

PRODUCT / PROCESS CHANGE NOTIFICATION

1. PCN basic data

1.1 Company		STMicroelectronics International N.V
1.2 PCN No.		MDG/21/12675
1.3 Title of PCN		ST Muar (Malaysia) LQFP7x7 32L line transfer for STM8S/L listed products
1.4 Product Category		STM8L15x 32K STM8S20x 128K STM8S20x 32K STM8S20x 8K
1.5 Issue date		2021-03-25

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: Assembly site (SOP 2617)	ST MUAR (Malaysia)

4. Description of change

	Old	New
4.1 Description	ST MUAR LQ32 Matrix leadframe JSCC LQ32 High Density leadframe	ST MUAR LQ32 Matrix leadframe JSCC LQ32 High Density leadframe and ST MUAR LQ32 High Density leadframe
4.2 Anticipated Impact on form,fit, function, quality, reliability or processability?	no impact	

5. Reason / motivation for change

5.1 Motivation	material EOL
5.2 Customer Benefit	SERVICE CONTINUITY

6. Marking of parts / traceability of change

6.1 Description	traceability ensured by ST internal tools
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7. Timing / schedule

7.1 Date of qualification results	2021-05-17
7.2 Intended start of delivery	2021-05-18
7.3 Qualification sample available?	Upon Request

8. Qualification / Validation

8.1 Description	12675 MDG-MCD-RER2102 PCN12675 ST Muar LQFP7x7 32L line transfer for STM8S-L products reliability plan.pdf		
8.2 Qualification report and qualification results	Available (see attachment)	Issue Date	2021-03-25

9. Attachments (additional documentations)

12675 Public product.pdf
 12675 MDG-MCD-RER2102 PCN12675 ST Muar LQFP7x7 32L line transfer for STM8S-L products reliability plan.pdf
 12675 PCN12675 _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
	STM8L151K4T3	
	STM8L151K4T6	
	STM8L151K4T6TR	
	STM8L151K6T3	
	STM8L151K6T6	
	STM8L151K6T6TR	
	STM8L152K4T6	
	STM8L152K4T6TR	
	STM8L152K6T3	
	STM8L152K6T6	
	STM8S003K3T6C	
	STM8S003K3T6CTR	
	STM8S005K6T6C	
	STM8S005K6T6CTR	
	STM8S103K3T3C	
	STM8S103K3T3CTR	
	STM8S103K3T6C	
	STM8S103K3T6CTR	
	STM8S105K4T3C	
	STM8S105K4T3CTR	
	STM8S105K4T6C	
	STM8S105K4T6CTR	
	STM8S105K6T3C	
	STM8S105K6T3CTR	
	STM8S105K6T6C	
	STM8S105K6T6CTR	
	STM8S207K6T3C	
	STM8S207K6T6C	
	STM8S207K6T6CTR	
	STM8S207K8T3C	
	STM8S207K8T6C	
	STM8S207K8T6CTR	
	STM8S903K3T3C	
	STM8S903K3T3CTR	
	STM8S903K3T6C	
	STM8S903K3T6CTR	

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RERMCD2102 for PCN12675 ST MUAR - LQFP7x7 32L line transfer for STM8S/L products

Reliability Evaluation Plan

March 19th, 2021

MDG MCD Quality & Reliability

RERMCD2102 ST MUAR - LQFP7x7 32L line transfer for STM8S/L products

Package Test Vehicles

Package line	Assembly Line	Package	Device (RawLine Code)	Diffusion Process Plant	Number of Reliability Lots
LQFP	LQFP 7*7	32L	STM8S003K3T6C (MA5V*767ISX7)	CMOS F9 G01 ST AMK SG8E	2
LQFP	LQFP 7*7	32L	STM8S003K3T6C (MA5V*767ISXY)	CMOS F9 G01 ST Rousset	1

Reliability strategy:

- Reliability will be performed on test vehicle STM8S in CMOS F9 G01 diffusion process.
- Full similarity is applicable on STM8L devices in CMOS F9 G02 diffusion process as using same passivation and pad structure.

RERMCD2102 ST MUAR - LQFP7x7 32L line transfer for STM8S/L products

Package Reliability Trials

Reliability Trial & Standard		Test Conditions	Pass Criteria	Unit per Lot	Lot qty
PC	Pre Conditioning: Moisture Sensitivity Jedec Level 1 J-STD-020/ JESD22-A113	Bake (125°C / 24 hrs) Soak (85°C / 85% RH / 168 hrs) for level1 Convection reflow: 3 passes	3 passes MSL1	308	3
Uhast(*)	UnBiased Highly Accelerated Temperature and Humidity Stress JESD22 A118	130°C, 85%RH, 2.3 atm	96h	77	3
TC(*)	Thermal Cycling JESD22 A104	-65°C +150°C	500Cy	77	3
THB(*)	Biased temperature & humidity stress JESD22 A101	85°C, 85% RH bias	1000h	77	3
HTSL	High Temperature Storage Life JESD22 A103	150°C- no bias	1000h	77	3
Construction analysis	JESD 22B102 JESDB100/B108	including Solderability, Physical dimensions	NA	NA	3
ESD	ESD Charge Device Model JESD22-C101	Aligned with device datasheet	1000V	3	1

(*) tests performed after preconditioning

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**PRODUCT/PROCESS
CHANGE NOTIFICATION
PCN12675– Additional information**

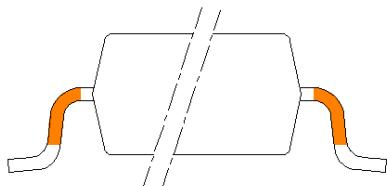
**ST Muar (Malaysia) LQFP7x7 32L line transfer
for STM8S/L products**

MDG - Microcontrollers Division (MCD)

What is the change?

	Current back-end lines	New back-end line	
Assembly site	STATS ChipPAC JiangYin (China) JSCC	ST Muar (Malaysia)	
wire	Silver 0.8 mil	Gold 0.8 mil	Silver 0.8 mil
Leadframe	High Density	Matrix	High Density
Leadfinishing (1)	Pure Tin (e3)	Rough Ni Pd AgAU (e4)	Rough Ni Pd AgAU (e4)
Resin (2)	Sumitomo G631SHQ	Sumitomo G700LS	Sumitomo G700LS
Glue	Ablestick 3230	Hitachi EN4900	Hitachi EN4900
Enhanced Traceability in marking	2 Digits	No digit	2 Digits

(1) Lead color and surface finish change depending on leadfinishing.

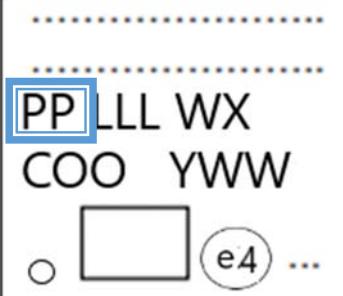
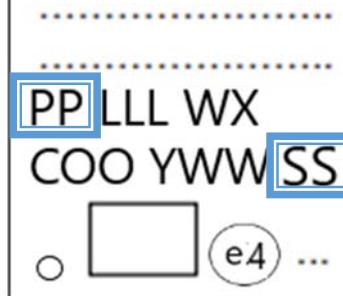


(2) Package darkness changes depending on molding compound.

Pin1 identifier can change in terms of form and positioning.

Marking position and size could be different upon assembly site, without any loss of information.

How can the change be seen?

	No Digit	With 2 Digits Enhanced Tracability (SS) marking
Marking example		

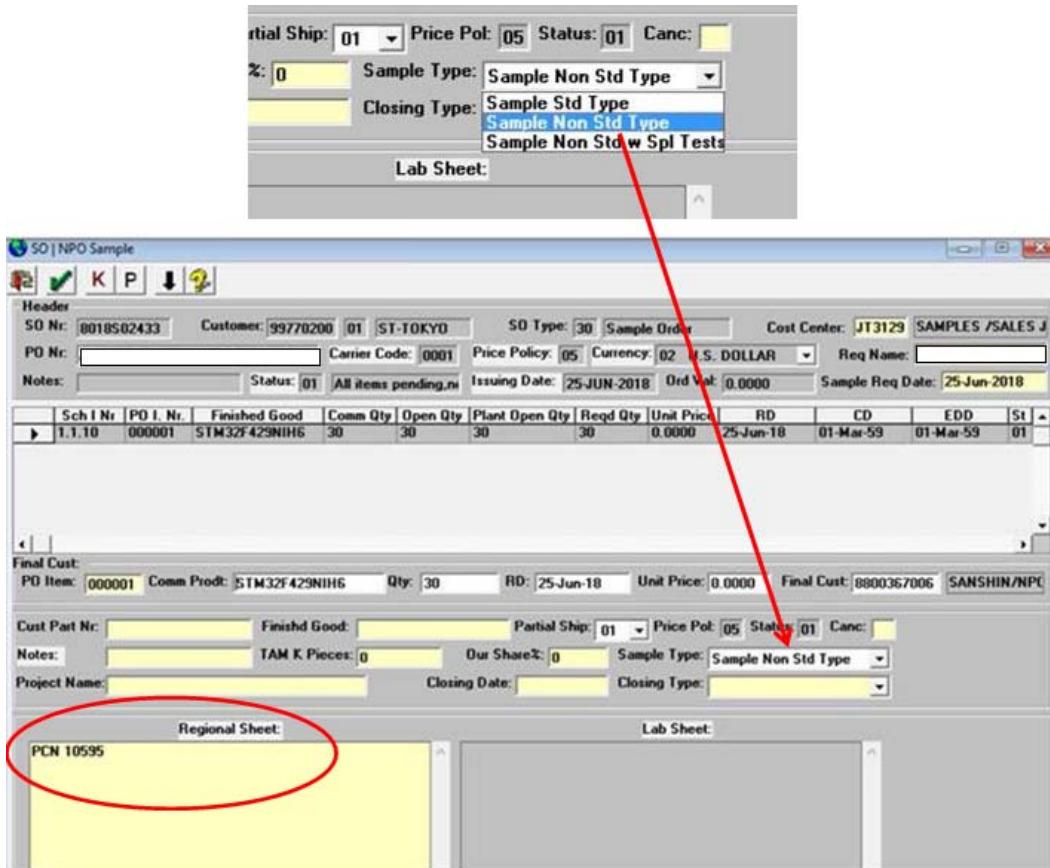
PP code indicates the Assembly traceability plant code.

PP code	Assembly Line - Fab
GQ	Stats ChipPAC Jiangyin JSCC (China)
99	ST Muar (Malaysia)

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 “**PCN12675**” into the NPO Electronic Sheet/**Regional Sheet**
- request sample(s) through Notice tool, indicating a single Commercial Product for each request



SO | NPO Sample

Header

SO Nr: 0018502433 Customer: 99770200 01 ST-TOKYO SO Type: 30 Sample Order Cost Center: JT3129 SAMPLES /SALES J

PO Nr: Carrier Code: 0001 Price Policy: 05 Currency: 02 U.S. DOLLAR Req Name:

Notes: Status: 01 All items pending,ni Issuing Date: 25-JUN-2018 Ord Val: 0.0000 Sample Req Date: 25-Jun-2018

Sch I Nr	PO I. Nr.	Finished Good	Comm Qty	Open Qty	Plant Open Qty	Reqd Qty	Unit Price	RD	CD	EDD	St
1.1.10	000001	STM32F429NIH6	30	30	30	30	0.0000	25-Jun-18	01-Mar-59	01-Mar-59	01

Final Cust:

PO Item: 000001 Comm Prod: STM32F429NIH6 Qty: 30 RD: 25-Jun-18 Unit Price: 0.0000 Final Cust: 8800367006 SANSIN/NPC

Cust Part Nr: Finished Good: Partial Ship: 01 Price Pol: 05 Status: 01 Canc:

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

Project Name: Closing Date: Closing Type:

Regional Sheet: **PCN 10595**

Lab Sheet:



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Public Products List

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PCN Title : ST Muar (Malaysia) LQFP7x7 32L line transfer for STM8S/L listed products

PCN Reference : MDG/21/12675

Subject : Public Products List

Dear Customer,

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

STM8S105K4T3C	STM8L151K4T6	STM8S105K4T3CTR
STM8L152K6T6	STM8S103K3T6CTR	STM8L151K6T6
STM8L151K4T3	STM8S903K3T3C	STM8S207K6T6CTR
STM8S105K6T6CTR	STM8S903K3T6C	STM8S105K6T3CTR
STM8S103K3T3CTR	STM8L152K6T3	STM8S903K3T6CTR
STM8S207K6T3CTR	STM8S003K3T6CTR	STM8S003K3T6C
STM8S903K3T3CTR	STM8S105K6T3C	STM8L151K6T3
STM8S207K8T3CTR	STM8S105K4T6C	STM8S005K6T6C
STM8S207K8T6CTR	STM8L151K6T6TR	STM8S105K4T6CTR
STM8L152K4T6	STM8S105K6T6C	STM8L152K4T6TR
STM8S103K3T6C	STM8S207K8T6C	STM8S005K6T6CTR
STM8S207K6T6C	STM8S207K8T3C	STM8S207K6T3C
STM8S103K3T3C	STM8L151K4T6TR	



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