

**PRODUCT / PROCESS CHANGE NOTIFICATION**

**1. PCN basic data**

<b>1.1 Company</b>		STMicroelectronics International N.V
<b>1.2 PCN No.</b>	MMS/15/9292	
<b>1.3 Title of PCN</b>	STM32L152V 128K STM32L162 384K STM32L162 512K - dice minor revision	
<b>1.4 Product Category</b>	STM32L1 128K Shrink & STM32L1 384K & STM32L1 512K dice. See full part number list in 9292_Detailed description document attached.	
<b>1.5 Issue date</b>	2015-12-21	

**2. PCN Team**

<b>2.1 Contact supplier</b>	
<b>2.1.1 Name</b>	ROBERTSON HEATHER
<b>2.1.2 Phone</b>	+1 8475853058
<b>2.1.3 Email</b>	heather.robertson@st.com
<b>2.2 Change responsibility</b>	
<b>2.2.1 Product Manager</b>	Michel BUFFA
<b>2.2.2 Marketing Manager</b>	Daniel COLONNA
<b>2.2.3 Quality Manager</b>	Pascal NARCHE

**3. Change**

<b>3.1 Category</b>	<b>3.2 Type of change</b>	<b>3.3 Manufacturing Location</b>
Die redesign	Mask or mask set change with new die design	ST Rousset (France)

**4. Description of change**

	Old	New
<b>4.1 Description</b>	<p>Limitations described in erratasheets.</p> <ul style="list-style-type: none"> <li>- Die STM32L1 128K Shrink : revision Z Errata sheet Revision 6 for STM32L1xxx6/8/B-A products</li> <li>- Die STM32L1 384K : revision Y Errata sheets : Revision 2 for STM32L15xxD/C/C-A products, Revision 2 for STM32L162xD/C/C-A products</li> <li>- Die STM32L1 512K : revision A Errata sheets : Revision 3 for STM32L15xxE STM32L15xVD-X products, Revision 3 for STM32L162xE STM32L162VD-X products</li> </ul>	<p>ST MCD Division is pleased to announce that the features of STM32L152V 128K &amp; STM32L162 384K &amp; STM32L162 512K products, will be enhanced through the introduction of new dice revisions.</p> <ul style="list-style-type: none"> <li>- Die STM32L1 128K Shrink : Revision Y Changes are described in Errata sheet Revision 7 for STM32L1xxx6/8/B-A products Wake up issues from stop and standby.</li> <li>- Die STM32L1 384K : Revision X Changes are described in Errata sheets : Revision 3 for STM32L15xxD/C/C-A products, Revision 3 for STM32L162xD/C/C-A products Wake up issues from stop and standby.</li> <li>- Die STM32L1 512K : Revision Z Changes are described in Errata sheets : Revision 4 for STM32L15xxE STM32L15xVD-X products, Revision 4 for STM32L162xE STM32L162VD-X products Wake up issues from stop and standby.</li> </ul>
<b>4.2 Anticipated Impact on form,fit, function, quality, reliability or processability?</b>	Function : changes indicated in Errata sheets	

**5. Reason / motivation for change**

<b>5.1 Motivation</b>	The strategy of ST MCD Division is to increase the robustness and improve performances, quality and functionality of our products. This is achieved by introducing new dice revisions for STM32L152V 128K & STM32L162 384K & STM32L162 512K products.
<b>5.2 Customer Benefit</b>	QUALITY IMPROVEMENT

**6. Marking of parts / traceability of change**

<b>6.1 Description</b>	The dice revisions change, see table in 9292_Detailed description document attached. It is marked onto the package of the part.
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7. Timing / schedule	
7.1 Date of qualification results	2016-02-21
7.2 Intended start of delivery	2016-03-21
7.3 Qualification sample available?	Upon Request

8. Qualification / Validation			
8.1 Description	9292_reliability plan_429Y_436X_437Z.pdf		
8.2 Qualification report and qualification results	Available (see attachment)	Issue Date	2015-12-21

9. Attachments (additional documentations)
9292PpPrdtLst.pdf 9292_Detailed description.pdf 9292_reliability plan_429Y_436X_437Z.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
	STM32L151RDT6	
	STM32L152RBT6A	
	STM32L152RET6	
	STM32L152VET6	
	STM32L152ZET6	

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**PRODUCT/PROCESS  
CHANGE NOTIFICATION  
PCN 9292 – Detailed description**

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**STM32L152V 128K STM32L162 384K STM32L162 512K  
dice minor revision**

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**MMS - Microcontrollers Division (MCD)**

**When ?**

The production on the new dice revisions, will start from:

<u>Die</u>	<u>Date of Final Qualification Report Availability</u>	<u>Date of First Shipment</u>
STM32L1 128K Shrink	Week 07 2016	Week 11 2016
STM32L1 384K	Week 07 2016	Week 11 2016
STM32L1 512K	Week 16 2016	Week 20 2016

**How to order samples?**

For all sample request linked to this PCN, please:

- request sample(s) through Notice tool, indicating a single Commercial Product for each request.
- insert "PCN 9292" into the remarks of your order.
- place **non standard** sample order using the following field in your system.

SO | NPO Sample

Header

SO Nr:  Customer:  SO Type: 38 Sample Order

PO Nr:  Carrier Code:  Price Policy:  Currency:

Notes:  Status:  Issuing Date:  Ord Val: 0.0000

Sch I Nr	PO I Nr	Finished Good	Comm Qty	Open Qty	Plant Open Qty	Reqd Qty	Unit Price	RD	CD	EDD	St

PO Item:  Comm Prod:  Qty: 0 RD: 06-Jan-15 Unit Price: 0.0000 Final Cost:

Cust Part Nr:  Finishd Good:  Partial Ship: 01 Price Pol:  Status: 01 Canc:

Notes:  TAM K Pieces: 0 Our Share %: 0 Sample Type: **Sample New Std Type**

Project Name:  Closing Date:  Closing Type:

Regional Sheet:  Lab Sheet:

SO Nr: 7075S05890 Customer: 99800200 SGS-TH/USA PO Nr: Mos/TPapay/RBC-Ullmer

Company: STM Issuing Date: 29-JUL-2015 12:07:00 Ship To: 9980020081 SGS/USANPD Price Policy: 05 Curr Code: 02 U.S. DOLLAR

Carrier Code: 0001 \* Bill To: 9980020001 SGS-TH/USA

Carriage Code: F1 F.I.S. Confirm To: 81

Transportn Mode: 01 AIR FREIGHT Sales Rep. ID: 07R00C NO COMMISSION

Payment Term: 0006 FREE OF CHARGE Cust Serv Rep ID: 11A000 Dummy FSA SWISS

SO Remark Details

SO Nr: 7075S05890

SO Remark Type	Text	Status Co	Last Update
01 INVOICE & O/C REMARK	PER PCN 9108- THANK YOU	01	30-Jul-2015

## **List of Commercial products impacted**

STM32L100C6U6A	STM32L151VDY6XTR
STM32L100C6U6ATR	STM32L151VET6
STM32L100R8T6A	STM32L151VEY6TR
STM32L100RBT6A	STM32L151ZCT6
STM32L100RBT6ATR	STM32L151ZCT6TR
STM32L151C6T6A	STM32L151ZDT6
STM32L151C6U6A	STM32L151ZET6
STM32L151C8T6A	STM32L152BDIE1A
STM32L151C8U6A	STM32L152BDIE6A
STM32L151CBT6A	STM32L152C6T6A
STM32L151CBT6D	STM32L152C6U6A
STM32L151CBU6A	STM32L152C8T6A
STM32L151CBU6D	STM32L152C8U6A
STM32L151QCH6	STM32L152CBT6A
STM32L151QDH6	STM32L152CBU6A
STM32L151QDH6TR	STM32L152DDIE0
STM32L151QEH6	STM32L152DDIE6
STM32L151R6H6A	STM32L152EDIE6
STM32L151R6T6A	STM32L152QCH6
STM32L151R8H6A	STM32L152QDH6
STM32L151R8H6ATR	STM32L152QEH6
STM32L151R8T6A	STM32L152R6H6A
STM32L151RBH6A	STM32L152R6T6A
STM32L151RBH6D	STM32L152R8H6A
STM32L151RBT6A	STM32L152R8T6A
STM32L151RBT6ATR	STM32L152RBH6A
STM32L151RBT6D	STM32L152RBT6A
STM32L151RBT7A	STM32L152RCT6A
STM32L151RBT7ATR	STM32L152RDT6
STM32L151RCT6A	STM32L152RDY6TR
STM32L151RCT6ATR	STM32L152RET6
STM32L151RCY6TR	STM32L152V8H6A
STM32L151RDT6	STM32L152V8T6A
STM32L151RDT6TR	STM32L152VBH6A
STM32L151RDT7	STM32L152VBT6A
STM32L151RDY6TR	STM32L152VBT6ATR
STM32L151RET6	STM32L152VCT6A
STM32L151RET6TR	STM32L152VDT6
STM32L151V8H6A	STM32L152VDT6X
STM32L151V8T6A	STM32L152VDTER
STM32L151VBH6A	STM32L152VET6
STM32L151VBH6D	STM32L152VET6D
STM32L151VBT6A	STM32L152VEY6TR
STM32L151VBT6D	STM32L152ZCT6
STM32L151VCT6A	STM32L152ZCT6TR
STM32L151VCT6ATR	STM32L152ZDT6
STM32L151VDT6	STM32L152ZET6
	STM32L152ZET6D

STM32L158VT6  
STM32L162DDIE0  
STM32L162QCH6  
STM32L162QDH6  
STM32L162QDH6DTR  
STM32L162RCT6A  
STM32L162RDT6  
STM32L162RDT6TR  
STM32L162RDY6TR  
STM32L162RET6  
STM32L162VCT6A  
STM32L162VDT6  
STM32L162VDY6XTR  
STM32L162VET6  
STM32L162VEY6TR  
STM32L162ZCT6  
STM32L162ZDT6  
STM32L162ZET6



Die 429 rev Y  
Die 436 rev X  
Die 437 rev Z

## Reliability Evaluation Plan

November 11<sup>th</sup> 2015

MMS MCD Quality & Reliability Department

# Die 429 rev Y / Die 436 rev X / Die 437 rev Z

- Qualification plan for new cuts of the dice described in the document
  - Target: No regression compared to the previous production versions

Trial	Test1	Method	Conditions	Sample x lot
				429 Rev Y (Cut 1.2) 436 Rev X (Cut 1.3) 437 Rev Z (Cut 1.1)
DIE	LU	JESD78	105°C	6 x 1 for each die
	ESD HBM	ANSI/ESDA/ JEDEC JS-001	1500Ω , 100pF, 25°C 1KV or 2kV depending of the die	3 x 1 for each die
	ESD CDM	ANSI/ESD STM5.3.1	25°C 250V or 500V depending of packages	3 x 1 for each die and in one package
	HTOL	MIL-STD-883 Method 1005 JESD22-A108	125°C , 3.6V 168h	77 x 1 for each die



## Public Products List

**PCN Title :** STM32L152V 128K STM32L162 384K STM32L162 512K - dice minor revision

**PCN Reference :** MMS/15/9292

**PCN Created on :** 15-Jun-2015

**Subject :** Public Products List

Dear Customer,

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

STM32L151V8T6A	STM32L152V8H6A	STM32L151RET6TR
STM32L152QEH6	STM32L151V8H6A	STM32L100C6U6A
STM32L151RBT6A	STM32L152VCT6A	STM32L152VDT6X
STM32L151VBH6A	STM32L162RDY6TR	STM32L152VBT6ATR
STM32L151C6T6A	STM32L152VEY6TR	STM32L151VDT6
STM32L152ZCT6	STM32L151R6H6A	STM32L151QCH6
STM32L151VDY6XTR	STM32L151VBT6A	STM32L151ZCT6
STM32L151QDH6TR	STM32L152RDT6	STM32L162VDT6
STM32L152RBT6A	STM32L151CBU6D	STM32L152VET6
STM32L162ZDT6	STM32L152CBT6A	STM32L152VBT6A
STM32L151VCT6A	STM32L152C8T6A	STM32L162RCT6A
STM32L151RBT6D	STM32L100R8T6A	STM32L152ZCT6TR
STM32L152QDH6	STM32L151ZET6	STM32L152VDT6
STM32L151ZCT6TR	STM32L152RDY6TR	STM32L151VET6
STM32L162QDH6	STM32L151C8T6A	STM32L151ZDT6
STM32L162ZET6	STM32L152R8H6A	STM32L162VCT6A
STM32L151RDY6TR	STM32L152RET6	STM32L152R6H6A
STM32L151R6T6A	STM32L100RBT6ATR	STM32L151QEH6
STM32L151RBT7A	STM32L152VBH6A	STM32L151VCT6ATR
STM32L152C8U6A	STM32L162VEY6TR	STM32L162RDT6
STM32L151R8H6ATR	STM32L152QCH6	STM32L151RET6
STM32L100RBT6A	STM32L151CBU6A	STM32L152R8T6A
STM32L151R8H6A	STM32L152V8T6A	STM32L162VET6
STM32L151RCT6ATR	STM32L152ZET6	STM32L151VBH6D
STM32L151QDH6	STM32L151R8T6A	STM32L151VEY6TR
STM32L151RBT6ATR	STM32L162RDT6TR	STM32L151RBT7ATR
STM32L152C6T6A	STM32L151RCY6TR	STM32L152ZDT6
STM32L152C6U6A	STM32L151C6U6A	STM32L100C6U6ATR
STM32L151C8U6A	STM32L151RDT6TR	STM32L151RBH6A
STM32L151RDT6	STM32L162RET6	STM32L151RDT7
STM32L152CBU6A	STM32L152RBH6A	STM32L151RCT6A
STM32L152R6T6A	STM32L151CBT6A	STM32L151CBT6D
STM32L162VDY6XTR	STM32L152RCT6A	



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