


# PRODUCT / PROCESS CHANGE NOTIFICATION

## 1. PCN basic data

1.1 Company		STMicroelectronics International N.V
1.2 PCN No.	CRP/20/11972	
1.3 Title of PCN	DISCONTINUATION OF TO220 BACK-END PRODUCTION LINE AT ST BOUSKOURA PLANT (MOROCCO)	
1.4 Product Category	All products currently in production at ST Bouskoura back-end plant (Morocco) on TO220 line	
1.5 Issue date	2020-02-14	

## 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 Process Owner	Daniele Alfredo BRAMBILLA
2.2.2 Corporate Quality Manager	Gerard PETIT

## 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: Assembly site (SOP 2617)	Bouskoura internal plant (Morocco)

## 4. Description of change

	Old	New
4.1 Description	TO220 produced at ST Bouskoura back-end plant (Morocco) and ST Shenzhen back-end (China), including Test & Finishing	TO220 produced at ST Shenzhen back-end (China) including Test & Finishing
4.2 Anticipated Impact on form, fit, function, quality, reliability or processability?	Form : No impact Fit : No impact (mold compound is changed, refer to document PCN ADG/19/11732) Function : No impact expected (part of qualification) Reliability or Processability : No impact expected (part of qualification)	

## 5. Reason / motivation for change

5.1 Motivation	Obsolescence of Bouskoura TO220 BE line preventing guarantee of business continuity.  The main benefits are: <ul style="list-style-type: none"><li>• To secure service continuity</li><li>• To improve quality : new BE line with new equipment vs obsolete equipment with limited capability (obsolescent)</li></ul>
5.2 Customer Benefit	QUALITY IMPROVEMENT

## 6. Marking of parts / traceability of change

6.1 Description	By internal traceability / dedicated FG
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## 7. Timing / schedule

7.1 Date of qualification results	2020-07-17
7.2 Intended start of delivery	2020-08-21
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)
11972 Public product.pdf 11972 PCN Notification for PTD and LGS Macro Division.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
	STP120N4F6	
	STP141NF55	
	STP150NF04	
	STP185N55F3	
	STP190N55LF3	
STP36NF06L	STP36NF06L	
	STP76NF75	

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## CORPORATE PRODUCT/PROCESS CHANGE NOTIFICATION

**SUBJECT**      **DISCONTINUATION OF STANDARD TO220 BACK-END PRODUCTION LINE AT ST BOUSKOURA PLANT (MOROCCO)**

IMPACTED PRODUCTS	<p>All products currently in production at ST Bouskoura back-end plant (Morocco) on standard TO220 line and assembled in the following packages:</p> <p> TO220</p> <p>Products inside Low Voltage Solution Division inside Low Voltage and ST iGaN Solution Macro-Division and Power Transistor Macro-Division (ADG Group) are directly impacted.</p>																												
MANUFACTURING STEP	Assembly and Test & Finishing.																												
INVOLVED PLANT	ST Bouskoura internal plant (Morocco)																												
CHANGE REASON	In the frame of the back-end locations management, ST has already a qualified TO220 line in its internal plant in Shenzhen (China)																												
CHANGE DESCRIPTION	<p>Production discontinuation of TO220 line at ST Bouskoura from W26/2020.</p> <p>ST has already engaged qualification of products still not released at new back-end lines.</p> <p>Here below the ZVEI Matrix reporting the list of changes:</p> <table><tr><th colspan="2">ASSESSMENT OF IMPACT ON SUPPLY CHAIN REGARDING FOLLOWING ASPECTS</th><th colspan="2">REMAINING RISKS ON SUPPLY CHAIN?</th></tr><tr><td colspan="2">- CONTRACTUAL AGREEMENTS</td><td colspan="2"></td></tr><tr><td colspan="2">- TECHNICAL INTERFACE OF PROCESSABILITY/MANUFACTURABILITY OF CTM</td><td colspan="2"></td></tr><tr><td colspan="2">- FORM, FIT, FUNCTION, QUALITY PERFORMANCE, RELIABILITY</td><td colspan="2"></td></tr><tr><th>ID</th><th>TYPE OF CHANGE</th><th>NO</th><th>YES</th></tr><tr><td>SEM-PA-18</td><td>MOVE OF ALL OR PART OF ASSEMBLY TO A DIFFERENT LOCATION/SITE/SUBCONTRACTOR.</td><td>P</td><td>P</td></tr><tr><td>SEM-PA-11</td><td>CHANGE OF MOLD COMPOUND / ENCAPSULATION MATERIAL</td><td>P</td><td>P</td></tr></table>	ASSESSMENT OF IMPACT ON SUPPLY CHAIN REGARDING FOLLOWING ASPECTS		REMAINING RISKS ON SUPPLY CHAIN?		- CONTRACTUAL AGREEMENTS				- TECHNICAL INTERFACE OF PROCESSABILITY/MANUFACTURABILITY OF CTM				- FORM, FIT, FUNCTION, QUALITY PERFORMANCE, RELIABILITY				ID	TYPE OF CHANGE	NO	YES	SEM-PA-18	MOVE OF ALL OR PART OF ASSEMBLY TO A DIFFERENT LOCATION/SITE/SUBCONTRACTOR.	P	P	SEM-PA-11	CHANGE OF MOLD COMPOUND / ENCAPSULATION MATERIAL	P	P
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SEM-PA-11	CHANGE OF MOLD COMPOUND / ENCAPSULATION MATERIAL	P	P																										
TRACEABILITY	By internal traceability and dedicated FG code																												

## VALIDATION

Validation is based on required performances and market application requirements. Reference guidelines such as AEC-Q101 are considered for automotive products. Here following the qualification plan we will use to validate the change:

### Commercial Product

STP190N55LF3
STP120N4F6
STP141NF55
STP130NS04ZB-MT
STP180NS04ZC

### Qualification Plan

TEST	DESCRIPTION
EV	External Visual
PV	Parametric Verification
HTRB	High Temperature Reverse Bias
ACBV	AC blocking voltage
HTFB	High Temperature Forward Bias
HTGB	High Temp. Gate Bias
TC	Temperature Cycle
TC Hot	Temperature Cycling Hot Test
TC Delam	TC Delamination Test
WBI	Wire Bond Integrity
AC	Autoclave
H <sup>3</sup> TRB	High Humidity High Temp. Reverse Bias
IOL	Intermittent Operational Life
DPA	Destruct. Phy. Analysis
PD	Physical Dimensions
TS	Terminal Strength
RSH	Resist. to Solder Heat
TR	Thermal Resistance
SD	Solderability / AEC-Q005
WBS	Wire Bond Strength
BS	Wire Bond Shear
DS	Die Shear

## NOTIFICATION

This document is intended to be the official notification to the customers

## REPORTS

The qualification results will be shared according to plan reported inside the PCN notification.





## 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 :** DISCONTINUATION OF TO220 BACK-END PRODUCTION LINE AT ST BOUSKOURA PLANT (MOROCCO)

**PCN Reference :** CRP/20/11972

**Subject :** Public Products List

Dear Customer,

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

STP85NF55	STP150NF04	STP180NS04ZC
STP120N4F6	STP141NF55	STP150NF55
STP190N55LF3	STP36NF06L	STP76NF75
STP185N55F3	STP70NS04ZC	



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