


**PRODUCT / PROCESS CHANGE NOTIFICATION**

**1. PCN basic data**

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

**2. PCN Team**

|                                  |                            |
|----------------------------------|----------------------------|
| <b>2.1 Contact supplier</b>      |                            |
| <b>2.1.1 Name</b>                | PIKE EMMA                  |
| <b>2.1.2 Phone</b>               | +44 1628896111             |
| <b>2.1.3 Email</b>               | emma.pike@st.com           |
| <b>2.2 Change responsibility</b> |                            |
| <b>2.2.1 Product Manager</b>     | Ricardo Antonio DE SA EARP |
| <b>2.1.2 Marketing Manager</b>   | Veronique BARLATIER        |
| <b>2.1.3 Quality Manager</b>     | Pascal NARCHE              |

**3. Change**

|                     |  |                                   |
|---------------------|--|-----------------------------------|
| <b>3.1 Category</b> | <b>3.2 Type of change</b>  | <b>3.3 Manufacturing Location</b> |
| Materials           | Direct Material: Bond Wire - Metallurgy (metallic composition/ raw material) | JSCC (China)                      |

**4. Description of change**

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

**5. Reason / motivation for change**

|                             |                     |
|-----------------------------|---------------------|
| <b>5.1 Motivation</b>       | To improve service  |
| <b>5.2 Customer Benefit</b> | SERVICE IMPROVEMENT |

**6. Marking of parts / traceability of change**

|                        |   |
|------------------------|---|
| <b>6.1 Description</b> | traceability ensured by ST Internal tools |
|------------------------|---|

**7. Timing / schedule**

|  |              |
|--|--------------|
| <b>7.1 Date of qualification results</b>   | 2024-05-15   |
| <b>7.2 Intended start of delivery</b>      | 2024-05-30   |
| <b>7.3 Qualification sample available?</b> | Upon Request |

**8. Qualification / Validation**

|   |   |                   |            |
|---|---|-------------------|------------|
| <b>8.1 Description</b>                                    | 14661 MDRF-GPM-RER2401 PCN14536-PCN14661 - JSCC QFN package CuPd_ STM32 lstd prd - rel plan.pdf |                   |            |
| <b>8.2 Qualification report and qualification results</b> | Available (see attachment)  | <b>Issue Date</b> | 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  |
|                         | STM32U535CEU6Q          |                          |
|                         | STM32U545CEU6Q          |                          |
|                         | STM32U575CIU6Q          |                          |
|                         | STM32U585CIU6           |                          |

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**PRODUCT/PROCESS  
CHANGE NOTIFICATION  
PCN14661 – Additional information**

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

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**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 |



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## 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.

Partial Ship: 01 Price Pol: 05 Status: 01 Canc:

Share: 0 Sample Type: Sample Non Std Type

Closing Type: Sample Std Type  
Sample Non Std Type  
Sample Non Std w Spl Tests

Lab Sheet:

SO | NPO Sample

Header  
SO Nr: 0018502433 Customer: 99778200 01 ST-TOKYO SO Type: 30 Sample Order Cost Center: JT3129 SAMPLES /SALES J

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

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

| Sch I Nr | PD 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:  
PD Item: 000001 Comm Prod: STM32F429NIH6 Qty: 30 RD: 25-Jun-18 Unit Price: 0.0000 Final Cust: 0000367006 SANSHIN/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 14661** Lab Sheet:



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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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## **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**



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

## Package Test Vehicles

| Package line | Assembly Line | Package | Device<br>(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                              |   |
|------------------------------|---|--|--------------------------------|--------------------------------------|---|
| <b>PC</b>                    | Pre Conditioning: Moisture Sensitivity<br>Jedec Level 3<br><br>J-STD-020/ JESD22-A113 | Bake (125°C / 24 hrs)<br>Soak (30°C / 60% RH / 192 hrs) for level 3<br>Convection reflow: 3 passes | 3 passes MSL3                  | 308 (for 474)<br>or<br>271 (for 455) | 3 |
| <b>Uhast(*)</b>              | UnBiased Highly Accelerated<br>Temperature and Humidity Stress<br>JESD22 A118         | 130°C, 85%RH, 2.3 atm  | 96h<br>168h for monitoring     | 77                                   | 3 |
| <b>TC(*)</b>                 | Thermal Cycling<br>JESD22 A104  | -65°C +150°C   | 500cy<br>1000cy for monitoring | 77                                   | 3 |
| <b>THB(*)</b>                | Biased temperature & humidity stress<br>JESD22 A101                                   | 85°C, 85% RH<br>bias   | 1000h                          | 77 (for 474)<br>or<br>40 (for 455)   | 3 |
| <b>HTSL(*)</b>               | High Temperature Storage Life<br>JESD22 A103  | 150°C- no bias   | 1000h                          | 77                                   | 3 |
| <b>Construction analysis</b> | JESDB100/B108<br>ST internal specifications   | Construction analysis including physical<br>dimensions measurement, Ball shear, pull test          | NA                             | 50                                   | 2 |
| <b>ESD</b>                   | ESD Charge<br>Device Model<br>JEDEC JS-002  | Aligned with device datasheet  | Aligned with device datasheet  | 3                                    | 2 |

(\*) tests performed after preconditioning

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