



## Product Change Notification: MFOL-300MBY736

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### Date:

31-Jan-2025

### Product Category:

Ethernet Phys

### Notification Subject:

CCB 7393 Initial Notice: Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material and 3280NP as a new die attach material for selected KSZ8051, KSZ8081, and KSZ8091 device families available in 32L VQFN (5x5x0.9mm) package at MTAI assembly site.

### Affected CPNs:

**MFOL-300MBY736\_Affected\_CPN\_01312025.pdf**

**MFOL-300MBY736\_Affected\_CPN\_01312025.csv**

**PCN Status:** Initial Notification

**PCN Type:** Manufacturing Change

**Microchip Parts Affected:** Please open one of the files found in the Affected CPNs section.

Note: For your convenience Microchip includes identical files in two formats (.pdf and .xls)

**Description of Change:** Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material and 3280NP as a new die attach material for selected KSZ8051, KSZ8081, and KSZ8091 device families available in 32L VQFN (5x5x0.9mm) package at MTAI assembly site.

### Pre and Post Summary Changes:

	Pre Change	Post Change
Assembly Site	Microchip Technology Thailand (HQ) (MTAI)	Microchip Technology Thailand (HQ) (MTAI)



**Method to Identify Change:** Traceability Code

**Qualification Plan:** Please open the attachments included with this PCN labeled as PCN\_#\_Qual\_Plan.

**Revision History:** February 04, 2025: Issued initial notification.

**Note:** The change described in this PCN does not alter Microchip's current regulatory compliance regarding the material content of the applicable product.

## **Attachments:**

**PCN\_MFOL-300MBY736\_Qual Plan.pdf**

Please contact your local **Microchip sales office** with questions or concerns regarding this notification.

## **Terms and Conditions:**

If you wish to receive Microchip PCNs via email please register for our PCN email service at our **PCN home page** select register then fill in the required fields. You will find instructions about registering for Microchips PCN email service in the **PCN FAQ** section.

If you wish to change your PCN profile, including opt out, please go to the **PCN home page** select login and sign into your myMicrochip account. Select a profile option from the left navigation bar and make the applicable selections.

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Affected Catalog Part Numbers (CPN)

KSZ8081MNXCA  
KSZ8081MNXIA  
KSZ8091MNXCA  
KSZ8091RNBCA  
SPNZ801174  
KSZ8081RNBCA-TR  
KSZ8091RNBCA-TR  
KSZ8081MNXCA-TR  
KSZ8091MNXCA-TR  
KSZ8081MNXIA-TR  
KSZ8091MNXIA-TR  
KSZ8081RNBIA-TR  
KSZ8091RNBIA-TR  
KSZ8051RNLV  
KSZ8051RNLV-TR



**MICROCHIP**

## **QUALIFICATION PLAN SUMMARY**

**PCN #: MFOL-30OMBY736**

**Date:**

**January 30, 2025**

**Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material and 3280NP as a new die attach material for selected KSZ8051, KSZ8081, and KSZ8091 device families available in 32L VQFN (5x5x0.9mm) package at MTAI assembly site.**

**Purpose:** Qualification of palladium coated copper with gold flash (CuPdAu) as a new bond wire material and 3280NP as a new die attach material for selected KSZ8051, KSZ8081, and KSZ8091 device families available in 32L VQFN (5x5x0.9mm) package at MTAI assembly site.

**CCB No.:** 7393

<b><u>Misc.</u></b>	Assembly site	MTAI
	BD Number	BD-002990
	MP Code (MPC)	XKAA1TPFAA14
	Part Number (CPN)	KSZ8081RNBIA-TR
	MSL information	MSL-2
	Assembly Shipping Media (T/R, Tube/Tray)	T/R
	Base Quantity Multiple (BQM)	1000
	Reliability Site	MTAI
<b><u>Lead Frame</u></b>	Paddle size	150 x 150
	Material	A194
	DAP Surface Prep	Ag selective
	Treatment	Roughened
	Process	Etched
	Lead-lock (Locking Hole, Half Etched, Dimple, etc. If none, please put No or N/A)	Yes
	Part Number	10103214
	Lead Plating	Matte tin
<b><u>Bond Wire</u></b>	Material	CuPdAu
<b><u>Die Attach</u></b>	Part Number	3280NP
	Conductive	Yes
<b><u>MC</u></b>	Part Number	G700LTD
<b><u>PKG</u></b>	Package Type	VQFN
	Pin/Ball Count	32
	PKG width/size	5x5

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	ATE Test Site	REL test site	Special Instruction
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	1	5	0 fails after TC	5			30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5	0	5			30 bonds from a min. 5 devices.
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5			
HTSL (High Temp Storage Life)	JESD22-A103. +175 C for 504 hours  Electrical test pre and post stress at +25C and hot temp 85C.	45	5			0	10	MTAI	MTAI	
Preconditioning - Required for surface mount devices	JESD22-A113. +150°C Bake for 24 hours, moisture loading requirements per MSL level + 3X reflow at peak reflow temperature per Jedec-STD-020E for package type; Electrical test pre and post stress at +25°C and 85C. Perform SAM (C-SCAN) analysis using 45 samples per lot.  MSL2/260	231	15	3	738	0	15	MTAI	MTAI	Spares should be properly identified. 77 parts from each lot to be used for HAST, uHAST, Temp Cycle test.

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	ATE Test Site	REL Test site	Special Instruction
HAST	JESD22-A110. +130°C/85% RH for 96 hours  Electrical test pre and post stress at +25°C and hot temp 85C.	77	5	3	246	0	10	MTAI	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
UHASt	JESD22-A118. +130°C/85% RH for 96 hrs  Electrical test pre and post stress at +25°C	77	5	3	246	0	10	MTAI	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Temp Cycle	JESD22-A104. -65°C to +150°C for 500 cycles  Electrical test pre and post stress at hot temp 85C; 3-gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress.	77	5	3	246	0	15	MTAI	MTAI	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.