


**PRODUCT / PROCESS CHANGE NOTIFICATION**

**1. PCN basic data**

<b>1.1 Company</b>		STMicroelectronics International N.V
<b>1.2 PCN No.</b>	MDG/24/14363	
<b>1.3 Title of PCN</b>	JSCC (China) LQFP7x7 32L/48L , LQFP10x10 64L and LQFP12x12 80L package copper palladium bonding wire introduction on STM32C0x, STM32G0/G4x, STM32H5/H7x, STM32L4/L5x and STM32U5x listed products	
<b>1.4 Product Category</b>	STM32C0, STM32G0, STM32G4 STM32H5, STM32H7 STM32L4, STM32L5 STM32U5	
<b>1.5 Issue date</b>	2024-04-12	

**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>	Current Wire bonding material: - JSCC (China) Gold wire or Silver wire - ASE Kaohsiung (Taiwan) Gold wire or Copper Palladium wire	Current Wire bonding material: - JSCC (China) Gold wire or Silver wire - ASE Kaohsiung (Taiwan) Gold wire or Copper Palladium wire Added Wire bonding material : - JSCC (China) Copper Palladium wire
<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
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**7. Timing / schedule**

<b>7.1 Date of qualification results</b>	2024-06-17
<b>7.2 Intended start of delivery</b>	2024-06-30
<b>7.3 Qualification sample available?</b>	Upon Request

**8. Qualification / Validation**

<b>8.1 Description</b>	14363 RER2321 JSCC LQFP7x7-10x10-12x12 CuPd wire introduct on STM32 - rel plan.pdf
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8.2 Qualification report and qualification results	Available (see attachment)	Issue Date	2024-04-12
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9. Attachments (additional documentations)	
14363 Public product.pdf 14363 RER2321 JSCC LQFP7x7-10x10-12x12 CuPd wire introduct on STM32 - rel plan.pdf 14363 PCN14363_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
	STM32L462RET6	
	STM32L471RET6	
	STM32L475RCT6	
	STM32L476RET6	
	STM32L476RGT6	
	STM32L496RGT3	

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## 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 :** JSCC (China) LQFP7x7 32L/48L , LQFP10x10 64L and LQFP12x12 80L package copper palladium bonding wire introduction on STM32C0x, STM32G0/G4x, STM32H5/H7x, STM32L4/L5x and STM32U5x listed products

**PCN Reference :** MDG/24/14363

**Subject :** Public Products List

Dear Customer,

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

STM32G030C6T6TR	STM32G071R8T6	STM32G071RBT7TR
STM32G071CBT6	STM32G031K8T3	STM32G431CBT6
STM32L476RCT6	STM32G031C8T6	STM32G431R6T6
STM32G031C6T6	STM32G474RCT3	STM32G070CBT6TR
STM32G031K8T6	STM32G071C8T6	STM32L452RET6
STM32L452RET6P	STM32G431RBT6	STM32G031K8T7TR
STM32G474MBT6TR	STM32G473CBT6	STM32G0C1RCT3
STM32G474RCT3TR	STM32G071KBT3	STM32G431RBT6TR
STM32L476RET6TR	STM32L475RET6TR	STM32G071C8T3
STM32G070KBT6	STM32G0B0CET6TR	STM32G031C4T6
STM32U575RGT3	STM32G030K6T6	STM32G031K8T6TR
STM32L443RCT6	STM32G071CBT6TR	STM32G071CBT7
STM32G071KBT6N	STM32G431CBT6TR	STM32G031C8T7
STM32L412CBT6TR	STM32G473RBT6	STM32L475RGT6
STM32G051C8T6	STM32G0B1CET6N	STM32U545CET6Q
STM32G070RBT6	STM32L412CBT3TR	STM32G431RBT3
STM32G051K8T7TR	STM32L452CET6P	STM32U535RCT6
STM32G071K8T3	STM32L496RET6	STM32G431K8T3
STM32G071CBT3	STM32G031K8T7	STM32G030K6T6TR
STM32U545RET6Q	STM32G0B1RCT6TR	STM32G081KBT6
STM32G041C8T6	STM32L433RCT6P	STM32G041K6T6
STM32G473CBT3	STM32L486RGT6	STM32L422CBT6
STM32G431CBT3TR	STM32G081RBT3	STM32G071RBT7
STM32L433RBT6	STM32G0C1RCT6	STM32C031C4T6TR
STM32U575RGT6	STM32L433CBT6	STM32G030C8T6
STM32G474RCT6	STM32G441KBT6	STM32U585RIT6QTR
STM32H563RGT6	STM32G031K8T3TR	STM32G071KBT6
STM32G0B1RCT7	STM32L476RGT6TR	STM32G071RBT3
STM32G0B1RCT6	STM32L452RET6TR	STM32G0C1KET6N
STM32G071CBT7TR	STM32L431RCT6TR	STM32G030K8T6TR
STM32G070RBT6TR	STM32U585RIT6Q	STM32G474CCT6
STM32G070CBT6	STM32G071K8T3TR	STM32G031K4T6
STM32G081RBT6	STM32G041C6T6	STM32L475RGT7
STM32G441RBT6	STM32G071KBT6TR	STM32L475RGT6TR
STM32G0B1RBT6	STM32L476RCT6TR	STM32G431CBT3

STM32G474CCT6TR	STM32G431K8T3TR	STM32L486RGT7
STM32G474MBT3	STM32G4A1RET6	STM32L452CET6
STM32L452RET3	STM32G071C8T6TR	STM32G071RBT6
STM32G491RCT6	STM32G0B1CCT6TR	STM32U585RIT6
STM32G473RBT6TR	STM32H7B0RBT6	STM32G061K8T6
STM32L433CBT7	STM32L471RGT6TR	STM32G030K8T6
STM32G0C1MET6	STM32G431RBT3TR	STM32G081CBT6TR
STM32G031K6T6	STM32C031K6T7	STM32U585CIT6
STM32L451RET6TR	STM32L471RET3	STM32L486RGT6TR
STM32U535CCT6	STM32L422RBT6	STM32G051C8T3
STM32G0B1RBT6N	STM32G474MBT6	STM32L431RCT6
STM32L552CET6P	STM32G431KBT6TR	STM32U575CGT6
STM32U535RET6TR	STM32G474MET6TR	STM32G081RBT6TR
STM32C031C6T7	STM32U535RET6Q	STM32G030C6T6
STM32L462RET6	STM32G041K8T6	STM32L433RCT6
STM32L475RCT7	STM32L433RCT3TR	STM32L486RGT7TR
STM32U535RCT6Q	STM32U535CET6Q	STM32U545RET6
STM32L433RCT6TR	STM32G0B0RET6TR	STM32G0B1CBT6N
STM32G431K8T6TR	STM32G474MET3TR	STM32G431KBT3TR
STM32G473CET3TR	STM32G441CBT6	STM32L412K8T6TR
STM32G473RET6	STM32G491CET6	STM32C031K6T6
STM32G070KBT6TR	STM32L431RBT6	STM32L471RGT6
STM32H7A3RIT6	STM32G0C1KCT6N	STM32U575CIT6Q
STM32U575RGT6TR	STM32L452RCT6TR	STM32G081CBT6
STM32G484CET6	STM32U575CIT6	STM32G4A1CET6
STM32G0B1CCT7TR	STM32G0B1RET6N	STM32G0B0RET6
STM32G0B1KCT6N	STM32G473RET3	STM32G0B1KET6N
STM32C031C4T6	STM32L4P5RGT6P	STM32L552RET6
STM32L412C8T6	STM32L431CCT6	STM32U575RIT6Q
STM32C031C6T6TR	STM32G483RET6	STM32L476RET6
STM32C031K4T7TR	STM32G0C1RET6	STM32U585CIT3TR
STM32G050C6T6	STM32L452RCT6	STM32G483CET6
STM32G0B1KBT6	STM32G484MET6	STM32C031K4T7
STM32L476RGT6	STM32L471RET3TR	STM32L4A6RGT7TR
STM32L471RET6	STM32G491MCT6	STM32U575RIT3
STM32H7A3RGT6	STM32G473MBT3TR	STM32L412RBT3
STM32G431R8T6	STM32G0B1CCT6	STM32L471RET6TR
STM32L475RCT6	STM32L475RCT3	STM32G431MBT3
STM32L4P5CGT6P	STM32G0B0KET6	STM32L562RET6P
STM32U585CIT6Q	STM32U585CIT3	STM32U585RIT3TR
STM32G0B1RET6	STM32G0B1KBT3	STM32G431MBT6
STM32L431RBT6TR	STM32C031C6T6	STM32L462RET6TR
STM32L412RBT6	STM32L496RGT3	STM32L475RET6
STM32U585RIT6TR	STM32L412CBT3	STM32L496RGT6TR
STM32L475RCT7TR	STM32G0B1KBT6N	STM32L422KBT6
STM32G061K6T6	STM32G050K8T6	STM32L552RET6Q
STM32L476RGT3	STM32G483CET3	STM32L412R8T6TR
STM32U575RGT6Q	STM32L431CBT6TR	STM32U535RET6
STM32L412CBT6	STM32G474CBT3	STM32L443RCT6TR
STM32U545CET6	STM32L496RGT6	STM32L496RGT3TR

STM32L451RCT6	STM32L433RCT3	STM32G474CBT6TR
STM32G4A1MET6	STM32G051C8T3TR	STM32U535CCT6Q
STM32L412CBT6P	STM32L4P5CET6	STM32G474MCT6
STM32G484RET3	STM32G484RET6	STM32H503CBT6
STM32G474MCT3	STM32G473CCT3	STM32G473RCT6TR
STM32L431CBT6	STM32L451RCT3	STM32G491RET6TR
STM32G051K8T6	STM32L562CET6	STM32G0B1CBT6
STM32U575RIT6	STM32G0B1CBT3	STM32H503RBT7
STM32G473MCT3TR	STM32G431K6T6	STM32G474MBT3TR
STM32G0B1CET6TR	STM32L475RGT7TR	STM32G4A1MET3
STM32H562RGT6TR	STM32G473MCT6TR	STM32L4A6RGT6P
STM32G0B1MCT6	STM32L412R8T6	STM32G491RCT6TR
STM32L496RGT6P	STM32L412RBT6TR	STM32L431CBT3
STM32L496RET6TR	STM32U535RBT6Q	STM32G0B1KET6
STM32H563RIT6	STM32G474CET3TR	STM32L4A6RGT7
STM32L562RET6TR	STM32L4Q5CGT6	STM32G0C1KET6
STM32G491MET6	STM32G050C8T6	STM32U535RET6QTR
STM32U535CBT6Q	STM32H7B3RIT6	STM32L4A6RGT6TR
STM32U535CBT6	STM32L433CCT6TR	STM32G473MET6
STM32G491CCT6TR	STM32C031C6T7TR	STM32L552CCT6
STM32C031K4T6	STM32H562RIT6	STM32L443CCT6
STM32L4A6RGT6	STM32L443CCT6TR	STM32G483MET6
STM32L552RCT6	STM32G0B1RBT3TR	STM32G431M8T6
STM32H7A3RIT6TR	STM32L451RCT3TR	STM32U535RBT6
STM32G0B1RBT7TR	STM32G491CCT6	STM32C031K6T7TR
STM32L412RBT6P	STM32G474MCT6TR	STM32G473CCT6TR
STM32H503RBT6	STM32G031K6T7TR	STM32G474RBT3TR
STM32L4P5RGT6	STM32G0C1CET6	STM32G491CCT3
STM32G061C6T6	STM32G474CBT3TR	STM32G050K6T6
STM32L552RCT3	STM32U545RET3	STM32L433CCT3TR
STM32G474RBT6TR	STM32G473MET3	STM32L431CBT3TR
STM32G051C6T6	STM32U575CGT6Q	STM32L4Q5RGT3
STM32U585RIT3	STM32G473MCT6	STM32L562RET6
STM32G0B1MBT6	STM32G0B1CET6	STM32G473MCT3
STM32L451CET6	STM32L4Q5RGT6	STM32G431C6T6
STM32G473CCT3TR	STM32G474MCT3TR	STM32G431C8T6TR
STM32G474RET3TR	STM32L562CET6P	STM32G474RET3
STM32G431M6T6	STM32G431C8T6	STM32G474RET6TR
STM32G491RET6	STM32G051K6T6	STM32G474CET3
STM32G061C8T6	STM32G0C1MCT6	STM32L552RET6TR
STM32H573RIT6	STM32G050K6T6TR	STM32G431KBT3
STM32L4Q5RGT6P	STM32L412KBT6	STM32G474CET6
STM32G431C8T3	STM32G431C8T3TR	STM32L433CCT6
STM32L4Q5CGT6P	STM32G0B1KBT3TR	STM32L412KBT3
STM32L462CET6P	STM32H503CBT7	STM32G474RET6
STM32H562RGT6	STM32G473RCT6	STM32G431KBT6
STM32L433CCT3	STM32L562CET3P	STM32G474RBT3
STM32U535CET6	STM32G491RET3	STM32L4P5CGT6
STM32L4P5RET6	STM32L462CET6	STM32G474MET6
STM32G473CET3	STM32G0B0CET6	STM32L431CCT6TR

STM32L451RET6	STM32G0B1MET6	STM32G473MBT6
STM32G0B1KCT6	STM32G473RET3TR	STM32L412KBT3TR
STM32G431K8T6	STM32G491MET3	STM32G0B1CCT7
STM32G473MBT3	STM32L562RET6Q	STM32G031K6T7
STM32U585RIT3Q	STM32L412K8T6	STM32G474RBT6
STM32L552RET6P	STM32G473CET6	STM32L552CET6
STM32G474MET3	STM32G441MBT6	STM32G473RET6TR

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**PRODUCT/PROCESS  
CHANGE NOTIFICATION**

**PCN14363 – Additional information**

**JSCC (China) LQFP7x7 32L/48L, LQFP10x10 64L and LQFP12x12 80L package copper palladium bonding wire introduction on STM32C0x, STM32G0/G4x, STM32H5/H7x, STM32L4/L5x and STM32U5x 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	ASE		StatsChipPAC JSCC Jiangyin (China)		
Molding Compound	Sumitomo EME-G631SH		Sumitomo EME-G631SHQ		Sumitomo EME-G700LA type LA
GLUE	SUMITOMO EPOXY CRM 1076WA	HITACHI EN4900G	Die Attach Loctite Ablestik 3230		HITACHI EN4900GC
Wire	Gold 2N 0.8mil	Copper Palladium 0.8mil	Gold 0.8mil	Silver 96.5% 0.8mil	Copper Palladium 0.8mil
Marking composition	Without 2D	With 2D Marking	Without 2D		With 2D Marking
PP code on marking	AA		GQ		



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### How can the change be seen?

Package top view Marking will display the 2D marking

Examples in below table

	Without 2D	With 2D
<b>LQFP 7x7 32L/48L</b>	<p>Diagram showing the marking layout for LQFP 7x7 32L/48L without 2D. It includes two Product Identification fields, an Assembly Plant field with 'PP', a Date Code field with 'Y WW', a Pin 1 indicator, the ST logo, and a Revision code field.</p>	<p>Diagram showing the marking layout for LQFP 7x7 32L/48L with 2D. It includes the ST logo, a circle with '2D', two Product Identification fields, an Assembly Plant field with 'PP', a Date Code field with 'Y WW', a Pin 1 indicator, and a Revision code field.</p>
<b>LQFP 10x10 64L</b>	<p>Diagram showing the marking layout for LQFP 10x10 64L without 2D. It includes a Logo field, a Revision code field, two Product Identification fields, an Assembly Plant field with 'PP', a Date Code field with 'Y WW', a Pin 1 indicator, the ST logo, and a circle with 'e3'.</p>	<p>Diagram showing the marking layout for LQFP 10x10 64L with 2D. It includes the ST logo, a circle with 'e3', a circle with '2D', two Product Identification fields, an Assembly Plant field with 'PP', a Date Code field with 'Y WW', a Pin 1 indicator, and a Revision code field.</p>
<b>LQFP 12x12 80L</b>	<p>Diagram showing the marking layout for LQFP 12x12 80L without 2D. It includes the ST logo, a circle with 'e3', two Product Identification fields, an Assembly Plant field with 'PP', a Date Code field with 'Y WW', a Pin 1 indicator, and a Revision code field.</p>	<p>Diagram showing the marking layout for LQFP 12x12 80L with 2D. It includes the ST logo, a circle with 'e3', a circle with '2D', two Product Identification fields, an Assembly Plant field with 'PP', a Date Code field with 'Y WW', a Pin 1 indicator, and a Revision code field.</p>

**Y WW** : Year Week (manufacturing date)

**PP** : Assembly Plant code

Please refer to Technical Note **TN1433** for package marking details.



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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 "**PCN14363**" 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 1 Nr	PD 1. 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 14363** Lab Sheet:



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**MDRF-GPM-RER2321 PCN14363**

**JSCC LQ7x7-10x10-12x12**

**CuPd wire introduction on STM32  
listed products**

## **Reliability Evaluation Plan**

8- April , 2024

MDRF GPM Q&R

# MDRF-GPM-RER2321 PCN14363 JSCC LQ7x7-10x10-12x12 CuPd wire introduction on STM32 listed products

## Package Test Vehicles

Package line	Assembly Line	Package	Version	Device (RawLine Code)	Diffusion Process Plant	Number of Reliability Lots
LQFP	LQFP 7x7	32L	Legacy	5V*466	TSMC 90nm	1
	LQFP 7x7	48L	Legacy	5B*469	TSMC 90nm	1
	LQFP 12X12	80L	Legacy	9X*467	TSMC 90nm	1
	LQFP 10x10	64L	Legacy	5W*455	TSMC N40	1
	LQFP 10x10	64L	Legacy	5W*474	Crolles E40	1

Qualification strategy:

JSCC LQFP copper wire assembly line will be qualified with 3 qual lots in N90 TSMC technology. Then N40 TSMC and E40 Crolles will be qualified on the line.



# MDRF-GPM-RER2321 PCN14363 JSCC LQ7x7-10x10-12x12 CuPd wire introduction on STM32 listed products

## Reliability plan

(\*) tests performed after preconditioning

Reliability Trial & Standard	Test Conditions	Pass Criteria	Unit per Lot	Lot qty	
<b>PC</b>	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	5
<b>Uhast(*)</b>	UnBiased Highly Accelerated Temperature and Humidity Stress JESD22 A118	130°C, 85%RH, 2.3 atm	96h	77	5
<b>TC(*)</b>	Thermal Cycling JESD22 A104	-65°C +150°C	500cy	77	5
<b>THB(*)</b>	Biased temperature & humidity stress JESD22 A101	85°C, 85% RH bias	1000h	77	5
<b>HTSL(*)</b>	High Temperature Storage Life JESD22 A103	150°C- no bias	1000h	77	5
<b>Construction analysis</b>	ST internal specifications	Ball shear, pull test, IMC inspection , internal analysis	NA	50	5
<b>ESD</b>	ESD Charge Device Model JEDEC JS-002	Aligned with device datasheet	Aligned with device datasheet	3	5

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