PRODUCT / PROCESS CHANGE INFORMATION

1. PCI basic data	
1.1 Company	STMicroelectronics International N.V
1.2 PCI No.	MICROCONTROLLERS/24/14926
1.3 Title of PCI	ASE Kaohsiung Enhanced traceability with 2D marking for LQFP7x7, LQFP10x10, LQFP14x14, LQFP20x20 & LQFP24x24 additional list of products (Addendum to PCI14718)
1.4 Product Category	All listed products
1.5 Issue date	2024-08-18

2. PCI 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
2.1.2 Marketing Manager	Veronique BARLATIER
2.1.3 Quality Manager	Pascal NARCHE

3. Change		
3.1 Category	3.2 Type of change	3.3 Manufacturing Location
Methods	Traceability (marking content, company logo, etc)	ASE Kaohsiung (Taiwan)

4. Description of change		
	Old	New
4.1 Description	Marking composition with no 2D marking	New marking composition with 2D marking for production assembly
4.2 Anticipated Impact on form,fit, function, quality, reliability or processability?	Form: Change is visible on marking area Fit : No change Function : No change Reliability : No change Processability : No change	

5. Reason / motivation for change	
5.1 Motivation	To enhance traceability
5.2 Customer Benefit	SERVICE CONTINUITY

6. Marking of parts / traceability of change	
6.1 Description	2D marking visible on top device marking

7. Timing / schedule	
7.1 Date of qualification results	2024-08-06
7.2 Intended start of delivery	2024-09-02
7.3 Qualification sample available?	Not Applicable

8. Qualification / Validation			
8.1 Description	14926 PCI14926 - validation.pdf		
8.2 Qualification report and qualification results	Available (see attachment)	Issue Date	2024-08-18

9. Attachments (additional documentations)

14926 Public product.pdf
14926 PCI14926 - validation.pdf
14926 PCI14926_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
	STM32F100VCT6	
	STM32F100VDT6	
	STM32F100VET6	
	STM32F205RGT6W	
	STM32F205VGT6V	
	STM32F205VGT6W	
	STM32F405RGT6V	
	STM32F405RGT6W	
	STM32F405VGT6V	
	STM32F405VGT6W	
	STM32F405ZGT6V	
	STM32F405ZGT6W	
	STM32G473QET6	
	STM32G474QET3	
	STM32G474QET6	
	STM32G474QET6TR	
	STM32G483QET6	
	STM32G484QET6	

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PCI 14926
ASE Kaohsiung Enhanced traceability with 2D marking for LQFP7x7, LQFP10x10, LQFP14x14, LQFP20x20 & LQFP24x24 Additional list of products – addendum to PCI 14718

Validation of the Traceability

July 2024

2D marking – 2DID Code quality check rule

For 2D quality check method is follow ISO TR29158.

2D code is auto detect by 2D reader.

Overall	A
ISO/IEC TR 29158	
Decode	A
Cell Contrast	A
Cell Modulation	A
Reflectance Margin	A
Fixed Pattern Damage	A
Axial Nonuniformity	A
Grid Nonuniformity	A
Unused Err. Correction	A
Print Growth Horizontal	A
Print Growth Vertical	A

Based on 2D quality to determine the grade.
(Follow TR29158 defined item)

- ISO/IEC TR 29158:2011 Information technology - Automatic identification and data capture techniques - Direct Part Mark (DPM) Quality Guideline

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2D marking – 2DID Code Vision Pass Rate

2D level	Mark content	2D decode
Overall A		:AA4082220482634 5

Sch	In Qty	Pass Qty	2DID fail Qty	2DID Pass Rate	2DID fail Rate
08TXP4	1764	1764	0	100%	0%

1. For mark 2DID quality is level A and no abnormal.
2. Confirm the pass rate is 100% to read 2DID.

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Marking Inspection

- The yield for 2DID inspection is 100%.

ASET Schedule	2DID inspection result	Owner
441T9K311		PE/AE

Inqty	Pass	Reject	Invalid	Yield
3409	3409			100%

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PRODUCT/PROCESS CHANGE INFORMATION
PCI14926 – Additional information

ASE Kaohsiung Enhanced traceability with 2D marking for LQFP7x7, LQFP10x10, LQFP14x14, LQFP20x20 & LQFP24x24 additional list of products – Addendum to PCI 14718

MDRF – General Purpose Microcontrollers sub-group (GPM)

What is the change?

Purpose is to homogenize the marking composition to allow better identification of STM8/STM32 products whatever the production site (for package bigger or equal to 7x7mm body size).
For all listed products marking composition will include 2D information. This enhanced traceability will allow a unique traceability per device from manufacturing to the end customer.

Codes already available on current marking:

PP : Assembly Plant code

LLL : BE sequence

WX : Wafer Diffusion Plant code

SS : A**S**sembly **S**ub-Lot

COO : Country Of Origin code

TF : Test & Finishing site code

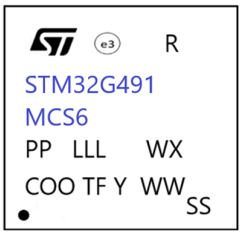
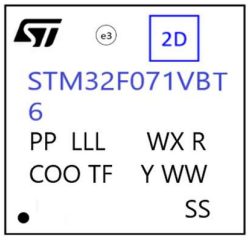
Y WW : Year Week (manufacturing date)

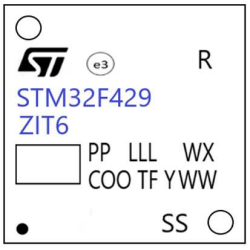
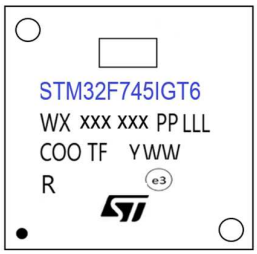
R : Additional Information (Die Version)

Impacted Assembly site	COO Country Of Origin	PP Product Plant
ASE KaoHsiung (Taiwan)	TWN	GQ

How can the change be seen?

Table below shows marking examples for different package.

	Current marking composition example	New marking composition example
Impacted Package	**Without**	**With 2D Marking**
LQFP 32 7x7x1.4 MM (5V)		
LQFP 48 7x7x1.4 MM (5B)		
LQFP 64 10x10x1.4 MM (5W)		
LQFP 80 14x14x1.4 MM (1S)		
LQFP 100 14x14x1.4 MM (1L)		

Impacted Package	Current marking composition example **Without**	New marking composition example **With 2D Marking**
LQFP144 20x20 1.4MM (1A)		
LQFP 176 24x24 1.4MM (1T)		

Some specific highlights:

- New marking will replace current marking.
- To save some space, “TF” code information has been removed from LQFP48 marking.
- Marking area is broken out into two separate lines to allow maximum information to be displayed.
    - In the new marking condition, the marking area (lines in blue color in above table) will be filled up to the last possible character of the first line and will be resumed on the second line.
- As a consequence, the cardboard box labeling will also display this change, but we may have mismatch between Box Labelling and marking composition of parts inside this box during the transition time for about a few weeks. Refer to below examples of box labeling.

Package size with box labeling examples	Box labeling before:	Box labeling after:
LQFP 32 7x7x1.4 MM	STM8S207 K8T6C V	STM8S20 7K8T6C V
LQFP 48 7x7x1.4 MM	32F100 C8T6B Z	STM32F1 00C8T6B Z
LQFP 64 10x10x1.4 MM	STM32F101 RCT6 2	STM32F101R CT6 2
LQFP 80 14x14x1.4 MM	Z STM32G491 MCS6	STM32G491MCS 6 Z
LQFP 100 14x14x1.4 MM	STM32F071 VBT6 Y	STM32F071VBT 6 Y
LQFP 144 20x20 1.4 MM	32F429ZIT6 4	STM32F429ZIT6 4
LQFP 176 24x24 1.4 MM	STM32F745IGT6 1	STM32F745IGT6 1

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PCI Title : ASE Kaohsiung Enhanced traceability with 2D marking for LQFP7x7, LQFP10x10, LQFP14x14, LQFP20x20 & LQFP24x24 additional list of products (Addendum to PCI14718)
PCI Reference : MICROCONTROLLERS/24/14926

Subject : Public Products List

Dear Customer,

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

STM32G474QCT6	STM32G473QCT6	STM32G474QET6TR
STM32G473QET6TR	STM32G474QBT6	STM32G071CBT7
STM32G473QET6	STM32G473QBT6	STM32G474QET6
STM32G483QET6	STM32G484QET6	STM32F405RGT6V
STM32F205RGT6W	STM32F205ZGT6W	STM32F405ZGT6W
STM32F205RGT6V	STM32F205VGT6V	STM32F405VGT6V
STM32F100VCT6	STM32F405RGT6W	STM32F405ZGT6V
STM32F205ZGT6V	STM32F405VGT6W	STM32F205VGT6W
STM32F100VDT6	STM32F100VET6	

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