


# PRODUCT / PROCESS CHANGE NOTIFICATION

## 1. PCN basic data

1.1 Company		STMicroelectronics International N.V
1.2 PCN No.	ADG/19/11407	
1.3 Title of PCN	STripFET™ F6 and H6 Products Capacity Extension in HHGrace Foundry	
1.4 Product Category	STripFET™	
1.5 Issue date	2019-03-08	

## 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	Riccardo NICOLOSO
2.1.2 Marketing Manager	Marcello SGROI
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 Subcon

## 4. Description of change

	Old	New
4.1 Description	Specific STripFET™ F6 and H6 products produced in Catania	Specific STripFET™ F6 and H6 produced in Catania and in HHGrace
4.2 Anticipated Impact on form,fit, function, quality, reliability or processability?	no impact	

## 5. Reason / motivation for change

5.1 Motivation	Capacity Extension and improvement in Flexibility to better manage the customer orders
5.2 Customer Benefit	CAPACITY INCREASE

## 6. Marking of parts / traceability of change

6.1 Description	by QA Number and Finished Good
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## 7. Timing / schedule

7.1 Date of qualification results	2019-02-25
7.2 Intended start of delivery	2019-08-25
7.3 Qualification sample available?	Upon Request

## 8. Qualification / Validation

8.1 Description	11407 Rel06-19.pdf		
8.2 Qualification report and qualification results	Available (see attachment)	Issue Date	2019-03-08

## 9. Attachments (additional documentations)

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
	STB120N4LF6	
	STB155N3LH6	
	STD120N4LF6	
	STD155N3LH6	
	STD96N3LLH6	
	STL120N4LF6AG	

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## Public Products List

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**PCN Title :** STripFET™ F6 and H6 Products Capacity Extension in HHGrace Foundry

**PCN Reference :** ADG/19/11407

**Subject :** Public Products List

Dear Customer,

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

STD155N3LH6	STB155N3LH6	STB120N4LF6
STL120N4LF6AG	STD120N4LF6	STD96N3LLH6



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Automotive Discrete Group (ADG)  
Power Transistor Division

**Process Change Notification**

**STripFET™ F6 and H6 Automotive Products Capacity Extension in HHGrace Foundry**

Dear Customer,

Following the continuous improvement of our service and in order to increase productivity, we are pleased to announce that some STripFET™ F6 and H6 technology wafers, currently manufactured in Catania will be also produced in Subcontractor HHGrace.

Wafer Probing currently performed in Catania, will be performed in our ST AMK Site (Singapore) for the wafers produced in HHGrace.

The wafers, and the final assembled products, guarantee the same quality and electrical characteristics as per current production.

In the next pages, we are reporting the qualification plan to reach full maturity.

The change has been classified as **Class 1** according to the ZVEI and ST internal rules.

<b>Assessment of impact on Supply Chain regarding following aspects</b> - contractual agreements - technical interface of processability/manufacturability of customer - form, fit, function, quality performance, reliability		<b>Remaining risks on Supply Chain?</b>	
<b>ID</b>	<b>Type of change</b>	<b>No</b>	<b>Yes</b>
SEM-PW-13	Move of all or part of wafer fab to a different location/site/subcontractor	<b>P</b>	<b>P</b>
SEM-TF-01	Move of all or part of electrical wafer test and/or final test to a different location/site/subcontractor	<b>P</b>	<b>P</b>

The qualification of the change has been completed

Sincerely Yours!

## STripFET™ F6 and H6 Automotive Products Capacity Extension in HHGrace Foundry

ST Part number:	Involved ST Part Numbers			
	STripFET™ F6 (40V)		STripFET™ H6 (30V)	
	STB120N4LF6		STB155N3LH6	
	STL120N4LF6AG		STD155N3LH6	
	STB120N4LF6		STD96N3LLH6	
Reason and background of the change	To increase flexibility by improving capacity avoiding the risk for the customer to line down due to lack of silicon at FE level.			
Detailed description of change(s), including affected type of changes	<ul style="list-style-type: none"><li>• The Diffusion Process for some STripFET™ F6 and H6 technology Automotive products will be performed also in our subcontractor HHGrace.</li><li>• For those wafers, wafer probing will be performed in our AMK site.</li></ul>			
	Wafer Testing for STripFET™ F6 and H6 technology products will be also performed in our ST AMK Site (Singapore). <i><b>Note</b> that AMK Site is an Automotive Grade qualified ST Wafer Probing site from which we test since more than 15 years all technologies Power MOSFET.</i>			
	Here below a table reporting the list of technologies diffused in Catania FAB and tested in AMK with the relevant wafers quantity since 2015.			
	Silicon Line	Technology	Number of Wafers (2015-2018)	Note
	6D6K 6L3C 6L3F 6L38  Various Series     TOTAL	    STripFET™ F6 / H6  STripFET™ 2 <sup>nd</sup> Generation STripFET™ 3 <sup>rd</sup> Generation STripFET™ F5 STripFET™ F3 STripFET™ F7 STripFET™ 2 <sup>nd</sup> Gen. – P-Channel	    52K  1.6M 6.8K 33K 9K 330K 35K 2.0M	    Same technology of Products under notification          
Impact on form, fit, function, or reliability.	No Impact			
Datasheet	No Impact			
Benefit of the change	Capacity and flexibility increase.			

Planned Implementation date for change	The qualification has been completed according to the following plan:																							
	<table><tr><th>Test Vehicles</th><th>N. of Lots</th><th>Type of verification</th><th>Forecast</th></tr><tr><td>STH320N4F6-2</td><td>1</td><td rowspan="4"><ul style="list-style-type: none"><li>Full electrical characterization</li><li>Full reliability</li></ul></td><td rowspan="4">Completed</td></tr><tr><td>STD80N4F6</td><td>1</td></tr><tr><td>STD130N4F6</td><td>1</td></tr><tr><td>STL86N3LLH6AG</td><td>1</td></tr></table>					Test Vehicles	N. of Lots	Type of verification	Forecast	STH320N4F6-2	1	<ul style="list-style-type: none"><li>Full electrical characterization</li><li>Full reliability</li></ul>	Completed	STD80N4F6	1	STD130N4F6	1	STL86N3LLH6AG	1					
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The alignment between Catania and AMK EWS has been performed by performing what below reported:																								
<table><tr><th>Test Vehicles</th><th>FAB</th><th>EWS</th><th>SS</th><th>Type of verification</th></tr><tr><td rowspan="2">6D4F</td><td>Catania</td><td>Catania</td><td>3 mths prod.</td><td rowspan="4"><ul style="list-style-type: none"><li>Yield Comparison</li><li>CPK Comparison</li><li>Main Electrical Parameters Distribution Comparison</li></ul></td></tr><tr><td>HHG</td><td>AMK</td><td>1 mth prod.</td></tr><tr><td rowspan="2">AL6E</td><td>Catania</td><td>Catania</td><td>3 mths prod.</td></tr><tr><td>Catania</td><td>AMK</td><td>3 mths prod.</td></tr></table>					Test Vehicles	FAB	EWS	SS	Type of verification	6D4F	Catania	Catania	3 mths prod.	<ul style="list-style-type: none"><li>Yield Comparison</li><li>CPK Comparison</li><li>Main Electrical Parameters Distribution Comparison</li></ul>	HHG	AMK	1 mth prod.	AL6E	Catania	Catania	3 mths prod.	Catania	AMK	3 mths prod.
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PPAP Update	After official customer acceptance																							