



## Product Change Notification - LIAL-26WMMN354

**Date:**

29 Mar 2018

**Product Category:**

16-Bit - Microcontrollers and Digital Signal Controllers

**Affected CPNs:****Notification subject:**

CCB 3317 Initial Notice: Qualification of palladium coated copper with gold flash (CuPdAu) wire in selected products of the 200K wafer technology available in 28L SSOP package at ANAP assembly site.

**Notification text:****PCN Status:**

Initial Notification.

**PCN Type:**

Manufacturing Change

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

**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) bond wire in selected products of the 200K wafer technology available in 28L SSOP package at ANAP assembly site.

**Pre Change:**

Using gold (Au) bond wire and G600 mold compound material

**Post Change:**

Using palladium coated copper with gold flash(CuPdAu) bond wire and G700LS mold compound material.

**Pre and Post Change Summary:**

	Pre Change	Post Change
<b>Assembly Site</b>	Amkor Technology Philippine (P1/P2), INC. (ANAP)	Amkor Technology Philippine (P1/P2), INC. (ANAP)
<b>Wire material</b>	Au	CuPdAu
<b>Die attach material</b>	8290	8290
<b>Molding compound material</b>	G600	G700LS
<b>Lead frame material</b>	C194	C194

**Impacts to Data Sheet:**

None

**Change Impact:**

None

**Reason for Change:**

To improve productivity by qualifying palladium coated copper with gold flash (CuPdAu) bond wire

**Change Implementation Status:**

In Progress

**Estimated Qualification Completion Date:**



August 2018

Note: Please be advised the qualification completion times may be extended because of unforeseen business conditions however implementation will not occur until after qualification has completed and a final PCN has been issued. The final PCN will include the qualification report and estimated first ship date. Also note that after the estimated first ship date guided in the final PCN customers may receive pre and post change parts.

**Time Table Summary:**

Workweek	March 2018					-->	August 2018				
	09	10	11	12	13		31	32	33	34	35
Initial PCN Issue Date					X						
Qual Report Availability								X			
Final PCN Issue Date								X			

**Method to Identify Change:**

Traceability code

**Qualification Plan:**

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

**Revision History:**

**March 29, 2018:** Issued initial notification.

The change described in this PCN does not alter Microchip’s current regulatory compliance regarding the material content of the applicable products.

**Attachment(s):**

[PCN\\_LIAL-26WMMN354\\_QUAL\\_PLAN.pdf](#)

Please contact your local [Microchip sales office](#) with questions or concerns regarding this notification.

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**MICROCHIP**

## **QUALIFICATION PLAN SUMMARY**

**PCN#: LIAL-26WMMN354**

**Date**

**March 20, 2018**

**Qualification of palladium coated copper with gold flash (CuPdAu) bond wire in selected products of the 200K wafer technology available in 28L SSOP package at ANAP assembly site.**

**Purpose:** Qualification of palladium coated copper with gold flash (CuPdAu) bond wire in selected products of the 200K wafer technology available in 28L SSOP package at ANAP assembly site.

**CCB No:** 3317

**MP code:** LEBE14N2XDXF  
**Part No.:** PIC24FV16KA302-E/SS  
**BD No:** BDM-001753a  
**Process/CUP:** 200K no CUP

**Package**

**Type/pin** 28 lead SSOP  
**Width or size:** 0.209" wide  
**Package Code** N2X  
**MSL:** 1

	After the change
<b>Subcon facility</b>	ANAP
<b>Package type/pin</b>	SSOP 28L
<b>Package code</b>	N2X
<b><u>Lead frame:</u></b>	
<b>Part number</b>	101383340
<b>Paddle size:</b>	3.91x5.08mm
<b>Material</b>	C194
<b>Shipped Strip/Singulated</b>	STRIPFORM
<b><u>Wire:</u></b>	CuPdAu
<b><u>Die Attach Epoxy:</u></b>	8290
<b>Part Number</b>	101374994
<b>Conductive</b>	YES
<b><u>Mold Compound:</u></b>	G700LS
<b><u>Lead finish:</u></b>	
<b>Lead Plating</b>	MATTE SN

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	Test Site	Special Instructions
Standard Pb-free Solderability	J-STD-002D ; Perform 8 hours of steam aging for Matte tin finish and 1 hour steam aging for NiPdAu finish prior to testing. Standard Pb-free: Matte tin/ NiPdAu finish, SAC solder, wetting temp 245°C for both SMD & through hole packages.	22	5	1	27	>95% lead coverage	5	MTAI	Standard Pb-free solderability is the requirement. SnPb solderability (backward solderability- SMD reflow soldering) is required for any plating related changes and highly recommended for other package BOM changes.
Wire Bond Pull - WBP	Mil. Std. 883-2011	3	0	3	Pull/shear as many as is possible per the number of wires per device to be qualified up to a maximum of 30 wires/balls from the total sample size specified.	0 fails after TC	5	MTAI	Wire pull / ball shear is performed after stress testing and decapsulation.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	3	0	3	Pull/shear as many as is possible per the number of wires per device to be qualified up to a maximum of 30 wires/balls from the total sample size specified.	0	5	MTAI	Wire pull / ball shear is performed after stress testing and decapsulation.
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5	MTAI	
HTSL (High Temp Storage Life)	JESD22A-103. +175°C, 2x Stress (500hrs and 1000 hrs). Electrical test pre and post stress at +25°C and hot temp at 125°C	45	5	3	150	0	10	MTAI	Spares should be properly identified.
Preconditioning Required for surface mount devices	+150°C Bake for 24 hours, moisture loading requirements per MSL level + 3X reflow at peak reflow temperature per Jedec-STD-020D for package type. Electrical test pre and post stress at 25°C and hot temp, 125°C. MSL1 @+260°C	231	15	3	738	0	15	MTAI	Spares should be properly identified

HAST	+130°C/85% RH for 96hrs. Electrical test pre and post stress at +25°C and hot temp at +85 °C, 125°C	77	5	3	246	0	15	MTAI	Spares should be properly identified
UHAST	+130°C/85% RH for 96 hrs. Electrical test pre and post stress at 25°C	77	5	3	246	0	15	MTAI	Spares should be properly identified.

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Affected Catalog Part Numbers(CPN)

- PIC24F08KA102-E/SS
- PIC24F08KA102-I/SS
- PIC24F08KA102T-E/SS
- PIC24F08KL302-E/SS
- PIC24F08KL302-I/SS
- PIC24F08KL302T-I/SS
- PIC24F08KL402-E/SS
- PIC24F08KL402-I/SS
- PIC24F08KL402T-I/SS
- PIC24F16KA102-E/SS
- PIC24F16KA102-I/SS
- PIC24F16KA102T-I/SS
- PIC24F16KA302-E/SS
- PIC24F16KA302-I/SS
- PIC24F16KA302T-I/SS
- PIC24F16KL402-E/SS
- PIC24F16KL402-I/SS
- PIC24F16KL402T-I/SS
- PIC24F32KA302-E/SS
- PIC24F32KA302-I/SS
- PIC24F32KA302T-I/SS
- PIC24FV16KA302-E/SS
- PIC24FV16KA302-I/SS
- PIC24FV16KA302T-E/SS
- PIC24FV16KA302T-I/SS
- PIC24FV32KA302-E/SS
- PIC24FV32KA302-I/SS
- PIC24FV32KA302T-E/SS
- PIC24FV32KA302T-I/SS

CuPdAu) wire in selected products of the 200K wafer technology available in 28L SSOP package at ANAP



assembly site.