

PRODUCT / PROCESS CHANGE NOTIFICATION

1. PCN basic data

1.1 Company		STMicroelectronics International N.V
1.2 PCN No.		MDG/20/12190
1.3 Title of PCN		ASE Kaohsiung (Taiwan) additional source for TFBGA14x14 for STM32H75 2MB products
1.4 Product Category		TFBGA14x14 for STM32H75 2MB products
1.5 Issue date		2020-09-11

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)	ASE Kaohsiung Taiwan

4. Description of change

	Old	New
4.1 Description	Back-end sources: - Amkor ATP Philippines	Back-end sources: - Amkor ATP Philippines - ASE Kaohsiung Taiwan - Additional source For more information, please refer to PCN12190 – Additional information attached document.
4.2 Anticipated Impact on form,fit, function, quality, reliability or processability?	Different manufacturing site Molding compound impacting Package darkness (color) Ball material and Package Outline Assembly (POA) dimensions changes. No other change in spec.	

5. Reason / motivation for change

5.1 Motivation	Due to the success on the market of STM32 devices, ST Microcontrollers Division decided to qualify an additional back-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	Tracability is ensure by ST internal tools. Please refer to PCN12190 Additional information attached document.
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7. Timing / schedule

7.1 Date of qualification results	2020-10-30
7.2 Intended start of delivery	2020-10-30
7.3 Qualification sample available?	Upon Request

8. Qualification / Validation

8.1 Description	12190 MDG-MCD-RERMCD2011 PCN12190 - ASE Kaohsiung additional source for TFBGA 14x14 STM32- reliability plan.pdf
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8.2 Qualification report and qualification results	Available (see attachment)	Issue Date	2020-09-11
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9. Attachments (additional documentations)

12190 Public product.pdf
 12190 MDG-MCD-RERMCD2011 PCN12190 - ASE Kaohsiung additional source for TFBGA 14x14 STM32- reliability plan.pdf
 12190 PCN12190_Authentication 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
	STM32H743XIH6	
	STM32H745XIH6	
	STM32H747XIH6	
	STM32H750XBH6	
	STM32H753XIH6	
	STM32H755XIH6	
	STM32H757XIH6	

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RERMCD2011 for PCN12190 ASE Kaohsiung (Taiwan) additional source for TFBGA 14x14

June 24th, 2020

MDG MCD Quality & Reliability Department

RERMCD2011 ASE Kh (Taiwan) additional source for TFBGA 14X14 - Package Test Vehicle

Package line	Assembly Line	Package	Device (Partial RawLine Code)	Diffusion Plants & Process	Number of Reliability Lots
BGA	TFBGA 14x14	265 balls	CV*450	ST Crolles M40	3

RERMCD2011 ASE Kh (Taiwan) additional source for TFBGA 14x14 - Package Reliability Trials

Reliability Trial & Standard		Test Conditions	Pass Criteria	Unit per Lot	Lot qty
PC	Pre Conditioning: Moisture Sensitivity Jedec Level 3 J-STD-020/ JESD22-A113	Bake (125°C / 24 hrs) Soak (30°C / 60% RH / 192 hrs) for level 3 Convection reflow: 3 passes	3 passes MSL3	231	3
TC (*)	Thermal Cycling JESD22 A104	-50°C, +150°C Or equivalent -65°C +150°C	1000Cy 500Cy	77	3
THB (*)	Temperature Humidity Bias 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			50	3
ESD	ESD Charge Device Model ANSI/ESD STM5.3.1	Aligned with device datasheet	250V	3	1

(*) tests performed after preconditioning

Thank you

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

**ASE Kaohsiung (Taiwan) additional source
For TFBGA14x14 240b for STM32H75 2MB products**

MDG - Microcontrollers Division (MCD)

What are the changes?

Changes described in table below:

	Existing back-end site	Added back-end site
Assembly site	AMKOR ATP (Philippines)	ASE Kaohsiung (Taiwan)
Die Attach Material	Ablebond 2300	ATB-125
Molding compound (1)	GE100LFCS	KE-G1250AAS
Ball material	SAC105	SACN305
POA (2)		
Max package thickness	1.1mm	1.2mm
Min Ball diam after reflow	0.350mm	0.320mm

(1) Package darkness changes depending on molding compound.

(2) All other Package Outline Assembly (POA) dimensions remain unchanged.

Note: 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?

The standard marking is:

 e2

.....
.....
 **PP**LLL WX
COO TF YWW

PP code indicates assembly traceability plant code.

Please refer to DataSheet for marking details.

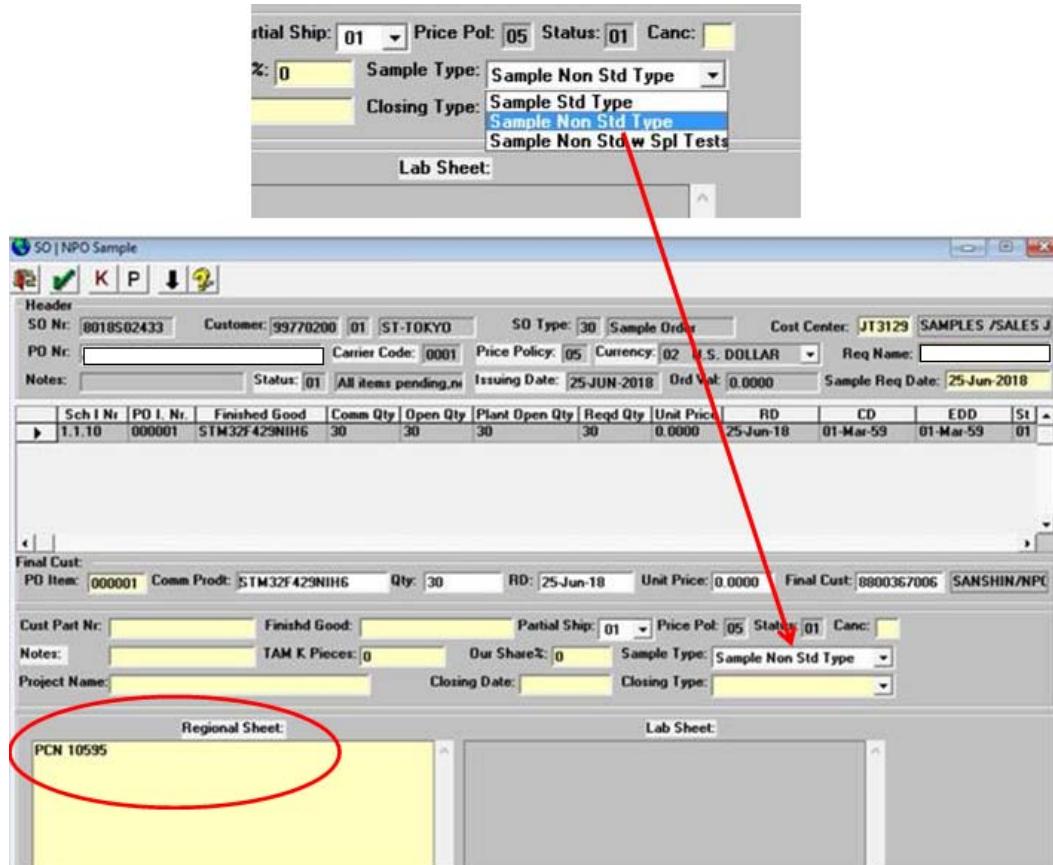
The marking is changing as follows:

Existing		Additional	
PP code	Fab	PP code	Fab
7B	Amkor ATP Philippines	AA	ASE Kaohsiung Taiwan

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 “**PCN11190**” into the NPO Electronic Sheet/**Regional Sheet**
- request sample(s) through Notice tool, indicating a single Commercial Product for each request





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 : ASE Kaohsiung (Taiwan) additional source for TFBGA14x14 for STM32H75 2MB products

PCN Reference : MDG/20/12190

Subject : Public Products List

Dear Customer,

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

STM32H743XIH6	STM32H745XGH6	STM32H750XBH6
STM32H745XIH3	STM32H747XGH6	STM32H745XIH6
STM32H753XIH6	STM32H742XGH6	STM32H755XIH6
STM32H743XGH6	STM32H742XIH6	STM32H757XIH6
STM32H747XIH6	STM32H755XIH3	



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