



PRODUCT/PROCESS CHANGE NOTIFICATION

PCN MMS-MMY/14/8315
Dated 31 Jan 2014

Molding compound change for EEPROM in PDIP8 at Amkor

Table 1. Change Implementation Schedule

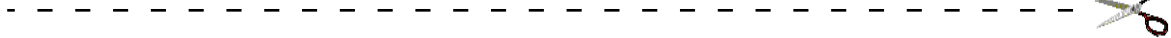
Forecasted implementation date for change	24-Jan-2014
Forecasted availability date of samples for customer	07-Mar-2014
Forecasted date for STMicroelectronics change Qualification Plan results availability	21-Mar-2014
Estimated date of changed product first shipment	06-Jun-2014

Table 2. Change Identification

Product Identification (Product Family/Commercial Product)	EEPROM in PDIP8
Type of change	Package assembly process change
Reason for change	Obsolescence of current molding compound
Description of the change	Molding compound change
Change Product Identification	Last digit of product code is "C" (backside marking)
Manufacturing Location(s)	

Table 3. List of Attachments

Customer Part numbers list	
Qualification Plan results	



Customer Acknowledgement of Receipt		PCN MMS-MMY/14/8315					
Please sign and return to STMicroelectronics Sales Office		Dated 31 Jan 2014					
<input type="checkbox"/> Qualification Plan Denied <input type="checkbox"/> Qualification Plan Approved <input type="checkbox"/> Change Denied <input type="checkbox"/> Change Approved	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="padding: 2px;">Name:</td></tr> <tr><td style="padding: 2px;">Title:</td></tr> <tr><td style="padding: 2px;">Company:</td></tr> <tr><td style="padding: 2px;">Date:</td></tr> <tr><td style="padding: 2px;">Signature:</td></tr> </table>		Name:	Title:	Company:	Date:	Signature:
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DOCUMENT APPROVAL

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Pavano, Rita	Q.A. Manager



PRODUCT / PROCESS CHANGE NOTIFICATION

Molding compound change for EEPROM in PDIP8 at Amkor

What is the change?

Following the obsolescence of the current molding compound (DMC2000HG) used to assemble the EEPROM in PDIP8 at Amkor subcontractor (Philippines), the MMY Division of STMicroelectronics has decided to qualify a new molding compound (CK5000A).

Concurrent to this change, the gold wire diameter will be reduced from 1 mil to 0.8 mil.

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 new molding compound for PDIP8 at Amkor will guarantee the production capability.

When?

The shipments of the EEPROM products in PDIP8 with the new molding compound will start from Week 23 / 2014

How will the change be qualified?

The EEPROM products assembled in PDIP8 using the new molding compound will be qualified following the standard ST Microelectronics Corporate Procedures for Quality & Reliability.

Qualification Plan QPMMY1322 is included inside this document.

What is the impact of the change?

- **Form:** Backside marking change (see **Device marking** paragraph)
- **Fit:** No change
- **Function:** No change

How can the change be seen?

- BOX LABEL MARKING

On the BOX LABEL MARKING, the difference is visible inside the **Finished Good Part Number**: where the last digit is “**C**” for products assembled with new molding compound.

→ Example for M93C46-WBN6P

STMicroelectronics

Manufactured under patents or patents pending
Country Of Origin: Philippines
Pb-free 2nd Level Interconnect
MSL: Not Applicable

PBT: 260 °C Category: e3 ECOPACK2/ROHS

TYPE: M93C46-WBN6P
M93C46-WBN6P/X X C

Total Qty: 50

Process Technology


Assembly and Test & Finishing plants

“C” for new molding

Trace Codes PPYWWLLL WX TF

Marking 93C46WP

Bulk ID X0X00XXX0000



Please provide the bulk ID for any inquiry

How can the change be seen?

- DEVICE MARKING

The difference is visible on the **backside marking**, inside the **first marking line** where the last digit is "**C**" for assembled units with **new molding compound**.

	BACKSIDE MARKING New molding	BACKSIDE MARKING Current molding
PDIP8 Example: M93C46-WBN6P	0C461GC XXXXXXX	0C461GB XXXXXXX

Appendix A- Product Change Information

Product family / Commercial products:	EEPROM in PDIP8
Customer(s):	All
Type of change:	Package assembly material change
Reason for the change:	Obsolescence of current molding compound
Description of the change:	Molding compound change
Forecast date of the change: (Notification to customer)	Week 04 / 2014
Forecast date of <u>Qualification samples</u> availability for customer(s):	Week 10 / 2014
<u>Qualification Report</u> availability:	Qualification Plan QPMMY1322 is included inside this document Qualification Report QRMMY1322 will be available Week 12 / 2014
Marking to identify the changed product:	Last digit of product code is "C" (backside marking)
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
Estimated date of first shipment:	Week 23 / 2014

Appendix B: Concerned Commercial Part Numbers:

Commercial Part Numbers
M24C01-WBN6P
M24C02-WBN6P
M24C04-WBN6P
M24C08-WBN6P
M24C16-RBN6P
M24C16-WBN6P
M24C32-WBN6P
M24C64-WBN6P
M93C46-WBN6P
M93C86-WBN6P

Appendix C: Qualification Plan:

ball shear / pull test data				50	3 lots	
xray (voids)				50	3 lots	< 20mil
wire sweeping				50	3 lots	< 10%
Construction analysis				30	1 lot	No Major Concern
Electrical Test				100%	3 lots	Yield > 95%
Assembly report				NA	3 lots	No Major Concern
TMCL	JESD22-A104	-65°C/+150°C	1000 cycles	77	3 lots	AOR1 at 1000 cycles
HTS	JESD22-A103	150°C	1000 hours	77	3 lots	AOR1 at 1000 hrs
THS	JESD22-A101	85°C/85%RH	1000 hours	77	3 lots	AOR1 at 1000 hrs
PPT	JESD22-A102	121°C, 2atm	96 hours	77	3 lots	AOR1 at 96 hrs

Appendix D: BOM comparison:

Material	Current BOM	New BOM
LEAD FRAME	PDIP8	PDIP8
MOLDING COMPOUND	Dongjin DMC2000HG	Panasonic CK5000A
GOLD WIRE	1 mil	0.8 mil
GLUE DIE ATTACH	Ablestik 8390A	Ablestik 8390A

Document Revision History		
Date	Rev.	Description of the Revision
December 10, 2013	1.00	First draft creation

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

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