


PRODUCT / PROCESS CHANGE NOTIFICATION

1. PCN basic data

1.1 Company	 STMicroelectronics International N.V
1.2 PCN No.	MDG/24/14661
1.3 Title of PCN	JSCC (China) UFQFPN 7X7 48L new BOM for STM32U53/545x STM32U57/585x listed products.
1.4 Product Category	STM32U535x STM32U545x, STM32U575x, STM32U585x
1.5 Issue date	2024-04-11

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
2.1.2 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
Materials	Direct Material: Bond Wire - Metallurgy (metallic composition/ raw material)	JSCC (China)

4. Description of change

	Old	New
4.1 Description	Assembly lines / wire bonding: - JSCC (China) / Gold wire	Assembly lines / wire bonding: - JSCC (China) / Gold wire - JSCC (China) / Copper Palladium wire additional source
4.2 Anticipated Impact on form,fit, function, quality, reliability or processability?	no impact on form, Fit, Function	

5. Reason / motivation for change

5.1 Motivation	To improve service
5.2 Customer Benefit	SERVICE IMPROVEMENT

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	2024-05-15
7.2 Intended start of delivery	2024-05-30
7.3 Qualification sample available?	Upon Request

8. Qualification / Validation

8.1 Description	14661 MDRF-GPM-RER2401 PCN14536-PCN14661 - JSCC QFN package CuPd_ STM32 lstd prd - rel plan.pdf		
8.2 Qualification report and qualification results	Available (see attachment)	Issue Date	2024-04-11

9. Attachments (additional documentations)
14661 Public product.pdf 14661 MDRF-GPM-RER2401 PCN14536-PCN14661 - JSCC QFN package CuPd_ STM32 Istd prd - rel plan.pdf 14661 PCN14661_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
	STM32U545CEU6Q	
	STM32U575CIU6Q	
	STM32U585CIU6	
	STM32U585CIU6Q	

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MDG-GPM-RER2401

JSCC(China) UFQFPN 5X5 32L, UFQFPN 7X7 48L and VFQFPN 8X8 68L new BOM for STM32H50x & STM32H56x/H7x listed product

Reliability Evaluation Plan

10 April, 2024

MDRF GPM Quality & Reliability Department



MDG-GPM-RER2401 JSCC(China) UFQFPN 5X5 32L, UFQFPN 7X7 48L and VFQFPN 8X8 68L new BOM Package Test Vehicles

Package line	Assembly Line	Package	Device (RawLine Code)	Diffusion Process Plant	Number of Reliability Lots	Full
UQFN	UQFPN 7x7	48L	MI*474	Crolles E40	1	Full
	UQFPN 7x7	48L	MI*455	TSMC N40	2	Full

Reliability strategy:

- Reliability will be performed on 3 lots from representative test vehicles of STM32H50x & STM32H56x/H7x listed products, to cover both Crolles E40 / TSMC N40 technologies. Refer to details in above and next tables.

MDG-GPM-RER2401

JSCC(China) UFQFPN 5X5 32L, UFQFPN 7X7 48L and VFQFPN 8X8 68L
new BOM

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	308 (for 474) or 271 (for 455)	3
Uhast(*)	UnBiased Highly Accelerated Temperature and Humidity Stress JESD22 A118	130°C, 85%RH, 2.3 atm	96h 168h for monitoring	77	3
TC(*)	Thermal Cycling JESD22 A104	-65°C +150°C	500cy 1000cy for monitoring	77	3
THB(*)	Biased temperature & humidity stress JESD22 A101	85°C, 85% RH bias	1000h	77 (for 474) or 40 (for 455)	3
HTSL(*)	High Temperature Storage Life JESD22 A103	150°C- no bias	1000h	77	3
Construction analysis	JESDB100/B108 ST internal specifications	Construction analysis including physical dimensions measurement, Ball shear, pull test	NA	50	2
ESD	ESD Charge Device Model JEDEC JS-002	Aligned with device datasheet	Aligned with device datasheet	3	2

(*) tests performed after preconditioning

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**PRODUCT/PROCESS
CHANGE NOTIFICATION**

PCN14661 – Additional information

**JSCC (China) UFQFPN 7X7 48L new BOM for STM32U53/545x
STM32U57/585x listed products.**

MDRF – General Purpose Microcontrollers Division (GPM)

What are the changes?

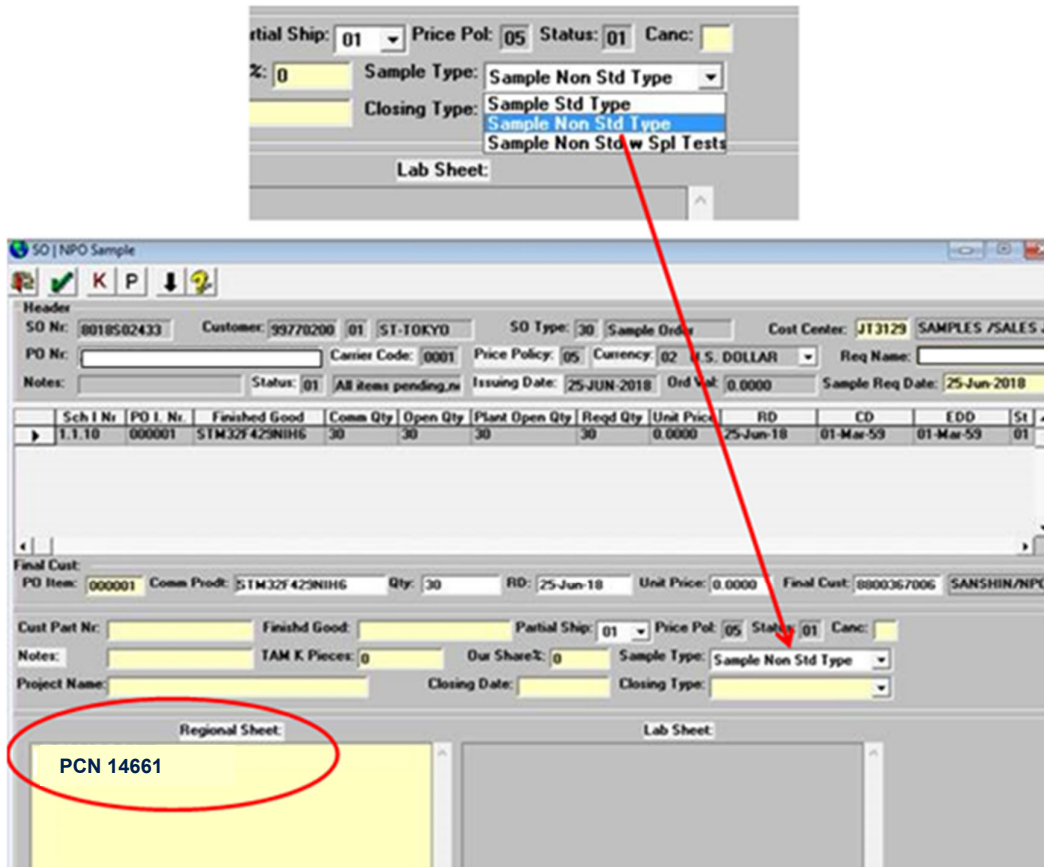
Changes described in table below:

	Existing back-end line	Added back-end line
Assembly site	StatsChipPAC JSCC Jiangyin (China)	
Molding Compound	SUMITOMO G770	Sumitomo G631BQ-CJ
Wire	Gold 0.8mil	Copper Palladium 0.8mil

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 "**PCN14661**" into the NPO Electronic Sheet/**Regional Sheet**.
- request sample(s) through Notice tool, indicating a single Commercial Product for each request.



The screenshot displays the NPO Sample software interface. At the top, a dropdown menu for 'Sample Type' is open, showing options: 'Sample Std Type', 'Sample Non Std Type' (highlighted), and 'Sample Non Std w Spl Tests'. A red arrow points from this menu to the 'Sample Type' field in the main form. The main form includes fields for 'SO No.', 'Customer', 'SO Type', 'Cost Center', 'PO No.', 'Carrier Code', 'Price Policy', 'Currency', 'Req Name', 'Status', 'Issuing Date', 'Ord Val', and 'Sample Req Date'. Below these is a table with columns: 'Sch 1 Nr', 'PO 1. Nr', 'Finished Good', 'Comm Qty', 'Open Qty', 'Plant Open Qty', 'Reqd Qty', 'Unit Price', 'RD', 'CD', 'EDD', and 'St'. The table contains one row with data. Below the table, there are fields for 'Final Cust', 'PO Item', 'Comm Prod', 'Qty', 'RD', 'Unit Price', and 'Final Cust'. Further down, there are fields for 'Cust Part Nr', 'Finishd Good', 'Partial Ship', 'Price Pol', 'Status', 'Canc', 'Notes', 'TAM K Pieces', 'Our Share%', 'Sample Type', 'Closing Date', and 'Closing Type'. At the bottom, there are two tabs: 'Regional Sheet' and 'Lab Sheet'. The 'Regional Sheet' tab is active, and it contains the text 'PCN 14661' circled in red.

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Public Products List

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PCN Title : JSCC (China) UFQFPN 7X7 48L new BOM for STM32U53/545x STM32U57/585x listed products.

PCN Reference : MDG/24/14661

Subject : Public Products List

Dear Customer,

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

STM32U575CGU3	STM32U575CGU6	STM32U585CIU6
STM32U585CIU6Q	STM32U535CCU6	STM32U575CIU6
STM32U585CIU3Q	STM32U535CCU6TR	STM32U575CGU3Q
STM32U535CEU6Q	STM32U545CEU6	STM32U535CEU6
STM32U575CGU6Q	STM32U575CGU6TR	STM32U535CBU6Q
STM32U575CIU6Q	STM32U545CEU6TR	STM32U535CCU6Q
STM32U545CEU6Q	STM32U585CIU6TR	STM32U535CEU6QTR
STM32U535CBU6		

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