Shenzhen (China)
Estimated date of first shipment:	August 2007 (or earlier upon customer approval)
Division Product Manager: B. RODRIGUES	Date:
Group QA Manager: N. YACKOWLEW	Date:

(*) Product under termination, replaced by M34C02-RDW6TP. See PTN 2123, dated Oct. 2006

APPENDIX B: Qualification Plan

TSSOP8 package
using Strip test line in **SHENZHEN** plant

PRODUCT DESCRIPTION

Devices to qualify			
Product name	M24512	M24128	M24C16
Process	CMOSF8	F6S26DP	F6SP36
Diffusion	RS8F - Rousset	CHAF - Chartered	AM6F – Ang Mo Kio

PACKAGE DESCRIPTION

BOM REFERENCE: not yet codified

Reference	Description
Die attach material	ABLEBOND 8390
Frame	New frame NiPdAu
Wire	Gold wire 0.8 mils
Molding compound	Sumitomo G700

SIMILARITY

Diffusion plants and process are already qualified in TSSOP8 package in Muar plant. M24C16 is the only vehicle which die is under qualification for fab transfer purpose.

RELIABILITY

Number of lots required by Product qualification:

Devices to qualify			
Product name	M24512	M24128	M24C16
Process	CMOSF8	F6S26DP	F6SP36
Diffusion	RS8F - Rousset	CHAF - Chartered	AM6F – Ang Mo Kio
Num of lots	2	2	2

A minimum of 3 lots is required for package qualification.

Package-related reliability tests

Test Procedure	Method	Test Conditions	Criteria
Preconditioning	AEC - Q100 - J-STD-020C	Level 1	0 fail
Pressure Pot	AEC - Q100 - JA 102 JESD22-A102	121°C, 2atm, 100% RH, 168 hrs	0/80
Temperature and Humidity Bias	AEC - Q100 - JA 101 JESD22-A101	85°C, 85% RH, 5.5V, 1000 hrs	0/80
High Temperature Bake	AEC - Q100 JA 103 JESD22-A103B	150°C, 1000hrs	0/80
Temperature Cycling	AEC - Q100 - JA 104 JESD22-A104B	-65°C / 150°C, 1000 cycles	0/80
Thermal Shock	Mil Std 883 Method 1011B JESD22-A106B	-55°C / 125°C, 200 shocks	0/25
Electrostatic Discharge CDM	AEC-Q100-011	Charge Device Model (Field Induced CDM): Up to 1500V (step 250V)	0/18

APPENDIX C: BOM COMPARISON

Line location	ST SHENZHEN	ST MUAR	AMKOR
Package	TSSOP8	TSSOP8	TSSOP8
Package size	See POA ref 0079397	See POA ref 0079397	See POA ref 0079397
Lead frame material	Copper (Matrix)	Copper (Matrix)	Copper (Matrix)
Die attach material	Silver epoxy	Silver epoxy	Silver epoxy
Type	glue Ablestick 8390	glue Ablestick 8390	glue Ablestick 8290
Manufacturer	Alebond	Alebond	Alebond
Bonding wire / Method	Gold 0.8 mil, Ball bond	Gold 0.8 mil, Ball bond	Gold 0.8 mil, Ball bond
Mold compound type	G700K	184-3	G700K
Mold compound manufacturer	Sumitomo	KMC	Sumitomo
Lead finish	Pre Plated Frame: NiPdAU	Pre Plated Frame: NiPdAU	Pre Plated Frame: NiPdAU



PRODUCT / PROCESS CHANGE NOTIFICATION

Document Revision History

Document Revision History		
Date	Rev.	Description of the Revision
Apr. 19, 2007	1.00	Draft Document creation (C. POLI)

Used Source Documents

Source document Title	Rev.:	Date:



Please Read Carefully:

Information in this document is provided solely in connection with ST products. STMicroelectronics NV and its subsidiaries ("ST") reserve the right to make changes, corrections, modifications or improvements, to this document, and the products and services described herein at any time, without notice.

All ST products are sold pursuant to ST's terms and conditions of sale.

Purchasers are solely responsible for the choice, selection and use of the ST products and services described herein, and ST assumes no liability whatsoever relating to the choice, selection or use of the ST products and services described herein.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted under this document. If any part of this document refers to any third party products or services it shall not be deemed a license grant by ST for the use of such third party products or services, or any intellectual property contained therein or considered as a warranty covering the use in any manner whatsoever of such third party products or services or any intellectual property contained therein.

UNLESS OTHERWISE SET FORTH IN ST'S TERMS AND CONDITIONS OF SALE ST DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY WITH RESPECT TO THE USE AND/OR SALE OF ST PRODUCTS INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE (AND THEIR EQUIVALENTS UNDER THE LAWS OF ANY JURISDICTION), OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.

UNLESS EXPRESSLY APPROVED IN WRITING BY AN AUTHORIZED ST REPRESENTATIVE, ST PRODUCTS ARE NOT RECOMMENDED, AUTHORIZED OR WARRANTED FOR USE IN MILITARY, AIR CRAFT, SPACE, LIFE SAVING, OR LIFE SUSTAINING APPLICATIONS, NOR IN PRODUCTS OR SYSTEMS WHERE FAILURE OR MALFUNCTION MAY RESULT IN PERSONAL INJURY, DEATH, OR SEVERE PROPERTY OR ENVIRONMENTAL DAMAGE. ST PRODUCTS WHICH ARE NOT SPECIFIED AS "AUTOMOTIVE GRADE" MAY ONLY BE USED IN AUTOMOTIVE APPLICATIONS AT USER'S OWN RISK.

Resale of ST products with provisions different from the statements and/or technical features set forth in this document shall immediately void any warranty granted by ST for the ST product or service described herein and shall not create or extend in any manner whatsoever, any liability of ST.

ST and the ST logo are trademarks or registered trademarks of ST in various countries.

Information in this document supersedes and replaces all information previously supplied.

The ST logo is a registered trademark of STMicroelectronics. All other names are the property of their respective owners

© 2007 STMicroelectronics - All rights reserved.

STMicroelectronics group of companies

Australia - Belgium - Brazil - Canada - China - Czech Republic - Finland - France - Germany - Hong Kong - India - Israel - Italy - Japan - Malaysia - Malta - Morocco - Singapore - Spain - Sweden - Switzerland - United Kingdom - United States of America

www.st.com

