PRODUCT / PROCESS CHANGE NOTIFICATION

1. PCN basic data

1.1 Company	STMicroelectronics International N.V
1.2 PCN No.	MDG/21/12706
1.3 Title of PCN	New Wafer Sawing Recipe for ST33G1M2A0, ST33G1M2A1 and ST33G1M2M0 products
1.4 Product Category	ST33G1M2A0 / ST33G1M2A1 / ST33G1M2M0 and the commercial derivatives
1.5 Issue date	2021-04-13

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	Marie-France FLORENTIN
2.1.2 Marketing Manager	Laurent DEGAUQUE
2.1.3 Quality Manager	Mickael DENAIS-ALLICHON

3. Change

3.1 Category	3.2 Type of change	3.3 Manufacturing Location
Wafer Fab (Process)	Any change in step sequence or new step introduction that may have an impact on product reliability or supply chain	AMKOR ATP1 (subcontractor)

4. Description of change

	Old	New
4.1 Description	Current wafer sawing recipe	introduction of an additional step called “Laser Grooving – BKM55”, before the mechanical wafer sawing recipe for the ST33 product family (ST33G1M2A Automotive Grade and ST33G1M2M Industrial Grade).
4.2 Anticipated Impact on form,fit, function, quality, reliability or processability?	No impact on form, fit and function	

5. Reason / motivation for change

5.1 Motivation	The Laser Grooving operation is an improvement of the wafer sawing recipe, that will prevent chipping issue.
5.2 Customer Benefit	QUALITY IMPROVEMENT

6. Marking of parts / traceability of change

6.1 Description	ST Part Number will be changed (Finish Good Name).

7. Timing / schedule

7.1 Date of qualification results	2021-04-09
7.2 Intended start of delivery	2021-06-18
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)
12706 Public product.pdf 12706 PCN ST33G1M2AM - Improved Sawing Recipe introduction rev1.0.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
	ST4SI2M0020TPIFW	

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PRODUCT CHANGE NOTIFICATION
PCN MDG/SMD

New Wafer Sawing Recipe (include BKM55)
ST33G1M2A0, ST33G1M2A1 and ST33G1M2M0 products
Include all their commercial derivatives.

What are the changes?
ST is introducing an additional step called “Laser Grooving – BKM55”, before the mechanical wafer sawing recipe for the ST33 product family (ST33G1M2A Automotive Grade and ST33G1M2M Industrial Grade).

Why?
The Laser Grooving operation is an improvement of the wafer sawing recipe, that will prevent chipping issue.

When?
The qualification of the new recipe has been completed since W07-2021.

How will the change be qualified?
The change will be qualified using the standard ST Microelectronics Corporate Procedures for Quality and Reliability, as per qualification plan detailed in Appendix B.

What is the impact of the change?
- **Form**: none
- **Fit**: none
- **Function**: none

Quality improvement of the Wafer sawing process

How can the change be seen?
ST Part Number will be changed (Finish Good Name).

Appendix A- Product Change Notification

Product family / Commercial products:	ST33G1M2A0 / ST33G1M2A1 / ST33G1M2M0
Type of change:	Process improvement
Reason for the change:	Wafer Sawing Quality improvement
Description of the change:	Additional Laser Grooving operation at sawing
Date of notification to the customer:	W13-2021
Forecast date of Qualification samples availability for customer(s):	W13-2021
Forecast date for the internal STMicroelectronics change, Qualification Report availability:	W14-2021
Description of the qualification program:	Standard ST Microelectronics Corporate Procedures for Quality and Reliability (See appendix B)
Manufacturing location:	AMKOR ATP1 (subcontractor)
Estimated date of first shipment:	W24-2021

Appendix B- Qualification Plan:

Qualification plan is the following:

	Qualification action	Items	Sampling size
1	Laser Groove measurements	Kerf, Laser depth, offset, …	5 locations / wafer (x 3 wafers)
2	Laser Groove Visual inspection	Top side peeling, metal residue, debris, …	5 locations / wafer (x 3 wafers)
3	Side Wall	Side wall inspection	10 dice / Assembly lot (3 assembly lots)
4	Reliability (in packages)	MSL1	80 parts / Assembly Lot (3 assembly lots)
		TMCL -65C/+150C (after MSL1)	
		uHAST 130C/85%RH (after TMCL)	

Document Revision History		
Date	Rev.	Description of the Revision
18/03/2021	1.0	Initial version

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 : New Wafer Sawing Recipe for ST33G1M2A0, ST33G1M2A1 and ST33G1M2M0 products

PCN Reference : MDG/21/12706

Subject : Public Products List

Dear Customer,

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

ST4SI2M0020TPIFW		

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