

PRODUCT / PROCESS CHANGE NOTIFICATION

1. PCN basic data

1.1 Company		STMicroelectronics International N.V
1.2 PCN No.		ADG/21/13051
1.3 Title of PCN		STx220N6F7 ,STx140xx (OD68,OD6E): Activation of HHGrace Fab3 (Industrial segment)
1.4 Product Category		see list
1.5 Issue date		2021-10-10

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	Mario ASTUTI
2.1.2 Marketing Manager	Anna RANIOLO,Michele SCUTO
2.1.3 Quality Manager	Vincenzo MILITANO

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: Wafer fabrication	HHGrace (China)

4. Description of change

	Old	New
4.1 Description	HHGrace fab2	HHGrace fab3
4.2 Anticipated Impact on form,fit, function, quality, reliability or processability?	No Impact	

5. Reason / motivation for change

5.1 Motivation	Capacity Increase
5.2 Customer Benefit	CAPACITY INCREASE

6. Marking of parts / traceability of change

6.1 Description	Dedicated Finished Good Codes
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7. Timing / schedule

7.1 Date of qualification results	2021-12-30
7.2 Intended start of delivery	2022-01-31
7.3 Qualification sample available?	Upon Request

8. Qualification / Validation

8.1 Description	
8.2 Qualification report and qualification results	In progress

9. Attachments (additional documentations)

13051 Public product.pdf 13051 Details.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
	STD140N6F7	
	STF140N6F7	
	STL140N6F7	
	STL220N6F7	
	STP140N6F7	
	STP220N6F7	

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PRODUCT/PROCESS CHANGE NOTIFICATION

TITLE	STx220N6F7 ,STx140xx (OD68,OD6E): Activation of HHGrace Fab3 (Industrial segment)
IMPACTED PRODUCTS	See list
MANUFACTURING STEP	Silicon Diffusion
INVOLVED PLANT	HHGrace fab3 (China)
CHANGE REASON	Capacity increase
CHANGE DESCRIPTION	HHGrace fab3 will be activated for a mixed flow (see details below)
TRACEABILITY	Dedicated Finished Good codes
VALIDATION	Qualification will be performed on test vehicle STL220N6F7 (silicon line OD6801) within December 2021 (see details below)



OFT60 Technology (Industrial segment) Activation of Fab3 in HHG

Agenda

3 Change Description

4 Current flow versus new one

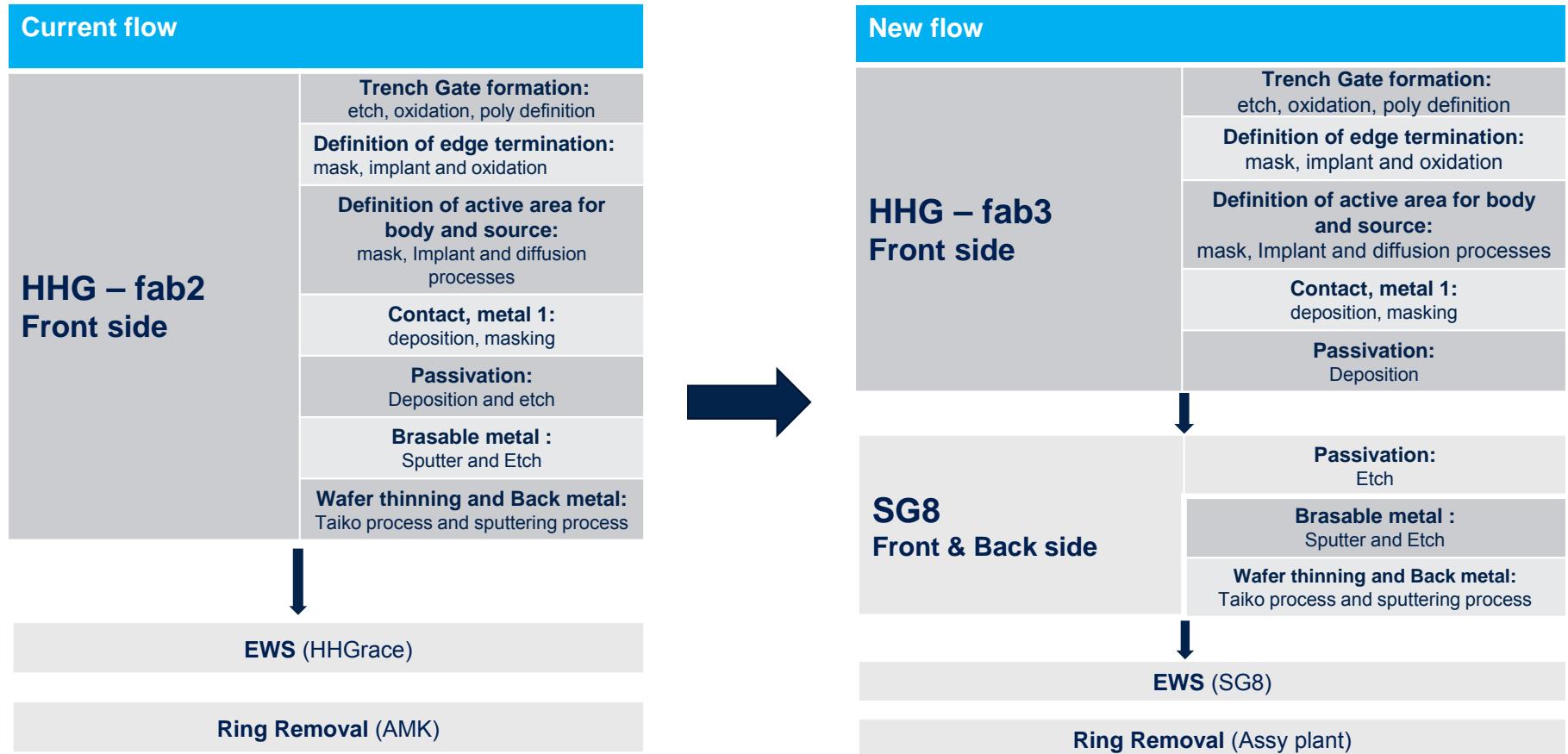
5 Selected Test Vehicles/ Impacted Products

6 Test vehicle reliability program

Change description

- Qualification activity is on going at HHGrace Fab3 to activate diffusion of OFT60 Technology (Industrial segment)
- The activity is started for some products & lines (described in next slides) and the target is to complete it in Q4'21 with MC30 achievement.
- A change in diffusion flow is introduced with activation of Fab3 and it is described in the next slide. The diffusion process flow performed in Fab3 is the same of Fab2
- No change in product characteristics

Current flow versus New one



* For products where Brasable MTL is not present the SG8 flow consists only in WAFER THINNING & BACK METALIZATION

Selected Test Vehicles/ Impacted Products

- Test Vehicle of technology transfer:
STL220N6F7, Silicon line OD6801
- Impacted products:

line	cp	package	plant	MC30	Samples Availability
OD6801	STL220N6F7	Power FLAT	SHENZHEN B/E	Dec'21	De'21
	STP220N6F7	TO 220	SHENZHEN B/E	Dec'21	De'21
OD6E01	STD140N6F7	TO 252 DPAK	Tongfu Microelectronics Co Ltd	Jan'22	Jan'22
			SHENZHEN B/E	Jan'22	Jan'22
	STF140N6F7	TO 220 ISO FULL PACK	SHENZHEN B/E	Dec'21	De'21
	STL14060	Power FLAT	Tongfu Microelectronics Co Ltd	Jan'22	Jan'22
	STL140N6F7	Power FLAT	SHENZHEN B/E	Dec'21	De'21
		Power FLAT	Tongfu Microelectronics Co Ltd	Jan'22	Jan'22
	STP140N6F7	TO 220	SHENZHEN B/E	Dec'21	Dec'21

Test vehicle reliability program

To qualify the new flow HHG Fab3/ SG8 Test Vehicle is STL220N6F7 line OD6801. 3lots will be used. Here the qualification flow that will be followed and the target is to achieve mc30 in Q4'21

#	TEST NAME	DESCRIPTION / COMMENTS	TEST FLAG
1	TEST	Pre- and Post- Stress Electrical Test	Yes
2	PC	Preconditioning	Yes
3	PV	Parametric Verification	Yes
4	HTRB	High Temperature Reverse Bias	Yes
5	HTGB	High Temperature Gate Bias	Yes
6	HTSL	High Temperature Storage Life	Yes
7	THB	Temperature Humidity Bias	Yes
8	AC	Autoclave	Yes
9	TC	Temperature Cycling	Yes
11	ESD -HBM	Human Body Model ESD	Yes
12	ESD - CDM	Charged Device Model ESD	Yes



Public Products List

Public 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 : STx220N6F7 ,STx140xx (OD68,OD6E): Activation of HHGrace Fab3 (Industrial segment)

PCN Reference : ADG/21/13051

Subject : Public Products List

Dear Customer,

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

STD140N6F7	STL140N6F7	STP220N6F7
STP140N6F7	STF140N6F7	STL220N6F7



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