

PRODUCT / PROCESS CHANGE NOTIFICATION

1. PCN basic data

1.1 Company		STMicroelectronics International N.V
1.2 PCN No.		MDG/20/11442
1.3 Title of PCN		SG8E (Singapore) additional source for STM8L052 32k/64k - STM8L15x 32k/64k products
1.4 Product Category		STM8L052 32k/64k - STM8L15x 32k/64k listed products
1.5 Issue date		2020-11-17

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	Ricardo Antonio DE SA EARP
2.2.2 Marketing Manager	Veronique BARLATIER
2.2.3 Quality Manager	Pascal NARCHE

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	ST SG8E 8" (Singapore)

4. Description of change

	Old	New
4.1 Description	Front-end source: - ST Rousset 8" France	Front-end sources: - ST Rousset 8" France - ST SG8E 8" Singapore - added source There is no change in the product functionality. Please refer to PCN 11442 – Additional information attached document.
4.2 Anticipated Impact on form,fit, function, quality, reliability or processability?	Packaged products : no change.	

5. Reason / motivation for change

5.1 Motivation	Due to the success on the market of STM8 devices, ST Microcontrollers Division decided to qualify an additional front-end site to maintain state of the art service level to our customers thanks to extra capacity.
5.2 Customer Benefit	CAPACITY INCREASE

6. Marking of parts / traceability of change

6.1 Description	Change is visible through diffusion traceability plant, in the marking: - "VG" for ST Rousset 8" (France) - "VC" for ST SG8E 8" (Singapore)
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7. Timing / schedule

7.1 Date of qualification results	2020-12-31
7.2 Intended start of delivery	2021-02-01
7.3 Qualification sample available?	Upon Request

8. Qualification / Validation

8.1 Description	11442 MDG-MCD-RER1906 - PCN11442 - ST SG8E (Singapore) additional source for STM8L052x STM8L151x and STM8L152x products - reliability.pdf
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8.2 Qualification report and qualification results	Available (see attachment)	Issue Date	2020-11-17
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9. Attachments (additional documentations)

11442 Public product.pdf
 11442 MDG-MCD-RER1906 - PCN11442 - ST SG8E (Singapore) additional source for STM8L052x STM8L151x and STM8L152x products - reliability.pdf
 11442 PCN11442 Additional information.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
	STM8L052C6T6	
	STM8L052C6T6TR	
	STM8L052R8T6	
	STM8L052R8T6TR	
	STM8L151C4T6	
	STM8L151C4U6	
	STM8L151C4U6TR	
	STM8L151C6T3	
	STM8L151C6T6	
	STM8L151C6U3	
	STM8L151C6U6	
	STM8L151C6U6TR	
	STM8L151C8T3	
	STM8L151C8T6	
	STM8L151C8T6TR	
	STM8L151C8T7	
	STM8L151C8U3	
	STM8L151C8U6	
	STM8L151C8U6TR	
	STM8L151G4U3	
	STM8L151G4U6	
	STM8L151G4U6TR	
	STM8L151G4Y3TR	
	STM8L151G4Y6TR	
	STM8L151G6U3	
	STM8L151G6U3TR	
	STM8L151G6U6	
	STM8L151G6U6TR	
	STM8L151G6U7	
	STM8L151G6Y3TR	
	STM8L151G6Y6TR	
	STM8L151K4T3	
	STM8L151K4T6	
	STM8L151K4T6TR	
	STM8L151K4U6	
	STM8L151K4U6TR	
	STM8L151K6T3	
	STM8L151K6T6	
	STM8L151K6T6TR	
	STM8L151K6U3	
	STM8L151K6U6	

	STM8L151K6U6TR	
	STM8L151M8T6	
	STM8L151M8T6TR	
	STM8L151R6T6	
	STM8L151R6T6TR	
	STM8L151R8T6	
	STM8L151R8T6TR	
	STM8L152C4T3	
	STM8L152C4T6	
	STM8L152C4T6TR	
	STM8L152C4U6	
	STM8L152C6T6	
	STM8L152C6U3	
	STM8L152C6U6	
	STM8L152C8T6	
	STM8L152C8U6	
	STM8L152K4T6	
	STM8L152K4T6TR	
	STM8L152K4U6	
	STM8L152K6T3	
	STM8L152K6T6	
	STM8L152K6U6	
	STM8L152K6U6TR	
	STM8L152K8Y6TR	
	STM8L152M8T6	
	STM8L152M8T6TR	
	STM8L152M8T7	
	STM8L152R6T6	
	STM8L152R6T6TR	
	STM8L152R8T6	
	STM8L162M8T6	
	STM8L162M8T6TR	
	STM8L162R8T6	

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RER1906 for PCN11442

ST SG8E (Singapore) additional source for STM8L052x, STM8L151x and STM8L152x products

Reliability Evaluation Plan

Oct 09th, 2020

MDG Quality & Reliability Department

RERMCD1906 – F9GO2 Technology Transfer R8 to SG8E (Singapore) STM STM8L Die Test Vehicles

Die Vehicle	Process Perimeter	Assembly Line	Package	Number of Reliability Lots
768	F9GO2	MUAR	LQFP14*14 80L	3 lots to qualify Process Perimeter
764		JSCC	LQFP7*7 48L	Then 1 lot by Die

RERMCD1906 – F9GO2 Technology Transfer R8 to SG8E (Singapore) STM STM8L Die Reliability Trials

Reliability Trial & Standard		Test Conditions	Pass Criteria	Lot Strategy	Units per Lot
ESD HBM	0060102 JESD22-A114ANSI/ESDA JEDEC JS-001	25°C	2kV (class 2)	1 to 3 lots	3
ESD CDM	ESD Charged Device Model ANSI/ESD STM5.3.1	Aligned with device datasheet	250V to 500V	1 lot	3
LU	0018695 JESD78	125°C REG-ON Configuration 125°C REG-OFF Configuration	No concern	1 to 3 lots	3 3
EDR + Bake	JESD22-A117 JESD22-A103	125°C & 3.6V Cycling 150°C Bake	10k cycles 1500h 1000h	1 to 3 lots 1 st lot 2 nd & 3 rd if any	77
EDR + Bake	JESD22-A117 JESD22-A103	25°C & 3.6V Cycling 150°C Bake	10k cycles 168h	1 to 3 lots	77
EDR + Bake	JESD22-A117 JESD22-A103	-40°C & 3.6V Cycling 150°C Bake	10k cycles 168h	1 to 3 lots	77
ELFR	MIL-STD-883 Method 1005 JESD22-A108 JESD74	125°C & 3.6V	48h	3 lots by process perimeter	500 units min per lot Total of 2000 units
HTOL	MIL-STD-883 Method 1005 JESD22-A108	125°C & 3.6V 100MHz	1200h 600h	1 st lot 2 nd & 3 rd if any	77

RERMCD1906 – F9GO2 Technology Transfer R8 to SG8E (Singapore) STM8L Package Test Vehicles

Package Line	Assembly Line	Package	Wire	Die Vehicle / Rawline (*)	Number of Reliability Lots
LQFP	MUAR	LQFP14*14 80L	Au	768 / 1S*768	3 lots to qualify F9GO2 Technology Then 1 lot by Package Assembly Line
	JSCC	LQFP7*7 48L	Ag	764 / 5B*764	
	ASE	LQFP7*7 48L	Au	768 / 5B*768	
QFN	JSCC	UFQFPN4*4 28L	Ag	764 / MB*764	
WLCSP	SCS	WLCSP32	-	768 / CF*768	

RERMCD1906 – F9GO2 Technology Transfer R8 to SG8E (Singapore) STM STM8L Package Reliability Trials

Reliability Trial & Standard		Test Conditions	Pass Criteria	Lot Strategy	Units per Lot
PC	Pre Conditioning: Moisture Sensitivity Jedec Level 1 J-STD-020/ JESD22-A113	Bake (125°C / 24h) Soak (85°C / 85% RH / 168h) for level 1 Convection reflow: 3 passes with Jedec level 1	3 Passes MSL1/3	1 to 3 lots	231 to 308 (**)
	Pre Conditioning: Moisture Sensitivity Jedec Level 3 J-STD-020/ JESD22-A113	Bake (125°C / 24h) Soak (30°C / 60% RH / 192h) for level 3 Convection reflow: 3 passes with Jedec level 3			
UHAST (*) (**)	Unbiased Highly Accelerated Temperature & Humidity Stress JESD22-A118	130°C, 85%RH, 2 Atm	96h	1 to 3 lots	77
TC (*)	Thermal Cycling JESD22-A104	-65°C +150°C	500Cy	1 to 3 lots	77
THB (*)	Temperature Humidity Bias JESD22-A101	85°C, 85% RH, bias	1000h	1 to 3 lots	77
HTSL (*)	High Temperature Storage Life JESD22-A103	150°C - no bias	1000h	1 to 3 lots	77
Construction Analysis	JESD22-B102 JESD22-B100/B108	Including Solderability & Physical Dimensions	No concern	1 by package assembly line	15 10
ESD CDM	ESD Charged Device Model ANSI/ESD STM5.3.1	Aligned with device datasheet	250V to 500V	1 by package assembly line	3



(*) Tests performed after preconditioning

(**) UHAST not done for BGA

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**PRODUCT/PROCESS
CHANGE NOTIFICATION
PCN 11442 – Additional information**

**SG8E (Singapore) additional source for
STM8L052 32k/64k - STM8L15x 32k/64k products**

MDG - Microcontrollers Division (MCD)

The standard marking is:



.....
.....
PPLLWX
COOTFYWW

WX code indicates the diffusion traceability plant code.

Please refer to the DataSheet for marking details.

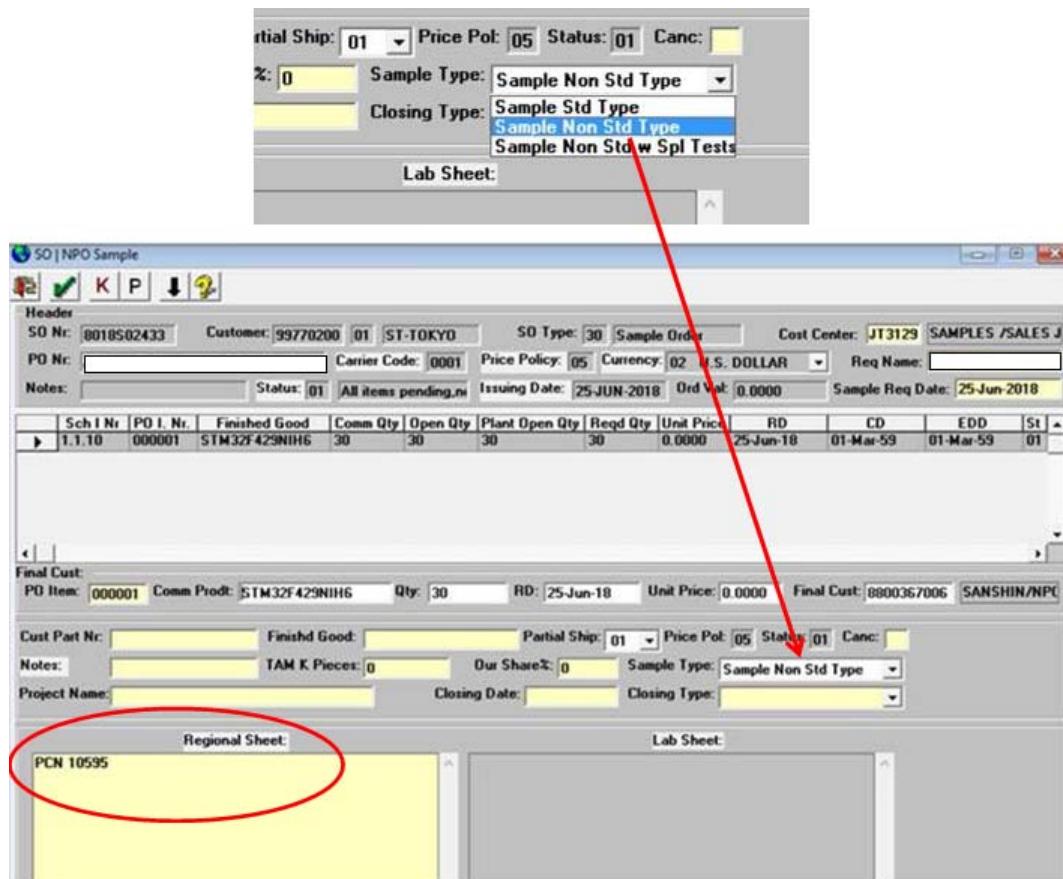
The marking is changing as follows:

Existing		Additional	
WX code	Fab	WX code	Fab
VG	ST Rousset 8"(France)	VC	ST SG8 8" (Singapore)

How to order samples?

For all samples request linked to this PCN, please:

- place a **Non-standard** sample order (choose Sample Non Std Type from pull down menu)
- insert the PCN number “**PCN11442**” into the NPO Electronic Sheet/**Regional Sheet**
- request sample(s) through Notice tool, indicating a single Commercial Product for each request



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Public Products List

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PCN Title : SG8E (Singapore) additional source for STM8L052 32k/64k - STM8L15x 32k/64k products

PCN Reference : MDG/20/11442

Subject : Public Products List

Dear Customer,

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

STM8L151R8T6	STM8L052C6T6	STM8L151R6T6TR
STM8L151C6T3TR	STM8L052R8T6	STM8L151K4T3
STM8L151C4U6	STM8L162R8T6	STM8L151C6U6TR
STM8L152C4T6TR	STM8L152K6U6	STM8L152M8T6TR
STM8L151G6U7	STM8L151C4T6	STM8L151G6U7TR
STM8L151G4U6TR	STM8L151C8U6TR	STM8L152C6T6TR
STM8L151R8T3	STM8L151G4U6	STM8L151G6U3
STM8L152R8T6	STM8L152C4T3	STM8L152K6U6TR
STM8L151C4U6TR	STM8L151C6U3TR	STM8L151K6U6
STM8L152M8T3	STM8L151C8T6TR	STM8L151K4T6TR
STM8L152K4T6	STM8L152C4T3TR	STM8L151K6U6TR
STM8L152K6T6	STM8L151C8U3	STM8L151R8T6TR
STM8L152C4T6	STM8L151G6U6	STM8L151C8T3
STM8L151G6U3TR	STM8L151C8T7	STM8L152R8T3
STM8L151K6U3	STM8L152R6T6	STM8L152R6T6TR
STM8L151M8T6	STM8L151G6U6TR	STM8L052R8T6TR
STM8L152C4U6	STM8L151G4U3	STM8L151C6U3
STM8L151C4T6TR	STM8L152C8T6	STM8L052C6T6TR
STM8L152C8U6	STM8L152C6U6	STM8L152M8T6
STM8L151K6U3TR	STM8L151K6T6	STM8L151C8T6
STM8L151C8U6	STM8L151C6T6	STM8L152M8T7
STM8L152K6T3	STM8L151K6T6TR	STM8L151K6T3
STM8L152C6T6	STM8L151R6T6	STM8L151M8T6TR
STM8L152C8T6TR	STM8L151G4Y6TR	STM8L151K4U6TR
STM8L152K4T6TR	STM8L152K4U6	STM8L151C6U6
STM8L151K4U6	STM8L151G6Y6TR	STM8L151C4T3
STM8L162M8T6	STM8L151C6T6TR	STM8L151K4T6
STM8L152C6U3	STM8L151C6T3	STM8L162M8T6TR
STM8L152K8Y6TR	STM8L151G6Y3TR	STM8L151G4Y3TR



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